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WeChat Official Account

Catalogue

wordop 沃德普

2026-version 1

wordop®

科技之光
共创未来
Brighter Future
with Science and
Technology

New Horizons of Imaging

www.wodp.com

2026-version 1

wordop 沃德普

Founded in 2014, Wordop is a manufacturing enterprise specializing in machine vision lights, imaging systems, and microscopic imaging systems. Approximately 28% of its employees are R&D and technical engineers.

The company has obtained ISO9001 certification and has been rated as 'High-tech Enterprise' , 'Specialized, Sophisticated, Distinctive and Innovative SME in Guangdong Province', 'Innovative SME (Top 100 Gazelle Enterprise)', and 'Demonstration Enterprise for Intellectual Property in Guangdong Province'. Wordop has certificates of CE, SGS, etc. The company owns 14 invention patents, 43 utility model patents, and 15 software patents.

Adhering to the values of 'Creating value for customers, collaborative innovation, working with passion and dedication, honesty and reliability, being simple and brave' and the customer-centric philosophy, Wordop perseveres in innovation and development, striving to be a respectable service provider of light application.

The headquarter is located in Dongguan, Guangdong Province. Wordop has five branches in Suzhou, Chengdu, Xiamen, Ningbo and Beijing, as well as an office in Ningde.

CATL
ATL
Sunwoda
Cosmx
Ganfeng Lithium
Hymson
Huawei
Sunny Optical
Samsung
LY iTECH
OPPO
HUAQIN
Cognex
Luster
Topstar
Colibri
World
Strong
Anda
Bozhon
Justech
Foxconn
Changyuan
JABIL
JPT
Axxon
Nidec
Hexagon
JRS
Han's Laser
Midea
Fuyao Glass
TATA
Keyence
Envision

*The above are listed in no particular order
*The above are some of the customers served by Wordop
*The ownership of the above trademarks belongs to their respective registrants

Company Profile

Vision	To be a respected lighting solution service provider
Mission	To create beautiful life through light application
Values	Creating value for customers, collaborative innovation, working with passion and dedication, honesty and reliability, being simple and brave
Value proposition	Brighter future with science and technology


SMT


SMT


Production Workshop


Production Workshop


Imaging Laboratory


Machining Center

Core Strengths

Competitive imaging solutions
- 80+ technical R&D engineers, 10 years industry experience

Efficient light customization service
- Provide regular custom products within 3 working days

Stability and consistency of products
- Systematic guarantee, Certification guarantee

Company Scale
- Headquartered in Dongguan, has established five branches in Suzhou, Chengdu, Xiamen, Ningbo, and Beijing, as well as a representative office in Ningde

Guarantee

Wordop's products can be repaired or replaced free of charge
if any failure occurs within 1 year from the date of shipment

Service and Support

Customization
- We can provide cost-effective customized products based on clients' actual needs

Lab setup
- Save the time and cost of lighting and imaging solutions, avoid project information leakage, and make quick response to solution

Free technical support and sample loan
- Professional technical evaluation support, free lighting test and loan

Development History

2025 The five offices in Suzhou, Chengdu, Xiamen, Ningbo, and Beijing are now branch companies
Introduced MES for smart manufacturing, WMS for intelligent warehousing

2024 Nezha/ Bajie/ Area-scan photometric stereo imaging system, Multi-partition lighting system
Multi-partition lighting system
Rated as Demonstration Enterprise for Intellectual Property in Guangdong Province
Introduced Kingdee Cloud management system

2022-2023 Wukong PMD imaging system, Honghu microscopic autofocus system
Rated as 'Innovative SME (Top 100 Gazelle Enterprise)'
'Guangdong Specialized andSophisticated Enterprise'

2021 Surveillance line scan lighting system
Established MicroTech R&D center, Ningbo Office

2020 Established Xiamen Office, Beijing Office
Introduced consulting management, established a sales and compensation management system, and optimized the equity incentive system

2019 Pangu sequence-function imaging system
Established Chengdu Office
Officially brought equity incentive system into execution

2018 Obtained ISO quality system certification
Rated as 'Integrated Doubling Enterprise of Dongguan'
Clarified a 3-year development strategy, formulated an equity incentive scheme

2017 Established Suzhou Office
Rated as High-tech Enterprise, Dongguan Doubling Enterprise of Nancheng District

2015-2016 The first company in China to launch multi-angle line light
Defined corporate vision, mission, values
Products are CE, ROHS certified

2014 Wordop Automation was formally incorporated to develop, manufacture and sell machine vision lights and light controllers

CE (TÜV) UL (SGS) ROHS ISO 9001 High-tech enterprise Patent for invention

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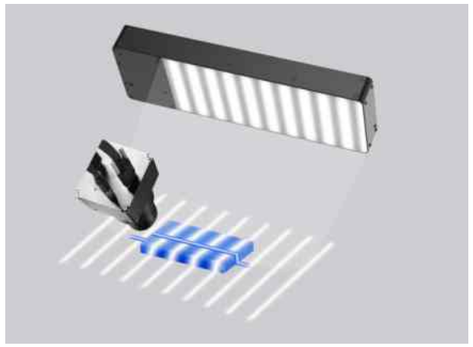


Wukong PMD Imaging System

Detect 2.5D and other minor defects on highly-reflective surface

Features

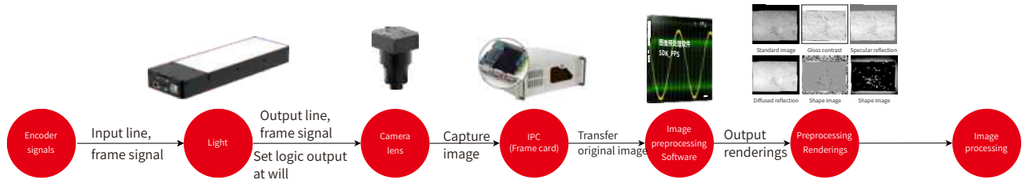
- 6 pre-processing renderings with 1 scan
- High frequency, high brightness, high efficiency
- Line and area scan are optional

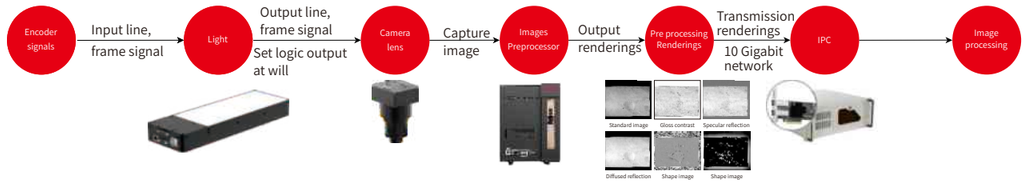
Applications

Cell with blue film | Glass cover | Aluminum battery | Reflective directional aluminum housing | Patterned wafer | Label tag

Car cushion | Graphite film | Cylindrical cell | Car paint | Flexible TFT screen | Keyboard membrane

Inspection Process

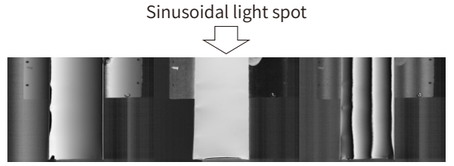




Principle

- The Phase Deflection technique (also known as ‘Fringe Projection’) is adopted to calculate and magnify the acquired image
- It can be transformed into 4 sinusoidal light spots of different phases in X and Y directions
- The modulated curved fringes on the surface of the measured object are collected by the camera, then been calibrated
- The modulated fringe pattern will be mathematically calculated and converted into height coefficients

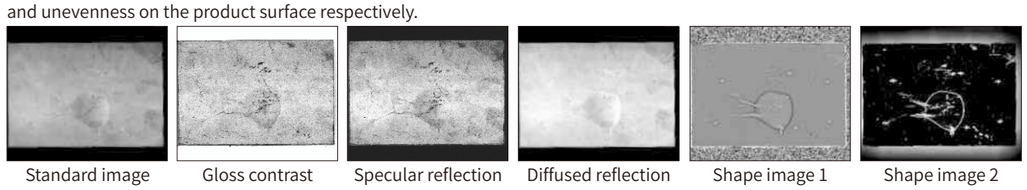
Sinusoidal light spot



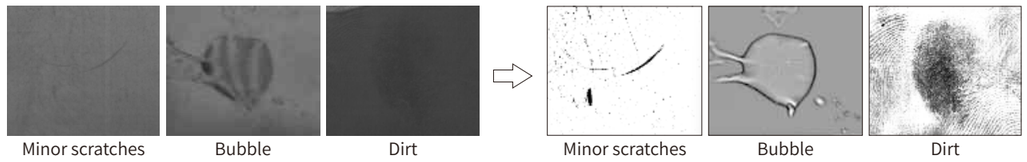
PMD calculation

Preprocessing Effect (example)

Different preprocessing images can be used to obtain information such as scratches, dirt, foreign objects, and unevenness on the product surface respectively.



Standard image | Gloss contrast | Specular reflection | Diffused reflection | Shape image 1 | Shape image 2



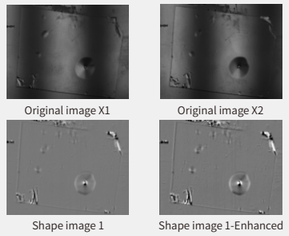
Minor scratches | Bubble | Dirt — Original image

Minor scratches | Bubble | Dirt — Renderings

Wukong PMD Imaging System Features

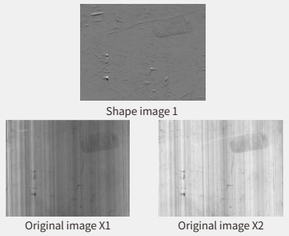
Highlighting 2.5D feature changes

Through the extraction and calculation of the phase deflection information of eight original images, the 2.5D feature with depth difference can be reflected in 'Shape image'.
It provides image adjustment function, which can adjust the pre-processed image for the second time, enhancing or weakening the feature contrast or contour.



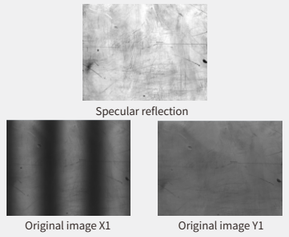
Eliminate background interference

If product has brushed pattern interference, it will affect the surface defects (such as scratches, dirt). The system eliminates features without phase changes in the background, extracting features with depth changes from 'Shape image' to eliminate background interference.
For more information such as detecting textures, you can observe from other pre-processing renderings.



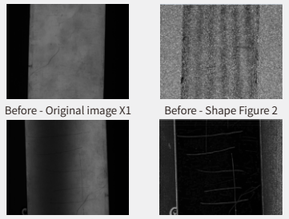
Highlight minor scratches

Through the calculation and superposition of different reflected spots in original image, small scratch defects can be obtained in pre-processing ‘specular reflection’ , and imaging features of small defects can be enlarged to increase the detection accuracy.



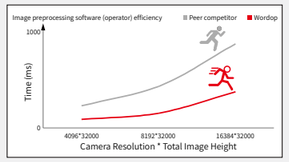
Adapt to products with different reflectance

A variety of sinusoidal spots for options, which suits products of different reflectance, the corresponding shape image is also different.
Phase deflection change can be observed from original image, corresponding shape image clearly shows 2.5D defects.



Ultra-fast computing efficiency

The system provides image preprocessor or SDK to process the original image, and obtain ultra-fast computing efficiency by using GPU/ preprocessor acceleration. Under the comparison of specific image sizes, our processing efficiency is nearly half of that of peer competitors, saving CT time for users and improving detection efficiency.



Imaging System Unit of Wukong PMD

	Configuration
System 1	PMD light+Preprocess software
System 2	PMD light+Preprocessor+Camera+Lens
System 3	PMD light+Preprocessor
System 4	PMD light

Preprocessing Software

Model	PPS
Preprocessing Software	1. Provide 1-6 preprocessing effects, including 2 shape images, gloss contrast, specular reflection, diffused reflection, standard image 2. Adjustable parameters
Remark	It must work with GPU graphics card

Preprocessor

Model	IP-640-104
Dimension (mm)	192×130.5×174.5
Weight (kg)	2.3
Preprocessor	1. Provide 1-6 preprocessing effects, including 2 shape images, gloss contrast, specular reflection, diffused reflection, standard image 2. Adjustable parameters 3. A single IPC supports the simultaneous connection of multiple preprocessors
Frame Grabber Card	Built-in frame grabber card, which can preprocess the image directly
10 Gigabit Nic Interface	Transfer renderings to PC through 10 Gigabit network protocol

PMD Integrated Light

Model	PLL-300X100W-LSE	PLL-400X100W-LSE	PLL-500X100W-LSE	PLL-600X100W-LSE	PLL-800X100W-LSE
Emitting Surface (mm)	300×100	400×100	500×100	600×100	800×100
Dimension (mm)	408.7×132×47	508.7×132×47	608.7×132×47	708.7×132×47	908.7×132×47
Weight (kg)	2.7	3.3	3.9	5.4	6.6
Features	1. Integrates light and light controller, slim and lightweight body 2. Different sinusoidal spot width optional 3. Internal trigger frequency can be up to 200K Hz, external trigger frequency can be up to 200K Hz 4. Supports customisation of the luminous surface				
Communication	RS232 & 100Mbps Ethernet (optional)				

Model	PLLH-108X80W-LSE	PLLH-216X80W-LSE
Emitting Surface (mm)	108×80	216×80
Dimension (mm)	148.7×110×85	256.7×110×85
Weight (kg)	1.1	1.7
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz * 4. Increases efficiency by approximately 4 times compared to PLL series 5. Supports customisation of the luminous surface	
Communication	RS232 & 100Mbps Ethernet (optional)	

PMD Integrated Light

Model	PLLH-324X72IR850-LSE	PLLH-324X72W-LSE	PLLH-432X72W-LSE	PLLH-648X72W-LSE
Emitting surface (mm)	324×72	324×72	432×72	648×72
Dimension (mm)	378.5×130×116	378.5×130×116	454×130×116	670×130×116
Weight (kg)	5.2	5.2	6.1	9.2
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz ⋆ 4. Increases imaging efficiency by approximately 4 times compared to PLL series 5. Supports customisation of the luminous surface			
Communication	RS232 & 100Mbps Ethernet (optional)			

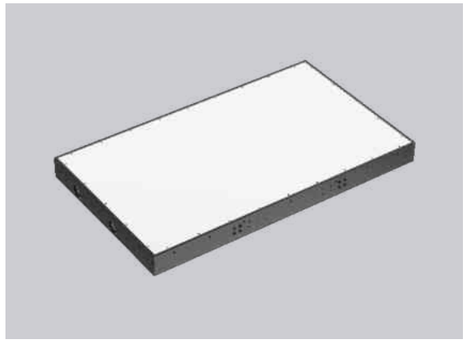
Model	COPLL-108X80W-LSE
Emitting surface (mm)	108×80
Dimension (mm)	195×148.7×106
Weight (kg)	1.84
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz 4. Coaxial illumination prevents depth-of-field and distortion issues caused by oblique mounting 5. Supports customisation of the luminous surface
Communication	RS232 & 100Mbps Ethernet (optional)

Model	COAPLL-108X80W-LSE
Emitting surface (mm)	108×80
Dimension (mm)	195×148.7×106
Weight (kg)	1.84
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz 4. Angled coaxial design saves vertical space for equipment 5. Supports customisation of the luminous surface
Communication	RS232 & 100Mbps Ethernet (optional)

Model	PAL-160X96W-LSE	PAL-256X160W-LSE
Emitting surface (mm)	160×96	256×160
Dimension (mm)	188.7×130×85	278.7×185×80
Weight (kg)	1.7	3
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz 4. Supports customisation of the luminous surface	
Communication	RS232 & 100Mbps Ethernet (optional)	

Model	COPAL-160X96W-LSE	COPAL-256X160W-LSE
Emitting surface (mm)	160×96	256×160
Dimension (mm)	215×188.7×126	265×278.7×181
Weight (kg)	2.5	4.9
Features	1. Integrated design of light and controller-drive 2. Support selection of binary mode and sinusoidal modes with different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 200 kHz 4. Coaxial illumination prevents depth-of-field and distortion issues caused by oblique mounting 5. Supports customisation of the luminous surface	
Communication	RS232 & 100Mbps Ethernet (optional)	

Model	PAL-80X80W-LS
Emitting surface (mm)	80×80
Dimension (mm)	100×96×55.8
Weight (kg)	0.45
Features	1. Compact emitting surface design for small FOV imaging 2. Space-efficient integration of power, communication and trigger ports 3. Compatible with standard 24V power input 4. Supports customisation of the luminous surface
Communication	RS232



Car Paint Integrated PMD Light

Detect 2.5D and other minor defects on highly-reflective surface

Features

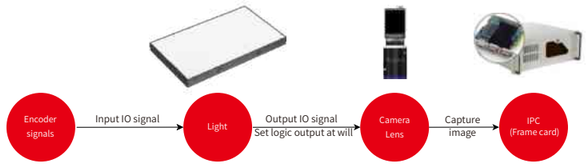
- High-brightness, large FOV, high-frequency
- Applicable for area-scan imaging to acquire multiple phase raw images from different periods
- Supports configuration of various light spot patterns.

Applications

Car paint

Car paint

Inspection Process



Principle

- The Phase Deflection technique (also known as 'Fringe Projection') is adopted to calculate and magnify the acquired image
- It can be transformed into 4 sinusoidal light spots of different phases in X and Y directions
- The modulated curved fringes on the surface of the measured object are collected by the camera, then been calibrated

Sinusoidal light spot

Car Paint Integrated PMD Light

Model	PAL-530X312W-LSE
Emitting Surface (mm)	530×312
Dimension (mm)	568.6×352.6×84.6
Weight (kg)	10.3
Features	1. Integrated design of light and controller-drive 2. Supports phase pattern configuration from different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 1 Khz 4. Supports customisation of the luminous surface
Communication	RS232 & 100Mbps Ethernet (optional)

Model	PAL-936X530W-LSE
Emitting Surface (mm)	936×530
Dimension (mm)	991.6×580×73
Weight (kg)	18
Features	1. Integrated design of light and controller-drive 2. Supports phase pattern configuration from different periods 3. Support constantly-on and overdrive modes, with a trigger frequency of up to 1 Khz 4. Supports customisation of the luminous surface
Communication	RS232 & 100Mbps Ethernet (optional)

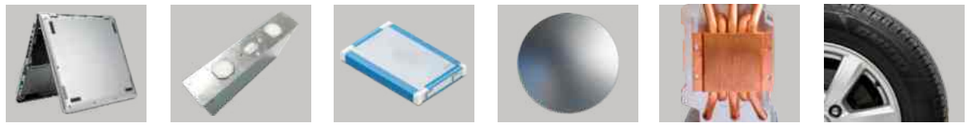
Nezha Line-scan Photometric Stereo Imaging System

Detect 2.5D and other defects on edge of non-reflective surface

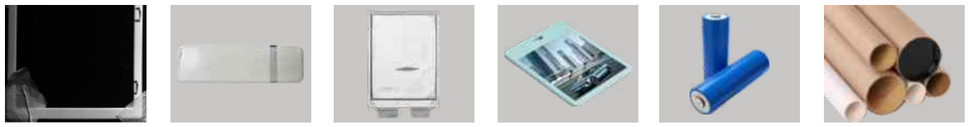
Features

- 7 pre-processing renderings with 1 scan
- Meet the high-speed detection of 500mm/s or faster
- Multi-imaging forms are optional, suitable for different applications

Applications

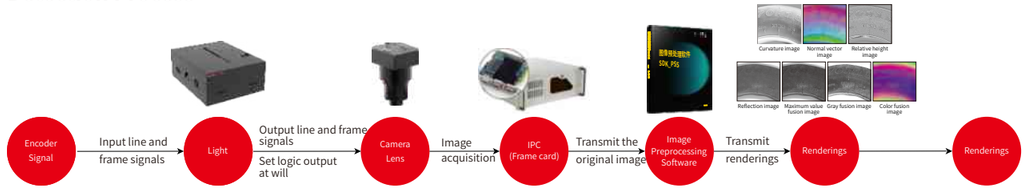


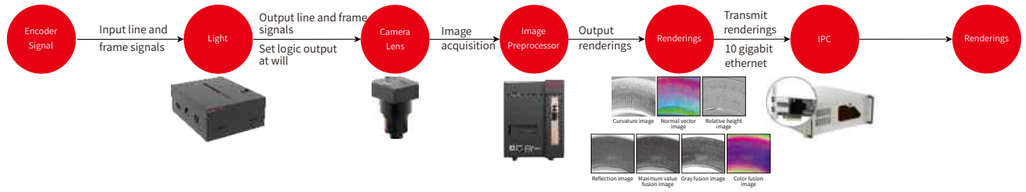
Laptop case | Battery top cover | Separator cell core | Silicon wafer | Vapor chamber | Tire



Foam sheet | Buffer | Pack battery | Aroma disc | Cylindrical battery | Cylindrical paper tube

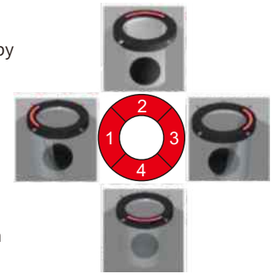
Detection Process





Principle

- Using photometric stereo technique, the relative height features of the surface are recovered by shadow, and the 2.5D features and various features are obtained.
- Using a camera and several lights with same luminous intensity, keeping the camera and the object still, by changing the direction of the lights, and take a set of images under different directions at the same time.
- Through image preprocessing technology, the surface features are further enhanced, hence the depth information of the object surface is derived.
- Line scan is different from area scan, which has higher precision, larger width, faster detection and support motion detection.

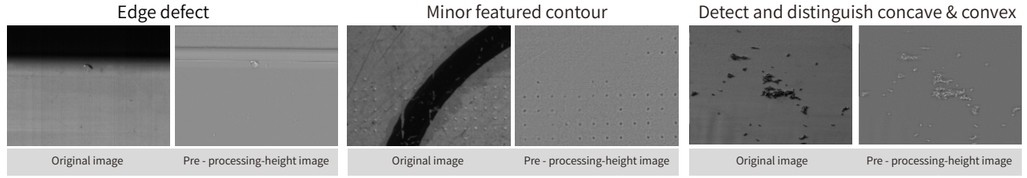


Preprocessing Effect (example)

Information such as scratches, stains, foreign objects, and unevenness on the product surface can be obtained from different pre - processed images respectively.

Curvature image | Normal vector image | Relative height image | Reflection image | Maximum value fusion image | Gray fusionimage | Color fusion image

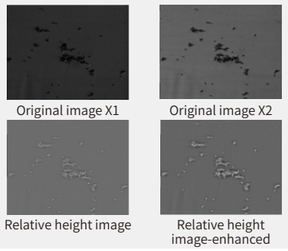
Effect-comparison



Nezha Photometric Stereo Imaging System Features

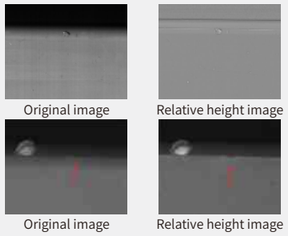
Feature: Highlight 2.5D defects

Through the extraction and calculation of normal vector of 4 original images, the 2.5D feature with depth difference can be reflected in 'Relative height image'.
It provides image adjustment function, which can adjust the pre-processed image for the second time, enhancing the feature contrast.



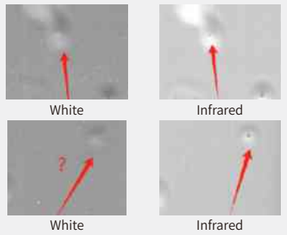
Edge features can be detected

The camera is perpendicular to object, each edge is illuminated through different lighting angles, and then enhances the surface details during image calculation. The edge defects can be highlighted.
Edge defects can be detected in ‘Relative height image’ etc., and distinguish the concave and convex.



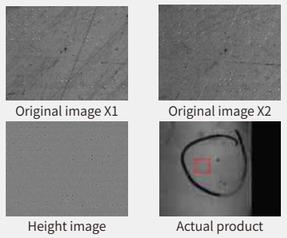
The submembrane features are clearly visible

‘Photometric stereo imaging system’ supports white light, infrared and other different spectra/a variety of combination spectral schemes.
Compatible with surface detection, it can also detect defects such as foreign matters under the film, saving work position.



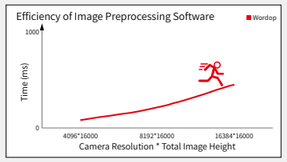
High-precision on-fly imaging application

When detecting objects with extremely small concave-convex features, a high-resolution line scan camera can be selected and combined with a high-brightness photometric stereo light to ensure high-precision imaging and large FOV, thereby improving detection efficiency.



Ultra-fast computing efficiency

This system can provide an image pre-processor or pre-processing algorithm to process the original image. By using GPU/pre-processor, ultra-fast computing efficiency can be accelerated, saving CT time for users and improving detection efficiency.



Imaging System Unit of Nezha Photometric Stereo

	Configuration
System 1	Light+Preprocess software
System 2	Light+Preprocessor+Camera+Lens
System 3	Light+Preprocessor
System 4	Light

Photometric Stereo Line Light

Model	LNPS-300W-E-A	LNPS-400W-E-A	LNPS-600W-E-A
Emitting Surface (mm)	300	400	600
Dimension (mm)	350×360×170	450×360×170	650×360×170
Weight (kg)	11.5	13.5	18
Features	1. Integrates light and light controller 2. The internal light allows for adjustments to the lighting angle according to actual circumstances 3. Internal trigger frequency can be up to 100KHZ		
Communication Methods	100Mbps Ethernet		

Preprocessor

Model	IP-640-204
Dimension (mm)	192×130.5×174.5
Weight (kg)	2.5
Preprocessor	1. Provide 1 - 7 pre - processing effects, including curvature image, normal vector image, relative height image，reflection image, maximum value fusion image, gray fusion image, color fusion image 2. Adjustable parameters 3. A single IPC supports the simultaneous connection of multiple preprocessors
Frame Grabber Card	Built-in frame grabber card, which can preprocess the image directly
10 Gigabit Nic Interface	Transfer renderings to PC through 10 Gigabit network protocol

Preprocessing Software

Model	PSS
Preprocessing Software	1. Provide 1 - 7 pre - processing effects, including curvature image, normal vector image, relative height image，reflection image, maximum value fusion image, gray fusion image, color fusion image 2. Adjustable parameters
Remark	It must work with GPU graphics card

Bajie Photometric Stereo Imaging System

Detect 2.5D and other defects on edge of non-reflective surface

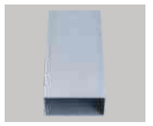
Features

- 7 pre-processing renderings with 1 scan
- Meet the high-speed detection of 500mm/s or faster
- Integrates light and controller, saving more space

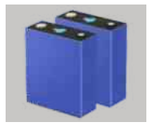
Applications

PCB

Rough plastic parts



Battery aluminum casing



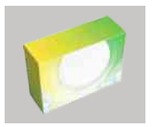
Blue film battery

Aluminum shell cylindrical battery

Phone mid-frame

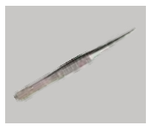
Plastic-wrapped cigarette case

Ceramic backplate



Glossy packaging box

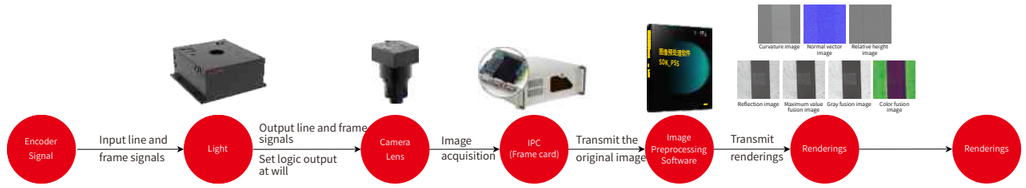
Matte metal parts



Medical tweezers

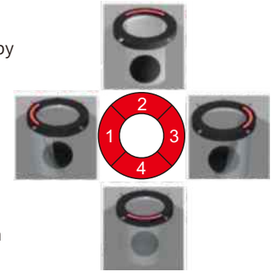
Cylindrical battery cell

Detection Process



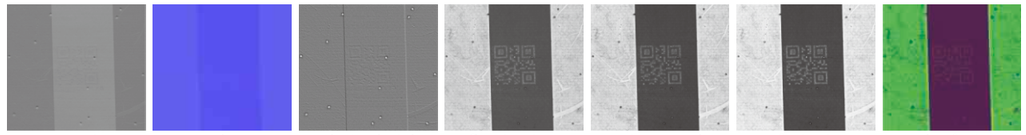
Principle

- Using photometric stereo technique, the relative height features of the surface are recovered by shadow, and the 2.5D features and various features are obtained.
- Using a camera and several lights with same luminous intensity, keeping the camera and the object still, by changing the direction of the lights, and take a set of images under different directions at the same time.
- Through image preprocessing technology, the surface features are further enhanced, hence the depth information of the object surface is derived.
- Line scan is different from area scan, which has higher precision, larger width, faster detection and support motion detection.



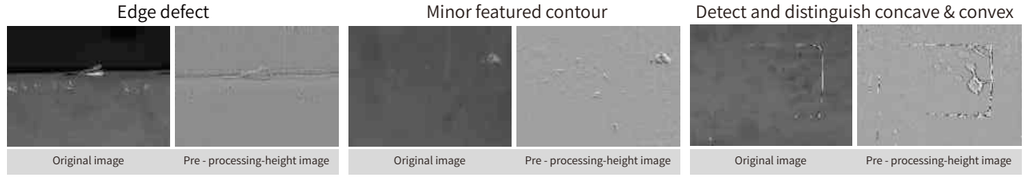
Preprocessing Effect (example)

Information such as scratches, stains, foreign objects, and unevenness on the product surface can be obtained from different pre - processed images respectively.



Curvature image | Normal vector image | Relative height image | Reflection image | Maximum value fusion image | Gray fusionimage | Color fusion image

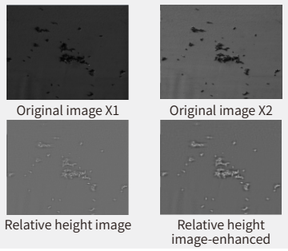
Effect-comparison



Bajie Photometric Stereo Imaging System Features

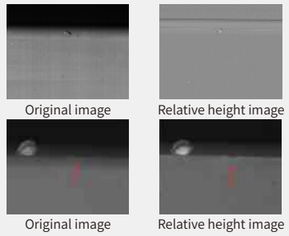
Feature: Highlight 2.5D defects

Through the extraction and calculation of normal vector of 4 original images, the 2.5D feature with depth difference can be reflected in 'Relative height image'.
It provides image adjustment function, which can adjust the pre-processed image for the second time, enhancing the feature contrast.



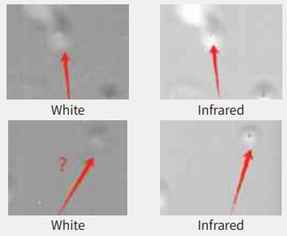
Edge features can be detected

The camera is perpendicular to object, each edge is illuminated through different lighting angles, and then enhances the surface details during image calculation. The edge defects can be highlighted.
Edge defects can be detected in ‘Relative height image’ etc., and distinguish the concave and convex.



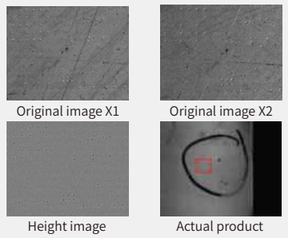
The submembrane features are clearly visible

‘Photometric stereo imaging system’ supports white light, infrared and other different spectra/a variety of combination spectral schemes.
Compatible with surface detection, it can also detect defects such as foreign matters under the film, saving work position.



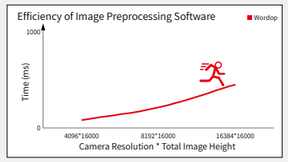
High-precision on-fly imaging application

When detecting objects with extremely small concave-convex features, a high-resolution line scan camera can be selected and combined with a high-brightness photometric stereo light to ensure high-precision imaging and large FOV, thereby improving detection efficiency.



Ultra-fast computing efficiency

This system can provide an image pre-processor or pre-processing algorithm to process the original image. By using GPU/pre-processor, ultra-fast computing efficiency can be accelerated, saving CT time for users and improving detection efficiency.



Imaging System Unit of Bajie Photometric Stereo

	Configuration
System 1	Light+Preprocess software
System 2	Light+Preprocessor+Camera+Lens
System 3	Light+Preprocessor
System 4	Light

Photometric Stereo Dome Light

Model	SDPS-400E	SDPS-370X330W-E
Trigger Method	Internal / external trigger	Internal / external trigger
Light color	White / IR	White
Dimension (mm)	405.6×404×392	370×330×362
Weight (kg)	12	9.2
Features	Light and control driver are designed as an integrated unit, eliminating the need for an additional controller	
Communication Methods	100Mbps Ethernet	100Mbps Ethernet

Preprocessor

Model	IP-640-204
Dimension (mm)	192×130.5×174.5
Weight (kg)	2.5
Preprocessor	1. Provide 1 - 7 pre - processing effects, including curvature image, normal vector image, relative height image，reflection image, maximum value fusion image, gray fusion image, color fusion image 2. Adjustable parameters. 3. A single IPC supports the simultaneous connection of multiple preprocessors
Frame Grabber Card	Built-in frame grabber card, which can preprocess the image directly
10 Gigabit Nic Interface	Transfer renderings to PC through 10 Gigabit network protocol

Preprocessing Software

Model	PSS
Preprocessing Software	1. Provide 1 - 7 pre - processing effects, including curvature image, normal vector image, relative height image，reflection image, maximum value fusion image, gray fusion image, color fusion image 2. Adjustable parameters.
Remark	It must work with GPU graphics card

Area-Scan Photometric Stereo Imaging System

Detect 2.5D and other defects on edge of surface made from different material

Features

- 7 pre-processed renderings can be obtained without any movement
- Concave-convex features on the surface of objects can be detected
- Multi-imaging forms are optional, suitable for different applications

Applications

Positive and negative electrodes of the top cover of a cylindrical battery

Watch strap

Coated pouch battery

Pouch battery

Connecting piece

Label

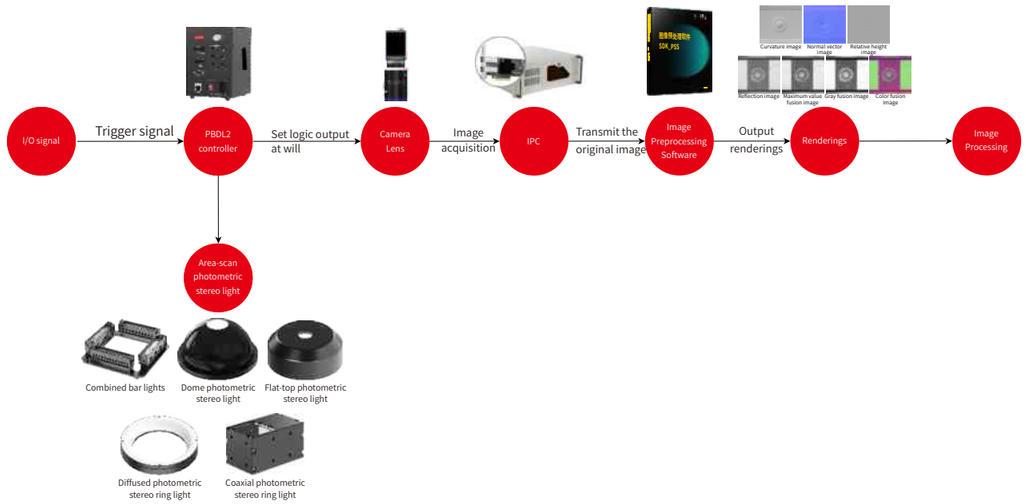
Keyboard keycaps

Mobile phone foam sheet

Battery explosion-proof valve

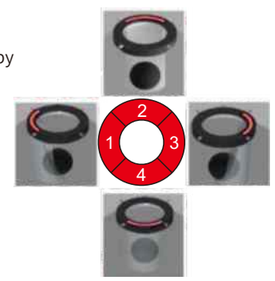
Nickel sheet

Detection Process



Principle

- Using photometric stereo technique, the relative height features of the surface are recovered by shadow, and the 2.5D features and various features are obtained.
- Using a camera and several lights with same luminous intensity, keeping the camera and the object still, by changing the direction of the lights, and take a set of images under different directions at the same time.
- Through image preprocessing technology, the surface features are further enhanced, hence the depth information of the object surface is derived.

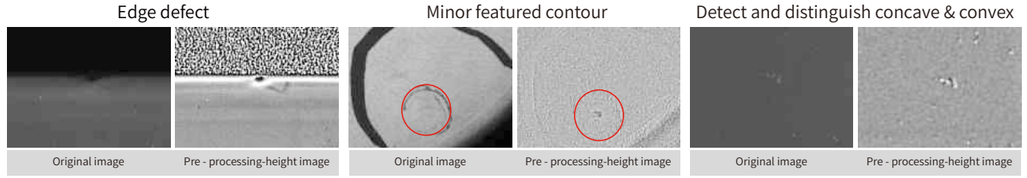


Preprocessing Effect (example)

Information such as scratches, stains, foreign objects, and unevenness on the product surface can be obtained from different pre - processed images respectively.

Curvature image | Normal vector image | Relative height image | Reflection image | Maximum value fusion image | Gray fusionimage | Color fusion image

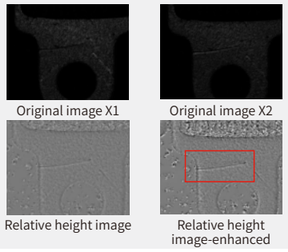
Effect-comparison



Area-scan Photometric Stereo Imaging System Features

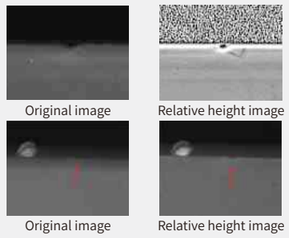
Feature: Highlight 2.5D defects

Through the extraction and calculation of normal vector of 4 original images, the 2.5D feature with depth difference can be reflected in 'Relative height image'.
It provides image adjustment function, which can adjust the pre-processed image for the second time, enhancing the feature contrast.



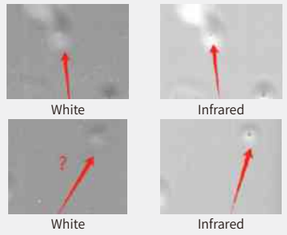
Edge features can be detected

The camera is perpendicular to object, each edge is illuminated through different lighting angles, and then enhances the surface details during image calculation. The edge defects can be highlighted.
Edge defects can be detected in 'Relative height image' etc., and distinguish the concave and convex.



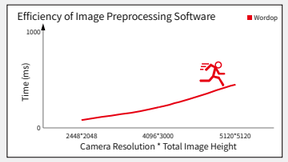
The submembrane features are clearly visible

'Photometric stereo imaging system' supports white light, infrared and other different spectra/a variety of combination spectral schemes.
Compatible with surface detection, it can also detect defects such as foreign matters under the film, saving work position.



Ultra-fast computing efficiency

This system can provide an image pre-processor or pre-processing algorithm to process the original image. By using GPU/pre-processor acceleration, ultra-fast computing efficiency can be achieved, saving CT time for users and improving detection efficiency.



Imaging System Unit of Area-scan Photometric Stereo

	Configuration
System 1	4-partition Area-scan Photometric Stereo Light + Logic Digital Controller
System 2	4-partition Area-scan Photometric Stereo Light + Logic Digital Controller + Preprocess software
System 3	40-partition Integrated Light★1+Preprocess software

★1 Please refer to the 40-partition Integrated Light P25-26

Preprocessing Software

Model	PSS
Preprocessing Software	1. Provide 1 - 7 pre - processing effects, including normal vector image, reflectivity image, relative height image, color fusion image, maximum value fusion image, gray fusion image, color fusion image 2. Adjustable parameters.
Remark	It must work with GPU graphics card

Combined Bar Light

Model	HDLM3-80X80W-A	HDLM3-119X119W-A	HDLM3-218X218W-A
Color	White	White	White
Power (W)	4×2.7W	4×5.1W	4×13.7W
Emitting Surface (mm)	80×80	119×119	218×218
WD (mm)	50-80	50-80	50-80
Dimension (mm)	151×151×38	190×190×38	307.5×307.5×38
Weight (kg)	0.4	0.58	1.2
No. of Partition	4		
Supporting Controller	PBDL2 series controller		

Dome Photometric Stereo Light / Flat-top Photometric Stereo Light

Model	SDPS-100W-4F	SDPS-150W-4F	FDPS-120W-4F
Color	White	White	White
Power (W)	4×3.6W	4×14.4W	4×3.6W
Emitting Surface (mm)	Ø66	Ø116	Ø75
WD (mm)	15-25	15-25	15-25
Dimension (mm)	Ø116×56.1	Ø166×80.8	Ø134×55.4
Weight (kg)	0.193	0.373	0.15
No. of Partition	4		
Supporting Controller	PBDL2 series controller		

★2 SDPS: Dome Photometric Stereo Light; FDPS: Flat-top photometric stereo light

Coaxial Photometric Stereo Light

Model	COPS-50W-4F-SF2-A
Color	White
Current (A)	4×2A
Emitting Surface (mm)	50×50
WD (mm)	10-60
Dimension (mm)	96×60×57
Weight (kg)	5.2
No. of Partition	4
Supporting Controller	PBDL2 series controller

Diffused Photometric Stereo Ring Light

Model	HBDPS-80W-4F-A	HBDPS-120W-4F-A	HBDPS-132W-4F-A	HBDPS-166W-4F-A	HBDPS-196W-4F-A
Color	White	White	White	White	White
Power (W)	4×1.6W	4×3.0W	4×3.6W	4×4.2W	4×5.2W
WD (mm)	86.7×80×22	124.2×120×25.5	136.2×132×25.5	170.4×166×25.5	200.5×196×25.5
Dimension (mm)	50-100	50-100	50-100	50-100	50-100
Weight (kg)	0.12	0.25	0.30	0.35	0.51
No. of Partition	4				
Supporting Controller	PBDL2 series controller				

Logic Overdrive Controller

Model	PBDL2-12048-6-LSE-B
Power (W)	120
Channel Number	6
Trigger Method	Internal/external trigger
Communication	RS232 & 100Mbps Ethernet (optional)
Dimension (mm)	130.8×116.7×167.8
Weight (kg)	1.36
Features	1. 1-6 channels can be configured separately 2. Switch 2 voltage modes freely(DC24V/DC48V), synchronously change lighting time unit 3. With 8 mode combinations, each group takes image in sequence, light output and trigger output port can be freely matched or set

Pangu Sequence-Function Strobe Imaging System

Support independent high-speed on/off switching of multiple light groups
Acquire images corresponding to different lights in a single scan
Reduce imaging stations and lower the costs, significantly improving inspection efficiency

Applications

Laptop appearance

Keyboard

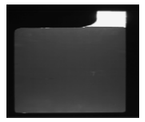
Mobile phone frame

Glass cover plate

Display module

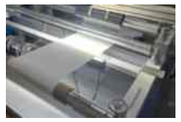
Cylindrical cell

Power battery packaging film



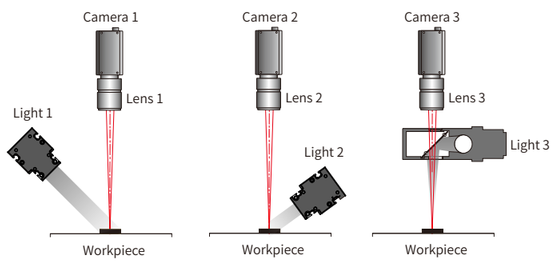
Electrode slice

PCB/FPC

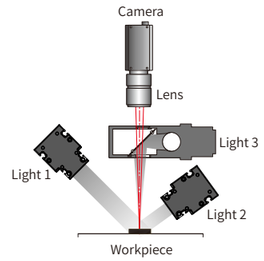


Transparent film

Multi-station inspection system vs Pangu sequence-function strobe imaging system



Multi-station inspection system



Pangu sequence-function strobe imaging

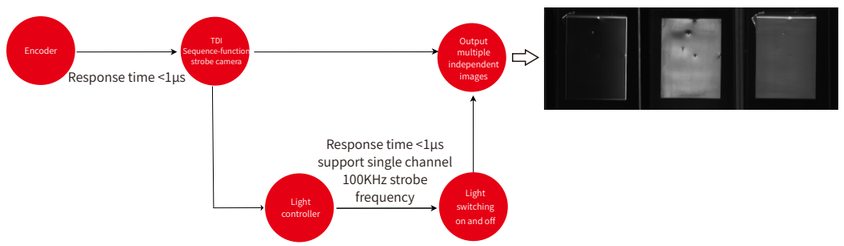
Example: 1 machine with 3 line-scan inspection stations

		Multi-station inspection system	Pangu sequence-function strobe inspection system
Space requirements		3 positions	1 position
Imaging system configuration requirements	IPC + Vision software	1-3 sets	1 set
	Camera + Frame card + Wiring	3 sets	1 set
	Lens	3 sets	1 set
	Light + Extension cable	3 sets	3 sets
	Light controller	1-3 sets	1 set
	Hardware structure	3 stations	1 station

Pangu sequence-function strobe imaging system classification

Solution comparison	Pangu TDI sequence-function strobe imaging system	Pangu single-line sequence-function strobe imaging system
Camera chip types (relative light sensitivity)	TDI 16 lines, 4 lines in a group (relatively strong)	Single line (relatively weak)
Resolution	8K	2K, 4K, 8K, 12K, 16K etc
Number of light groups that support sequence-function	2-4 groups	2-8 groups, expandable (need to consider space distribution and actual demand)
Logic control terminal	Camera	PHDL Series Controller
Imaging stability (anti-interference capability)	Strong	Lower
Image extraction processing	Camera outputs directly	PC software pre-processing

Pangu TDI sequence-function strobe imaging process



TDI sequence-function strobe system characteristics

- Adopt TDI technology solution to improve overall light sensitivity, preferred for high-speed moving application.
- Directly output images from multiple lights, no interference between images, with higher efficiency.
- Support 4 groups of lights sequentially strobing, which can form bright field, dark field, bright and dark field, transmitted field and other lighting methods

TDI camera description

Product	Model	Resolution	Chip size	Line frequency	Output method	Interface
TDI sequence-function strobe camera	WDCL8K-50KXCL	8320X16	5umX5um	2 lights: 50KHz 3 lights: 33KHz 4 lights: 25KHz	Camera link	M72

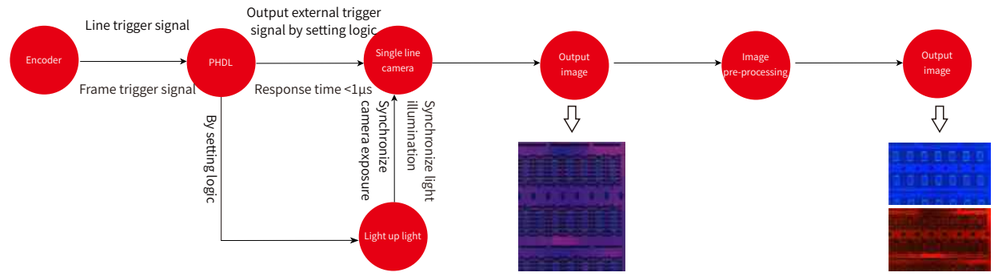
TDI controller description

Product	Model	Channel	Single channel current	Output total power	Input voltage	Features
High-speed constant-voltage logic controller	PHDL-60048-4-X4-LSE	4	12.5A MAX	600W	AC100-240V	Response speed is up to 1us Each trigger port supports a set of light combinations
	PHDL-80048-4-X4-LSE	4	16A MAX	800W	AC100-240V	
	PHDL-150048-8-X4-LSE	8	25A MAX	1500W	AC100-240V	

Notes:

1. Please check P195-196 for detailed parameters of the controller
2. Please refer to P33-50 for light selection
3. Please refer to P197: Sequence-function strobe extension cable and sequence-function strobe adapter extension cable, for matching cables

Pangu single-line sequence-function strobe imaging process



Single-line sequence-function strobe system characteristics

- Support single-line cameras of different brands and different resolutions, applicable to a wider range of scenarios
- Light strobe logic can be freely combined and set according to real needs
- Support synchronized shooting of multiple cameras, the number of lights and cameras can be added

Single-line camera description

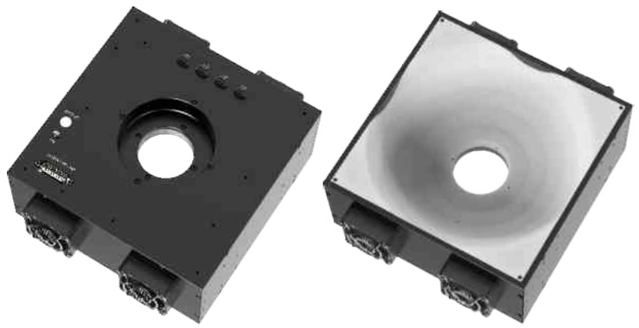
Product	Model	Resolution	Chip size	Total line frequency	Output method	Interface
4K monochromatic line-scan camera	WDCL4K-80KME	4096X1	3.5um	27KHz (80KHz lossless compression)	GigE	C mount
8K monochromatic line-scan camera	WDCL8K-80KMCL	8192X1	7.0um	80KHz	Camera Link FULL	M72
16K monochromatic line-scan camera	WDCL16K-40KMCL	16384X1	3.5um	40KHz	Camera Link FULL	M72
16K monochromatic line-scan camera	WDCL16K-80KMCXP	16384X1	3.5um	80KHz	CoaXPress	M72
8K color line-scan camera	WDCL8K-49KCTG	8192X3	3.5um	49KHz	10GigE	M72

Logic controller description

Product	Model	Channel	Single channel current	Output total power	Input voltage	Application
High-speed constant voltage logic controller	PHDL-60048-4-X2-LSE-A	4	12.5A MAX	600W	AC100-240V	Suitable for coil material applications
	PHDL-80048-4-X2-LSE-A	4	16A MAX	800W	AC100-240V	
	PHDL-150048-8-X2-LSE-A	8	25A MAX	1500W	AC100-240V	
	PHDL-60048-4-X3-LSE	4	12.5A MAX	600W	AC100-240V	Control multi-station
	PHDL-80048-4-X3-LSE	4	16A MAX	800W	AC100-240V	
	PHDL-150048-8-X3-LSE	8	25A MAX	1500W	AC100-240V	

Notes:

1、Please refer to P195-196 for controller detailed parameters
2、Please refer to P33-50 for light selection, the light power on strobe mode needs to be calculated 1.3 times of continuously-on mode, which can help confirm whether it meets the power requirements of the controller
3、Please refer to P197 for matching cables: Sequence-function extension cable and sequence-function adapter extension cable
4、Contact our technical support personnel for more details



40-Partition Integrated Light

Integrated Light with 40 independently controllable zones, enabling up to 2^{40} lighting angles
Features two photometric stereo imaging modes: 4-zone and 8-zone
Offers two operating modes: constantly-on and overdrive
Compatible with self-developed automatic lighting software, outputting preliminarily lighting solutions with only one click

Applications

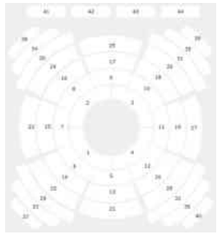
- Battery tab, middle bezel of mobile phone appearance inspection
- Appearance inspection of other products

Specification

Model	RMA-200X200W-40F-ML-EIA-A	RMA-246X246W-40F-ML-EIA
Lighting Method	Continuous / trigger lighting / overdrive lighting	
Light Color & Color Temperature	White / 6500±500K	
Driving Method	Constant voltage	
Dimming Method	PWM / lighting time control	
Power Supply Method	Matching DC24V power	
Matching Power Input Voltage	AC100-240V(2.6A Max) 50/60Hz	
Matching Power Output Voltage	DC24V(240W Max)	
Channel Number	40 internal channels, 4 external channels	
External Port Output Current	Single-channel current 2A (Max)/Total current of 4 channels 2A (Max)	
External Port Output Voltage	Continuous / Trigger: 21V, overdrive: 34V	
Trigger Method	Internal / External trigger	
Trigger Input	DC12-24V(10mA)	
Trigger Output	DC15V(10mA Max)	
Trigger Response Time	2us(Max)	
Brightness Level	0-255	
Lighting Time	0-999	
Protect	External port: Overcurrent protection	
Weight (kg)	Light 2.4KG + Power supply 1KG	Light 4.2KG + Power supply 1KG
Dimensions (mm)	242.5×200×96.8	288.5×246×140
Operation	Temperature: 0~40°C; humidity: 20~85%RH (non-condensation)	
Storage	Temperature: -20~60°C; humidity: 20~85%RH (non-condensation)	
Cooling Method	Fan cooling	
Material·Surface Treatment	AL6061. Anodize black	
Communication Method	EIA-485	
Compatible Cable	SO-11C-15PIN-XX-F(A.X)★1	

★1 XXX is the length of cable. It's available to customize according to different demands.
(A.X)is the version code, X is the version number.

Zoning Distribution

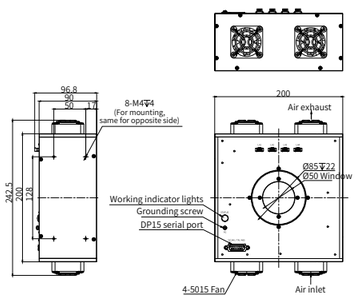


Model Code Description

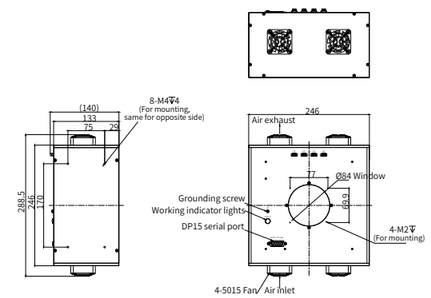
RMA	-	200X200	W	-	40F	-	ML	-	EIA	-	A
Model		Emitting surface	Color		Multi-partition		Surveillance function		Communication method		Version

Automatic Lighting Software

Model	ALS
Features	1. Automatically configures parameters for each light channel based on the types of products 2. Allows manual adjustment of each channel parameter to achieve optimal lighting
Remark	Supports multi-partition integrated lights and is compatible with standard area-scan cameras



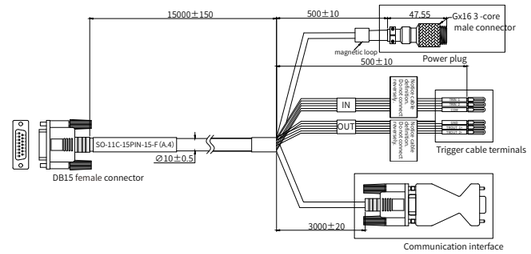
RMA-200X200W-40F-ML-EIA-A



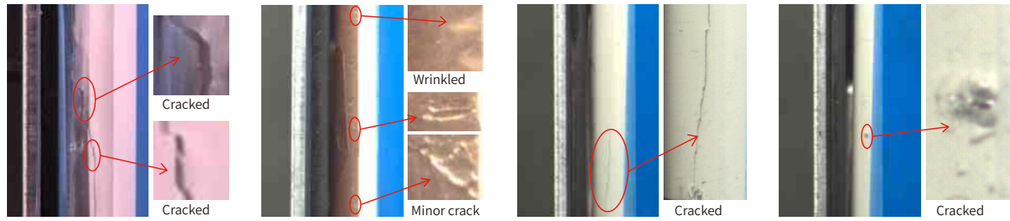
RMA-246X246W-40F-ML-EIA

Cable Definition of External Port

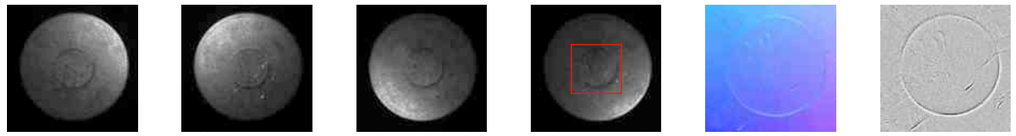
Cable label	Definition	Description
TRIN 1	Trigger input 1	Bidirectional input, regardless of polarity; Input voltage: DC12～24V
TRIN 2	Reset input	
COM	Trigger input common	
GND	Trigger output common (-)	Common negative; Output voltage: DC12V
TROUT 1+	Trigger output 1 (+)	
TROUT 2+	Trigger output 2 (+)	



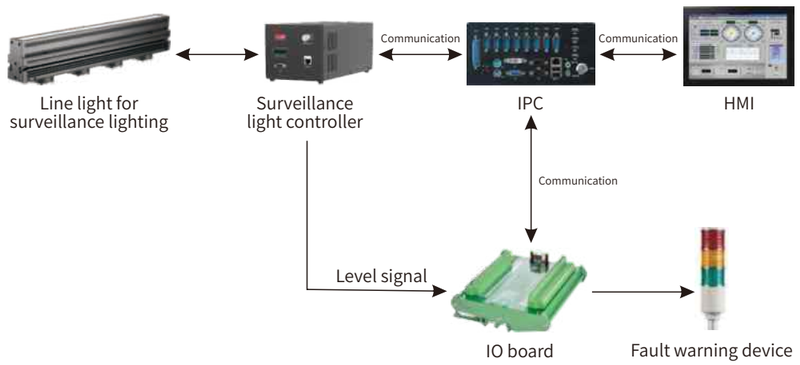
Imaging Effect



Photometric Stereo Pre-processing Renderings



Original image 1 | Original image 2 | Original image 3 | Original image 4 | Normal vector image (partial view) | Relative height image (partial view)



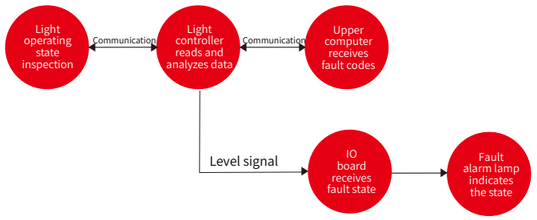
Surveillance Line Scan Lighting System

The system monitors light's operating status, illuminance, temperature, fan operation, and operating hours (for both light and controller)
It provides real-time alerts and alarms for any failures, preventing product inspection errors such as missed or repeated checks due to lighting system abnormalities

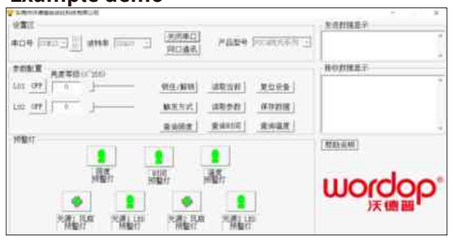
Applications

- Defect detection of lithium battery pole piece
- Appearance detection of glass cover
- Power battery case inspection

Workflow



Example demo



Model code description

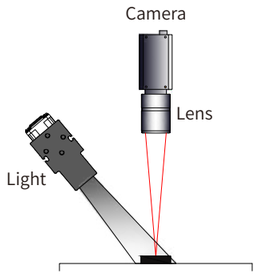
LN6	-	422	W	-	ML	-	FN
Model		Emitting surface length	Color		Surveillance		Fan cooling

Patented product

The maximum illuminance of the light is approx. 650,000 lx *1(WD: 50 mm)

Technical specifications

Product	Surveillance Line Light
Input voltage	DC 48V
Color	W/R/B
Light color (wavelength)*2	Red：620-630nm Blue：460-470nm
Color temperature (white)*2	5000-6500K
Cooling method	Fan cooling
IP protection grade	IP54
Operating environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Matching controller	Surveillance constant current controllers PSC5-35048-2-ML-LSE-A
Accessory	Diffuser, anti-static diffuser

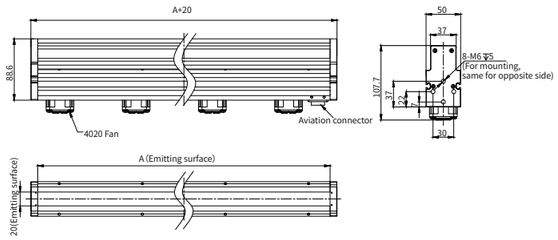


★1 This data include grating filter, data for reference only, may be different from actual value
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

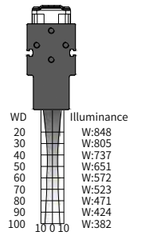
Series	Model	Color	WD(mm)	Power (W) ★3	Current (A)	Voltage (V)	L×W×H(mm)	Weight (kg)	Extension cable recommended	Controller recommended
LN6	LN6-338W-ML-FN	○	50-100	48	1.00	48	358×50×107.7	0.9	FCB-LN6-ML-6P-10	PSC5-35048-2-ML-LSE-A
	LN6-422W-ML-FN	○	50-100	67	1.40	48	442×50×107.7	1.5		
	LN6-482W-ML-FN	○	50-100	77	1.60	48	502×50×107.7	2.1		
	LN6-618W-ML-FN	○	50-100	96	2.00	48	638×50×107.7	2.7		
	LN6-898W-ML-FN	○	50-100	144	3.00	48	918×50×107.7	3.3		

★3 The normal tolerance is +/-10% between the actual product power and power table content

Divergence angle and illuminance distribution diagram

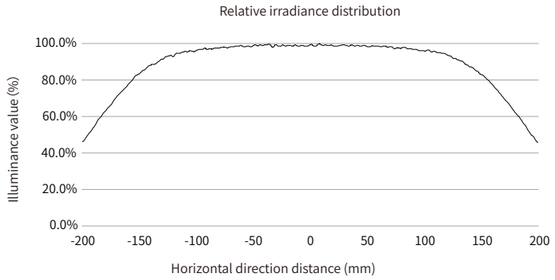


Remark: A indicates the emitting length



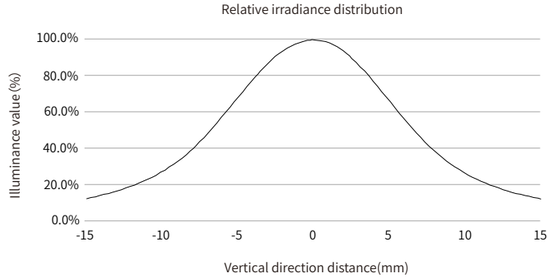
Remark: The unit of distance and width is mm
Illuminance unit: Klx
The measurements above are for LN6-422W-ML-FN and the data is for reference only

Transverse light intensity curve (example: LN6-422W-ML-FN)



Test value under 100% brightness and at 50mm WD, which may be differ in real value

Longitudinal light intensity curve (example: LN6-422W-ML-FN)



Test value under 100% brightness and at 50mm WD, which may be differ in real value

Description of controller model code

PSC5	-	350	48	-	2	-	ML	-	LSE	-	A
Model		Total power	Output voltage		Output channel		Surveillance		Communication method		Version

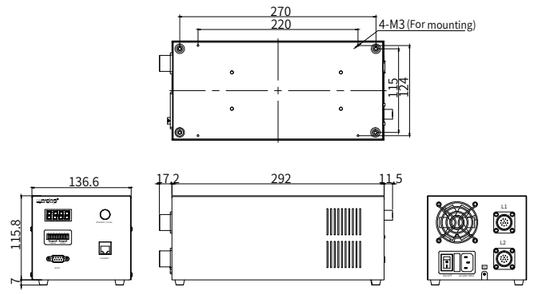
Intelligent identification of light power with a constant current accuracy up to 1%; monitoring the operating status, illuminance and temperature of light LEDs, the operation of fans, the operating time, etc., and real-time alarm against faults in lights and controller.

Controller Specifications

Product	Surveillance constant current controller
Model	PSC5-35048-2-ML-LSE-A
Lighting method	Constantly-on / Trigger
Driving method	Constant current
Dimming method	Regulate the current
Channel number	2 channels
Total output power (rated)	335W
Maximum output power per channel	288W
Output rated current per channel	6A
Total output current	7A
Input voltage / current	AC100-240V(3A Max) 50/60Hz
Trigger function	Trigger input
Overcurrent protection & Error detection indication	E01: Controller overtemperature protection E02: Controller overcurrent protection E03: Light overtemperature protection E04: Light temperature control fault E05: Controller temperature control fault E06: Fan drive circuit overtemperature protection E07: Temperature control fault of fan drive circuit
Output voltage	DC48V
Trigger method	External trigger
Trigger input voltage	DC5～24V
Trigger response time	50us Max
Brightness level	0～255 adjustable
Weight (kg)	2.7
Fan power supply indicators	Fan drive voltage DC12V, current 3.75A/power 45W (Max)
Dimension (mm)	320.7×136.6×122.8
Operation	Temperature: 0~40°C; humidity: 20~85% RH (non-condensation)
Storage	Temperature: -20~60°C; humidity: 20~85% RH (non-condensation)
Cooling method	Fan cooling
Material · Surface treatment	Painted SPCC surface
Communication method	LSE: RS232 & 100Mbps Ethernet (optional)

Function Description

Power identification	Automatically identify the power and output the current depending on power
Illuminance test	Read the illuminance of the light and check whether it meets the standard
Time-of-use record	Record the cumulative usage time of the controller and light, and remind users to maintain the device regularly
LED anomaly detection	Detect short circuit, open circuit and other anomalies of the LEDs to avoid significant deviations in the uniformity of the light resulting from light extinguishing and exceptional illumination
Fan inspection	Monitor the operating status of the fan to avoid excessively high temperature
Temperature alarm	The temperature alarm value is adjustable to avoid excessively high temperature of the light



Serial Port Communication Parameters

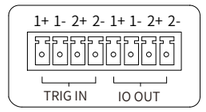
- Communication parameters

Communication interface	Working pattern	Communication rate	Transfer format			
			Start bit	Data bit	Check bit	Stop bit
RS-232	Half-duplex	38400bps	1	8	0	1

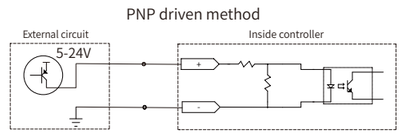
External Trigger Definition of Controller

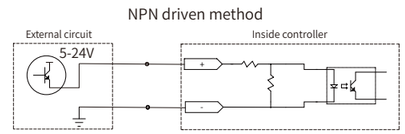
Trigger port pin number	TRIG IN connection definition		Input voltage
1+	L1 trigger	Input +	DC5～24V
1-		Input -	
2+	L2 trigger	Input +	
2-		Input -	

Trigger port pin number	IO OUT connection definition		Power supply specification
1+	OC1	Output +	Voltage range: DC5～36V Current range: ⩽200mA
1-		Output -	
2+	OC2	Output +	
2-		Output -	



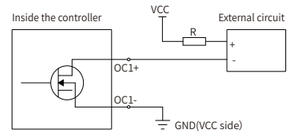
Trigger Input (with channel 1 as an example)





* It's not advisable to use switches with strong mechanical characteristics, such as relays, as the means of external trigger, since this may frequently cause false triggering

Wiring Method for OC Output Circuit (with OC1 channel as an example)

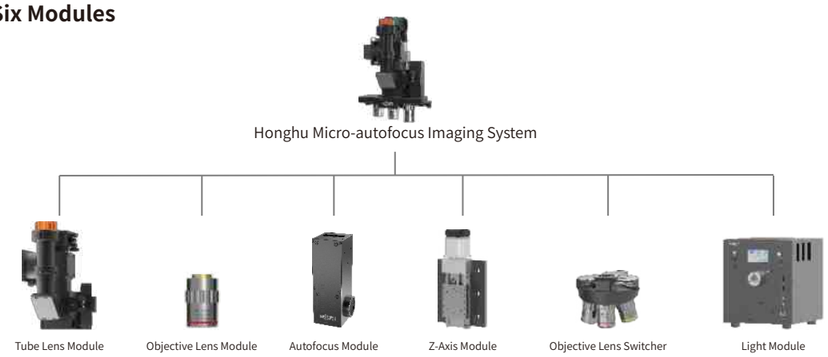


* When the controller detects anomaly in light, the IO gets ON; IO needs external power supply, voltage ranging from DC5V to 36V, a current-limiting resistors shall be connected in series, current should below 200 mA

Honghu Microscopic Autofocus System

- **Support large sensor size up to diagonal 40mm, best match with line scan 8K/5um or 65M camera**
- **High resolution objective lens, supports up to 0.5um resolution**
- **High-speed real-time autofocus tracking through coaxial laser tracking system**
- **High-speed image focusing system can be selected to solve the problem that the laser can not accurately focus in complex background**
- **Kohler coaxial light with external spot fiber and high-brightness cold light, supporting up to 5us exposure time**
- **The push-pull high-precision switcher also supports a 40mm image field of view**
- **Dark field lighting angle can be customized to adapt to different applications**

Six Modules

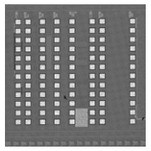


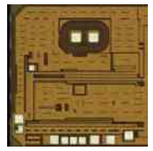
To provide clients with a distinctively featured image

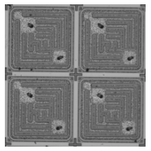
In order to meet the needs of different applications and projects, we adopt modular design and free combinations to provide you with flexible solutions.
Suitable for defect detection in fields such as semiconductor, display panel, PCB, and life science, it provides you with an image with distinct features.

Applications

Silicon Substrate Si
Patterned wafer / Unpatterned wafer / Mask plate


Patterned wafer-
Dirt detection


Patterned wafer-
Oxidization detection

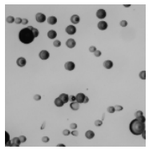

Patterned wafer-
Circuit detection


Unpatterned wafer-
Orange peel surface defects


Unpatterned wafer-
Crack detection

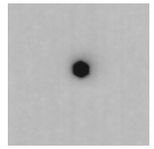

Unpatterned wafer-
Scratch detection

Compound Semiconductor
Silicon Carbide Sic / Gallium Nitride GaN / Sapphire

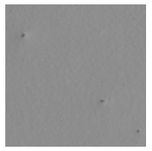

Silicon carbide-
Dislocation defect


Silicon carbide-
Displacement defect

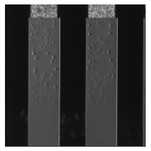

Silicon carbide-
Triangle defect

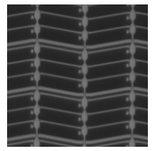

Gallium Nitride-
Hole defect

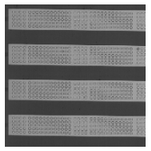

Gallium Nitride-
Scratch defect

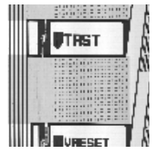

Sapphire-
Convex defect

Traditional Display
LCD / OLED


LCD-Conducting
particle detection


LCD-Circuit detection


LCD-Circuit detection

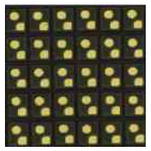


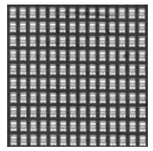
OLED-Via corrosion

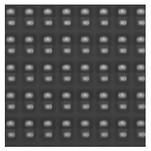

OLED-Rubber width detection


OLED-Collapse detection

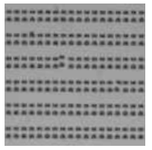
New-type Display
Mini LED / Micro LED


Mini LED-Dirt detection


Mini LED-Surface defect


Mini LED-Dimension detection

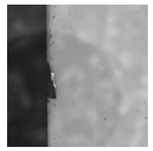

Micro LED-Presence detection

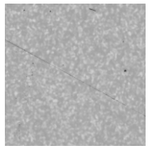

Micro LED-Presence detection

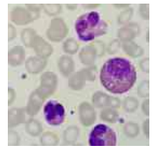

Micro LED-Defect detection

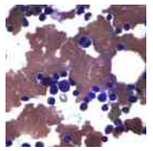
Advanced Packaging / Life Science
TGV / Life science

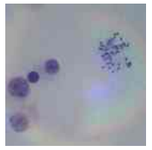

TGV-Hole detection


TGV-Edge breakage defect


TGV-Scratch detection


Life science -hemocyte


Life science–bone marrow biopsy


Life science-chromosome

Line Light

The highest illuminance is up to 1.1 million lx★1(WD: 50mm)

Applications

- Appearance inspection of glass cover plate
- PCB circuit inspection
- Lithium coating, coil appearance defect detection

Technical Specification

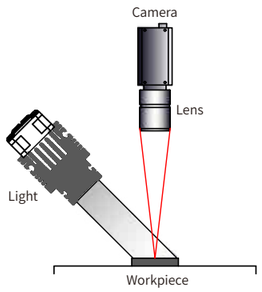
Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	6300-7800K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Accessory	Diffuser, anti-static diffuser
Product Development	Custom light to get best effects

★1 This data includes grating plate, hence for reference only, actual value may be different

★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

LN5	-	400	W	-	FN
Model		Emitting surface length	Color		Fan cooling

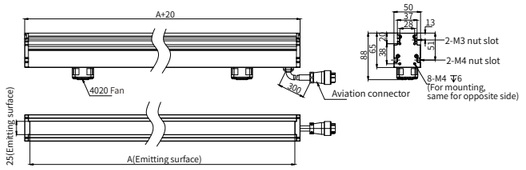


Series	Model★3	Color	WD(mm)	Power(W)★4	Current(A)	Voltage(V)	L × W × H(mm)★5	Weight(kg)	Compatible Extension Cable	Compatible Controller
LN5	LN5-100W-FN	○	50-100	28.8	0.60	48	120×50×88	0.7	FCB-LN3-4P-3(A.1)	PSC5-15048-2
	LN5-200W-FN	○	50-100	57.6	1.20	48	220×50×88	1.1		
	LN5-300W-FN	○	50-100	86.4	1.80	48	320×50×88	1.5		
	LN5-400W-FN	○	50-100	115.2	2.40	48	420×50×88	1.9		
	LN5-500W-FN	○	50-100	144.0	3.00	48	520×50×88	2.3	FCB-LN3-4P-3(A.1)	PSC5-35048-2
	LN5-600W-FN	○	50-100	172.8	3.60	48	620×50×88	2.7		
	LN5-700W-FN	○	50-100	216.0	4.50	48	720×50×88	3.1		
	LN5-800W-FN	○	50-100	230.4	4.80	48	820×50×88	3.5		
	LN5-900W-FN	○	50-100	268.8	5.60	48	920×50×88	3.9		
	LN5-1000W-FN	○	50-100	288.0	6.00	48	1020×50×88	4.3	FCB-LN3-4P-3(A.1)	PSC5-60048-2
	LN5-1100W-FN	○	50-100	336.0	7.00	48	1120×50×88	4.7	FCB-LN3-6P-3(A.1)	PSC5-60048-1
	LN5-1200W-FN	○	50-100	345.6	7.20	48	1220×50×88	5.1		
	LN5-1300W-FN	○	50-100	384.0	8.00	48	1320×50×88	5.5		
	LN5-1400W-FN	○	50-100	432.0	9.00	48	1420×50×88	5.9		
	LN5-1500W-FN	○	50-100	432.0	9.00	48	1520×50×88	6.3		
	LN5-1800W-FN	○	50-100	540.0	11.25	48	1820×50×88	7.5		

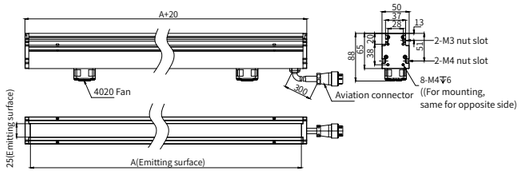
★3 Optional diffuser (model: OT-LN5-XXX-A0-006, XXX refers to emitting length) to achieve uniform lighting of highly reflective workpiece. Or use as backlight and finished product model is named by adding -DF. For example, diffuser model: OT-LN5-500-A0-006, finished product model: LN5-500W-FN-DF

★4 The normal tolerance is +/-10% between the actual product power and power table content

★5 The length of the emitting surface can be customized, the longest length of the whole product can be 3.6 meters, and splicing can reach even longer lengths

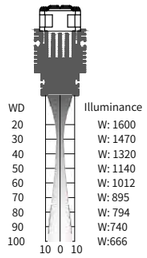


LN5 series drawing: length under 1.5 meters, A represents the length of emitting surface



LN5 series drawing: length longer than 1.5 meters, A represents the length of luminous surface

Divergence Angle and Illumination Distribution Diagram

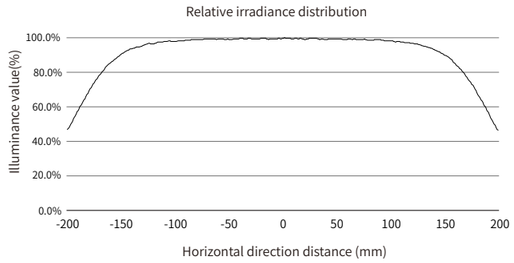


WD	Illuminance
20	W: 1600
30	W: 1470
40	W: 1320
50	W: 1140
60	W: 1012
70	W: 895
80	W: 794
90	W:740
100	W:666

10 0 10

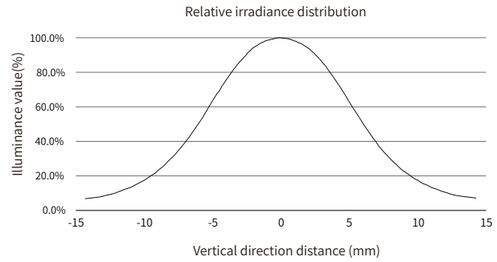
Remark: Unit for distance and width: mm
Illuminance unit: Klx
Test data for LN5-400W-FN, for reference only

Transverse Light Intensity Curve (example: LN5-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: LN5-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

High-Brightness Line Light

LNH2 series light max illumination is up to 2.7 million lx★1 (WD: 50mm)
LNH3 series light max illumination is up to 2.2 million lx★2 (WD: 50mm)

Applications

- Appearance inspection of glass cover plate
- PCB circuit inspection
- Lithium coating, coil appearance defect detection
- More high-speed large-field inspection…

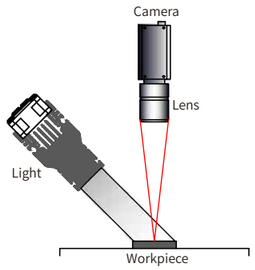
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★3	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★3	6300-7800K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Accessory	Diffuser, anti-static diffuser
Product Development	Custom light to get best effects

★1 This data includes no diffuser or grating plate, hence for reference only, actual value may be different
★2 This data includes grating plate, hence for reference only, actual value may be different
★3 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

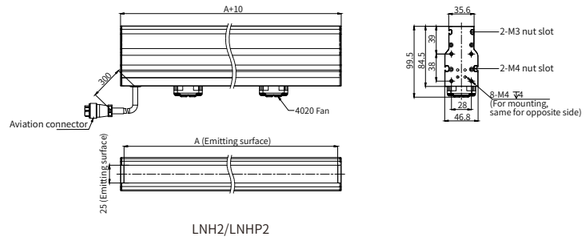
Model Code Description

LNH2	-	400	W	-	FN
Model		Emitting length	Color		Fan cooling

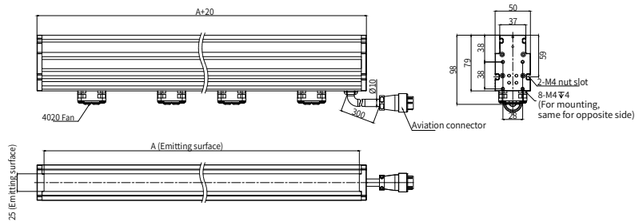


Series	Model★4	Color	WD (mm)	Power (W)★5	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
LNH2/LNHP2	LNH2/LNHP2-100W-FN	○	50-100/100-200	52	1.08	48	110×46.8×99.5	0.5	FCB-LN3-4P-3 (A.1)	PSC5-15048-2
	LNH2/LNHP2-200W-FN	○	50-100/100-200	105	2.19	48	210×46.8×99.5	0.8		
	LNH2/LNHP2-300W-FN	○	50-100/100-200	158	3.29	48	310×46.8×99.5	1.1	FCB-LN3-4P-3 (A.1)	PSC5-35048-2
	LNH2/LNHP2-400W-FN	○	50-100/100-200	210	4.38	48	410×46.8×99.5	1.4		
	LNH2/LNHP2-500W-FN	○	50-100/100-200	264	5.50	48	510×46.8×99.5	1.7		
	LNH2/LNHP2-600W-FN	○	50-100/100-200	316	6.58	48	610×46.8×99.5	2.0	FCB-LN3-6P-3 (A.1)	PSC5-60048-1
LNH3/LNHP3	LNH3/LNHP3-700W-FN	○	50-100/100-200	370	7.70	48	720×50×98	3.25	FCB-LN3-6P-3 (A.1)	PSC5-60048-1
	LNH3/LNHP3-800W-FN	○	50-100/100-200	410	8.50	48	820×50×98	3.70		
	LNH3/LNHP3-900W-FN	○	50-100/100-200	450	9.40	48	920×50×98	4.15		
	LNH3/LNHP3-1000W-FN	○	50-100/100-200	490	10.2	48	1020×50×98	4.60		
	LNH3/LNHP3-1100W-FN	○	50-100/100-200	530	11.0	48	1120×50×98	5.05		
	LNH3/LNHP3-1200W-FN	○	50-100/100-200	570	11.9	48	1220×50×98	5.50		
	LNH3/LNHP3-1300W-FN	○	50-100/100-200	2×325	13.5	48	1320×50×98	5.95		
	LNH3/LNHP3-1400W-FN	○	50-100/100-200	2×350	14.6	48	1420×50×98	6.40	2 FCB-LN3-6P-3 (A.1)	2 PSC5-60048-1
	LNH3/LNHP3-1500W-FN	○	50-100/100-200	2×375	15.6	48	1520×50×98	6.85		

★4 Optional diffuser model: OT-LNH2-XXX-A0-006, XXX refers to emitting length, to achieve uniform lighting of highly reflective workpiece. Or be used as backlight and finished product model is named by adding -DF. For example, diffuser model: OT-LNH2-500-A0-006, finished product model: LNH2-500W-FN-DF
★5 The normal tolerance is +/-10% between the actual product power and power table content.



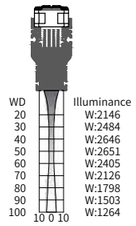
LNH2/LNHP2



LNH3/LNHP3

Remark: A indicates the emitting length

Divergence Angle and Illumination Distribution Diagram

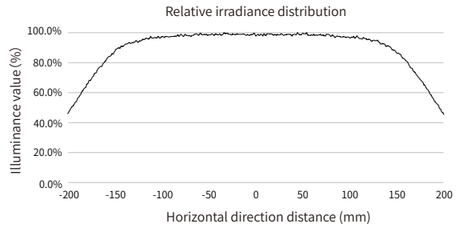


WD	Illuminance
20	W:2146
30	W:2484
40	W:2646
50	W:2651
60	W:2405
70	W:2126
80	W:1798
90	W:1503
100	W:1264

10 0 10

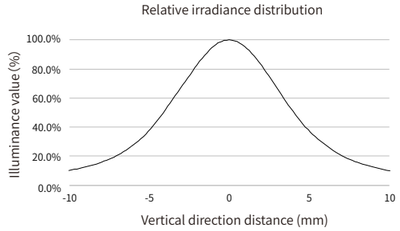
RemarkL: Unit for distance and width: mm
Illuminance unit; Klx
Test data for LNH2-400W-FN, for reference only

Transverse Light Intensity Curve (example: LNH2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: LNH2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

High-Brightness Coaxial Line Light

The maximum illuminance can reach 1 million lx★1 (WD: 50mm)

Applications

- PCB board components testing
- Phone screen bump, color difference detection
- Character, crack detection on smooth surface
- Scratch detection on cylindrical surface, etc

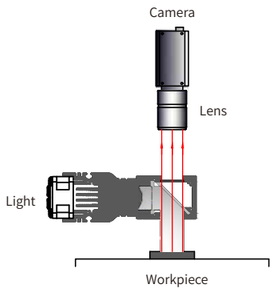
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	7000-8500K
Cooling Method	Fan cooling
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Matching Controller	PSC5 series controller
Accessories	Diffuser, anti-static diffuser, grating plate, dustproof mirror (with dustproof mirror installed at outlet, the light can be used inverted)
Product Development	Custom light to get best effects

★1 This data includes grating plate, hence for reference only, actual value may be different
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

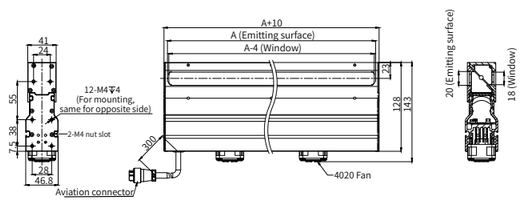
COLNH2	-	400	W	-	FN
Model		Emitting length	Color		Fan cooling



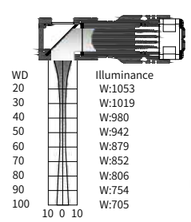
Series	Model	Color	WD (mm)	Power (W)★3	Current (A)	Voltage (V)	L×W×H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
COLNH2	COLNH2-100W-FN	○	50-100	52	1.08	48	110×46.8×143	1.2	FCB-LN3-4P-3 (A.1)	PSC5-15048-2
	COLNH2-200W-FN	○	50-100	105	2.18	48	210×46.8×143	1.6		
	COLNH2-300W-FN	○	50-100	158	3.29	48	310×46.8×143	2.0	FCB-LN3-4P-3 (A.1)	PSC5-35048-2
	COLNH2-400W-FN	○	50-100	210	4.37	48	410×46.8×143	2.4		
	COLNH2-500W-FN	○	50-100	264	5.50	48	510×46.8×143	2.8		
	COLNH2-600W-FN	○	50-100	316	6.58	48	610×46.8×143	3.2	FCB-LN3-6P-3 (A.1)	PSC5-60048-1

★3 The normal tolerance is +/-10% between the actual product power and power table content

Divergence Angle and Illumination Distribution Diagram

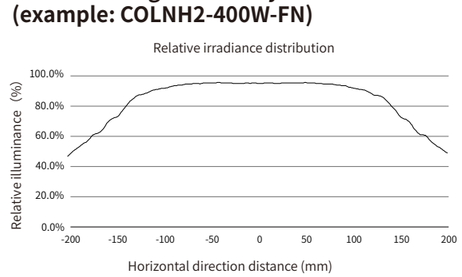


Remark: A indicates the emitting length



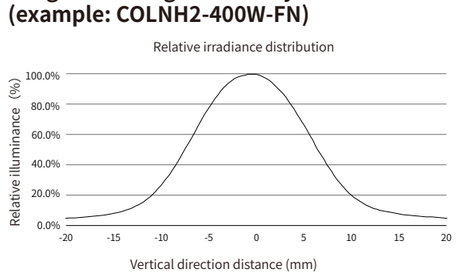
Remark: Unit for distance and width: mm
Illuminance unit: Klx
Test data for COLNH2-400W-FN, for reference only

Transverse Light Intensity Curve (example: COLNH2-400W-FN)



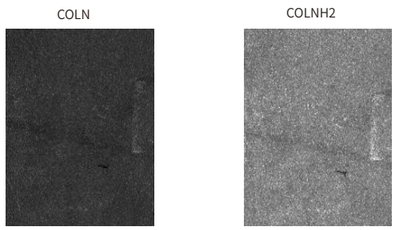
Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: COLNH2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Imaging Example (example: COLNH2-400W-FN)



The brightness of the new version is about 120% higher than the old product

Super-High Brightness Line Light

The illumination is converged by super-high brightness line light
The highest illuminance is up to 4 million lx★1(WD: 50mm)

Applications

- Appearance inspection of glass cover plate
- PCB circuit inspection
- Lithium coating, coil appearance defect detection
- More high-speed large-field inspection…

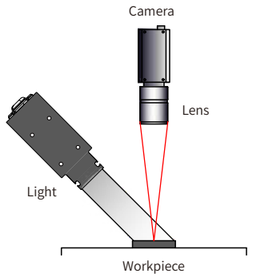
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	6000-7000K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Accessory	Diffuser, anti-static diffuser
Product Development	Custom light to get best effects

★1 This data includes grating plate,hence for reference only, actual value may be different
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model code description

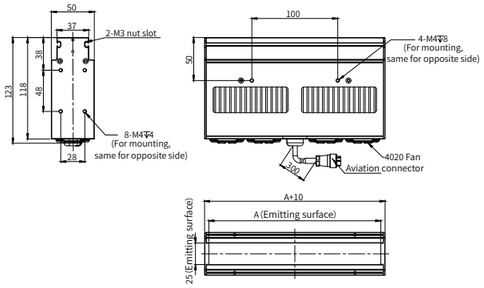
LNHS	-	200	W	-	FN
Model		Emitting length	Color		Fan cooling



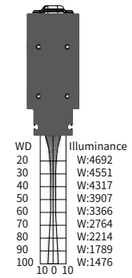
Series	Model★3	Color	WD (mm)	Power (W)★4	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible extension cable	Compatible controller
LNHS	LNHS-200W-FN	○	50-100	186	3.88	48	210×50×123	1.47	FCB-LN3-4P-3 (A.1)	PSC5-35048-2
	LNHS-300W-FN	○	50-100	249	5.19	48	310×50×123	2.21		
	LNHS-400W-FN	○	50-100	374	7.79	48	410×50×123	2.95	FCB-LN3-6P-3 (A.1)	PSC5-60048-1
	LNHS-500W-FN	○	50-100	499	10.40	48	510×50×123	3.69		
	LNHS-600W-FN	○	50-100	576	12.00	48	610×50×123	4.43		
	LNHS-800W-FN	○	50-100	2×374	2×7.79	48	810×50×123	5.91	2 FCB-LN3-6P-3 (A.1)	2 C-PSC5-60048-1-LSE-A
	LNHS-900W-FN	○	50-100	2×420	2×9.1	48	910×50×123	6.65		

★3 Optional diffuser (model: OT-LNHS-XXX-A0-006, XXX refers to emitting length), can be used as backlight, and finished product model is named by adding -DF
★4 The normal tolerance is+/-10% between the actual product power and power table content

Divergence Angle and Illumination Distribution Diagram

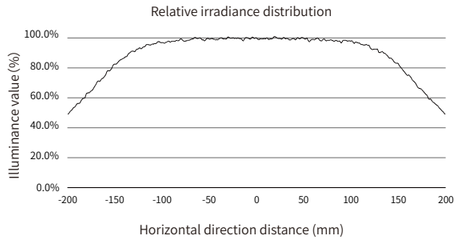


Remark: A indicates the emitting length



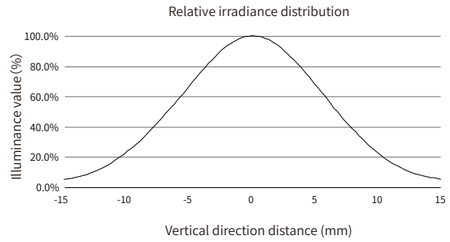
Remark: Unit for distance and width: mm
Illuminance unit; Klx
Test data for LNHS-600W-FN, for reference only

Transverse Light Intensity Curve (example: LNHS-400W-FN)



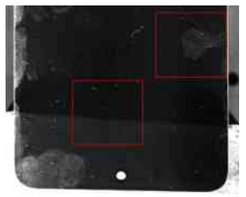
Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: LNHS-400W-FN)

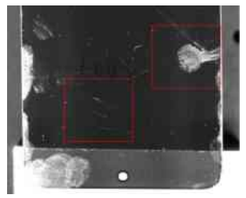


Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Imaging comparison between super-high brightness line light and high brightness line light (same emitting angle and camera exposure parameters)



High-brightness line light



Super-high brightness line light

Fanless High-Brightness Line Light

The highest illuminance is up to 1.1 million lx★1(WD: 50mm)

Applications

- Dust free environment inspection
- Appearance inspection of glass cover plate
- PCB circuit inspection
- Lithium coating, coil appearance defect detection

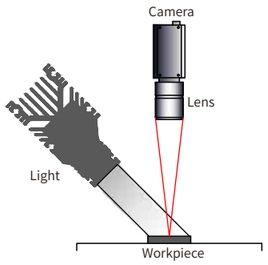
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	7000-8500K
Cooling Method	Natural cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Accessory	Diffuser, anti-static diffuser
Product Development	Custom light to get best effects

★1 This data includes grating plate, hence for reference only, actual value may be different
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

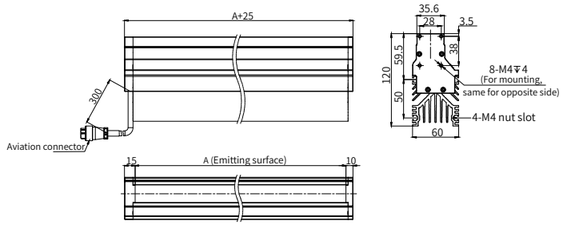
Model Code Description

LNHN	-	400	W
Model		Emitting length	Color



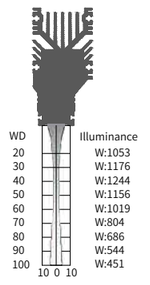
Series	Model	Color	WD (mm)	Power (W)★3	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
LNHN	LNHN-100W	○	50-100	26	0.54	48	125×60×120	0.9	FCB-LN3-4P-3 (A.1)	PSC5-15048-2
	LNHN-200W	○	50-100	51	1.06	48	225×60×120	1.5		
	LNHN-300W	○	50-100	58	1.20	48	325×60×120	2.1		
	LNHN-400W	○	50-100	90	1.87	48	425×60×120	2.7		
	LNHN-500W	○	50-100	113	2.35	48	525×60×120	3.3		
	LNHN-600W	○	50-100	115	2.39	48	625×60×120	3.9		

★3 The normal tolerance is +/-10% between the actual product power and power table content



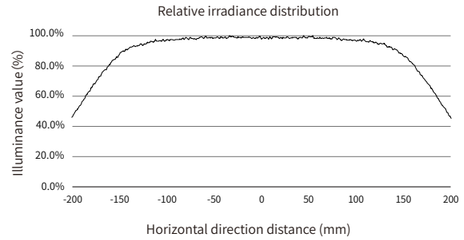
Remark: A indicates the emitting length

Divergence Angle and Illumination Distribution Diagram



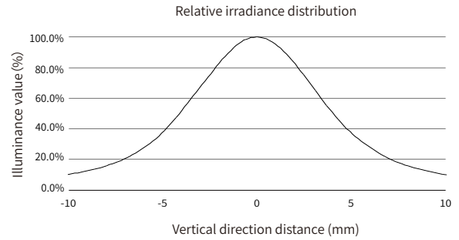
Remark: Unit for distance and width: mm
Illuminance unit: Klx
Test data for LNHN-400W, for reference only

Transverse Light Intensity Curve (example: LNHN-400W)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: LNHN-400W)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Crossed High-Brightness Line Light

Change the emitting angle of the light to realize the defect detection of moving object, the highest illuminance is up to 1.3 million lx★1 (WD: 50mm)

Applications

- Scratches inspection of clear film
- Scratches inspection on the surface of glass cover plate

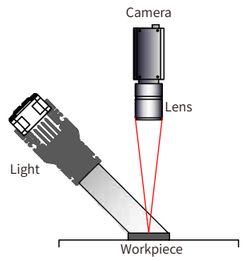
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	7000-8500K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Accessory	/
Product Development	Custom light to get best effects

★1 This data includes grating plate, hence for reference only, actual value may be different
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

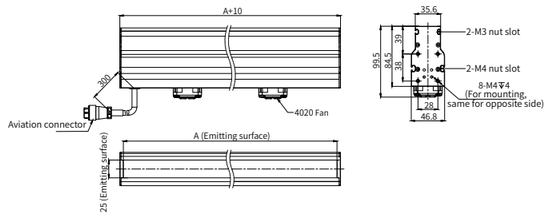
Model Code Description

LNC2	-	400	W	-	FN
Model		Emitting length	Color		Fan cooling



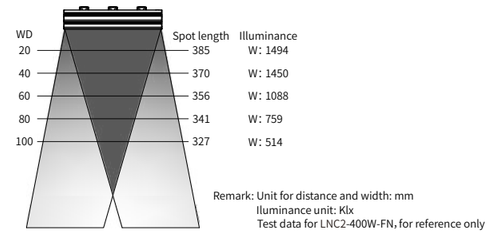
Series	Model	Color	WD (mm)	Power (W)★3	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
LNC2	LNC2-100W-FN	○	50-100	52	1.08	48	110×46.8×99.5	0.5	FCB-LN3-4P-3 (A.1)	PSC5-15048-2
	LNC2-200W-FN	○	50-100	105	2.18	48	210×46.8×99.5	0.8	FCB-LN3-4P-3 (A.1)	
	LNC2-300W-FN	○	50-100	158	3.29	48	310×46.8×99.5	1.1	FCB-LN3-4P-3 (A.1)	PSC5-35048-2
	LNC2-400W-FN	○	50-100	210	4.37	48	410×46.8×99.5	1.4		
	LNC2-500W-FN	○	50-100	264	5.50	48	510×46.8×99.5	1.7		
	LNC2-600W-FN	○	50-100	316	6.58	48	610×46.8×99.5	2.0	FCB-LN3-6P-3 (A.1)	PSC5-60048-1

★3 The normal tolerance is +/-10% between the actual product power and power table content



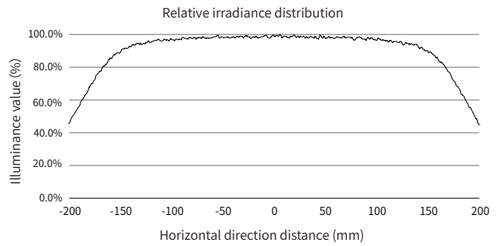
Remark: A indicates the emitting length

Divergence Angle and Illumination Distribution Diagram



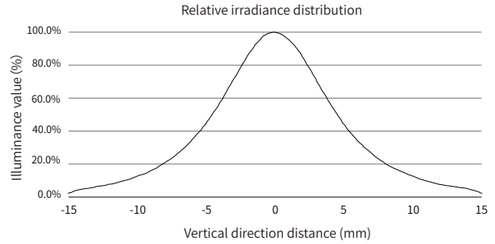
Remark: Unit for distance and width: mm
Illuminance unit: Klx
Test data for LNC2-400W-FN, for reference only

Transverse Light Intensity Curve (example: LNC2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary

Longitudinal Light Intensity Curve (example: LNC2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary

Imaging Example (example: LNC2-400W-FN)

Same lens, aperture, exposure time, light brightness

LNC Series

LNC2 Series

Sequence-Function Line Light

Natural air heat dissipation, fanless design, small size, easy to install
Multi-group lights instantly and sequentially switch, one station integrates multiple imaging effects
Using high-speed constant voltage logic controller to instantly increase brightness

Applications

- Appearance inspection of glass cover plate
- Laptop case inspection
- Power battery shell defect inspection

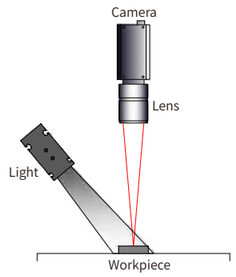
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★1	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★1	6000-7000K
Cooling Method	Natural cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PHDL series controller
Accessory	/
Product Development	Custom light to get best effects

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

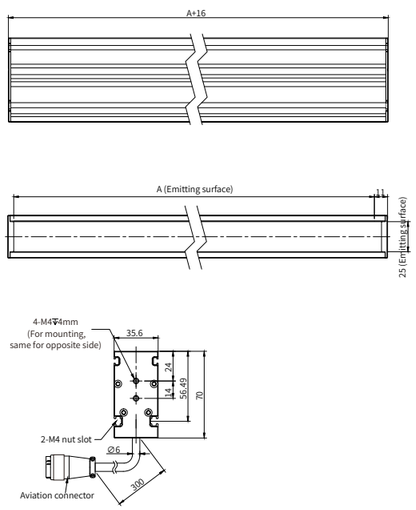
Model Code Description

LNSD	-	200	W
Model		Emitting length	Color



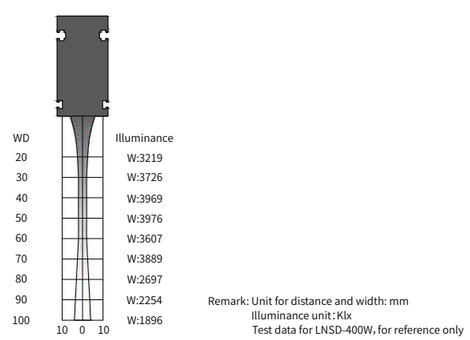
Series	Model	Color	WD (mm)	Overdrive Current (A)[2]	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
LNSD	LNSD-100W	○	50-100	1.30	48	116×35.6×70	0.3	FCB-12PIN-6C-P-3-6008A	PHDL series controller
	LNSD-200W	○	50-100	2.60	48	216×35.6×70	0.6		
	LNSD-300W	○	50-100	3.90	48	316×35.6×70	0.9		
	LNSD-400W	○	50-100	5.20	48	416×35.6×70	1.1		
	LNSD-500W	○	50-100	6.50	48	516×35.6×70	1.4		
	LNSD-600W	○	50-100	7.80	48	616×35.6×70	1.7		

★2 The normal tolerance is +/-10% between the actual product current and current table



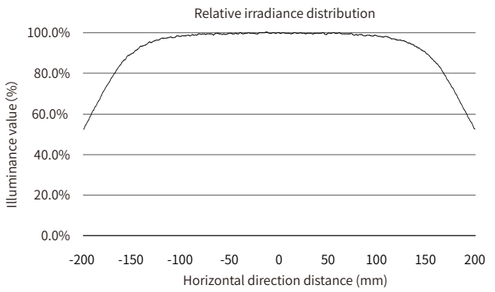
Remark: A indicates the emitting length

Divergence Angle and Illumination Distribution Diagram



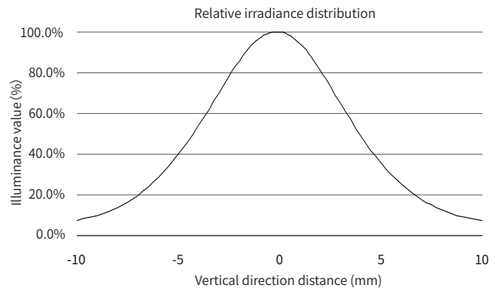
Remark: Unit for distance and width: mm
Illuminance unit：Klx
Test data for LNSD-400W, for reference only

Transverse Light Intensity Curve (example: LNSD-400W)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: LNSD-400W)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Tunneled Line Light

The highest illuminance is up to 0.66 million lx★1(WD: 10mm)

Applications

- Printed character defects inspection
- PCB surface defects inspection
- Lithium battery polarity defects inspection

Technical Specification

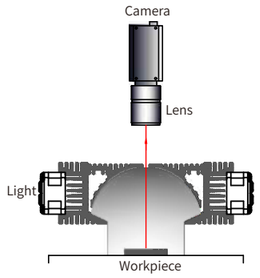
Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength)★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white)★2	5500-7000K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5 series controller
Product Development	Custom light to get best effects

★1 This data includes grating plate, hence for reference only, actual value may be different

★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

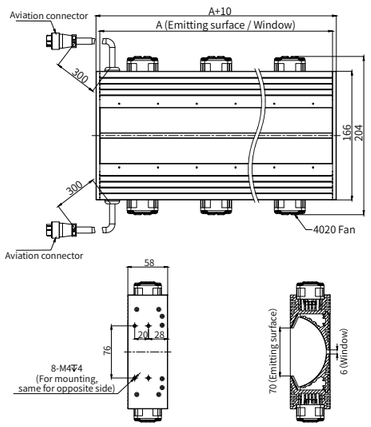
Model Code Description

TLN2	-	400	W	-	FN
Model		Emitting surface length	Color		Fan cooling



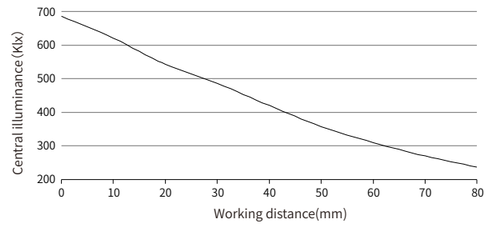
Series	Model	Color	WD (mm)	Power (W) ★3	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
TLN2	TLN2-100W-FN	○	10-50	2×37	2×0.77	48	110×204×58	1.3	2 FCB-LN3-4P-3(A.1)	PSC5-15048-2
	TLN2-200W-FN	○	10-50	2×75	2×1.565	48	210×204×58	2.0	2 FCB-LN3-4P-3(A.1)	PSC5-35048-2
	TLN2-300W-FN	○	10-50	2×112	2×2.335	48	310×204×58	2.7		
	TLN2-400W-FN	○	10-50	2×150	2×3.125	48	410×204×58	3.4	2 FCB-LN3-4P-3(A.1)	PSC5-60048-2
	TLN2-500W-FN	○	10-50	2×205	2×4.27	48	510×204×58	4.1		
	TLN2-600W-FN	○	10-50	2×225	2×4.69	48	610×204×58	4.8		
	TLN2-700W-FN	○	10-50	2×262	2×5.46	48	710×204×58	5.5		
	TLN2-800W-FN	○	10-50	2×270	2×5.625	48	810×204×58	6.2		
	TLN2-900W-FN	○	10-50	2×337	2×7.02	48	910×204×58	6.9	2 FCB-LN3-6P-3(A.1)	2 PSC5-60048-1
	TLN2-1000W-FN	○	10-50	2×375	2×7.815	48	1010×204×58	7.6		
	TLN2-1100W-FN	○	10-50	2×412	2×8.585	48	1110×204×58	8.3		
	TLN2-1200W-FN	○	10-50	2×448	2×9.335	48	1210×204×58	9.0		
	TLN2-1300W-FN	○	10-50	2×460	2×9.585	48	1310×204×58	9.7		
	TLN2-1400W-FN	○	10-50	2×480	2×10	48	1410×204×58	10.4		
	TLN2-1500W-FN	○	10-50	2×500	2×10.415	48	1510×204×58	11.1		

★3 The normal tolerance is +/-10% between the actual product power and power table content

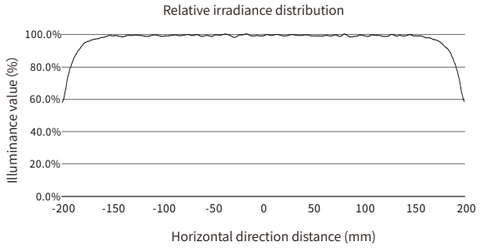


Remark: A indicates the emitting length

Illuminance and Working Distance Curve

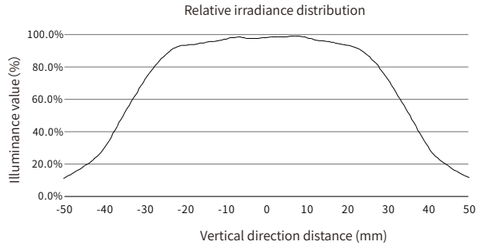


Transverse Light Intensity Curve (example: TLN2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: TLN2-400W-FN)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Tunneled Line Light

The highest illuminance is up to 0.39 million lx★1(WD: 10mm)

Application

- Printing industry inspection

Technical Specification

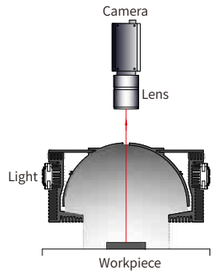
Input Voltage	DC48V
LED Color	W/R/B
Light Color (wavelength) ★2	Red: 620-630nm Blue: 460-470nm
Color Temperature (white) ★2	5500-7000K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40℃, humidity: 20~85% (non-condensation)
Supporting Controller	PSC5-60048-1
Accessory	/
Product Development	Custom light to get best effects

★1 Data for reference only, actual value may be different

★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

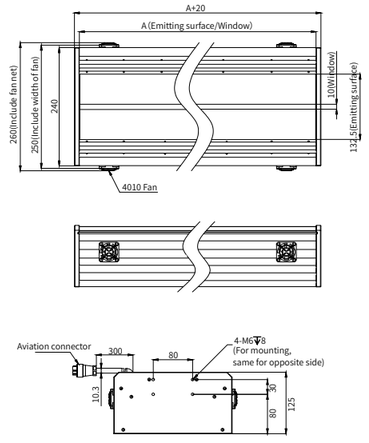
Model Code Description

C-TLN	-	480	W	-	FN
Model		Emitting surface length	Color		Fan cooling



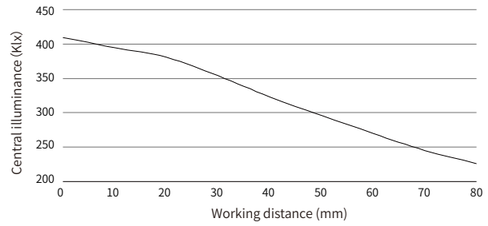
Model	Color	WD (mm)	Power (W)★3	Current (A)	Voltage (V)	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
C-TLN-280W-FN-X	○	10-50	260	5.41	48	300×260×125	5.3	FCB-LN3-6P-3(A.1)	PSC5-60048-1
C-TLN-380W-FN-X	○	10-50	380	7.91	48	400×260×125	6.6		
C-TLN-480W-FN-X	○	10-50	400	8.33	48	500×260×125	8.0		
C-TLN-580W-FN-X	○	10-50	500	10.41	48	600×260×125	9.4		
C-TLN-680W-FN-X	○	10-50	580	12.08	48	700×260×125	10.8		
C-TLN-780W-FN-X	○	10-50	2×330	2×6.88	48	800×260×125	12.2	2 FCB-LN3-6P-3(A.1)	2 PSC5-60048-1
C-TLN-880W-FN-X	○	10-50	2×375	2×7.81	48	900×260×125	13.6		
C-TLN-980W-FN-X	○	10-50	2×410	2×8.54	48	1000×260×125	15.0		
C-TLN-1080W-FN-X	○	10-50	2×450	2×9.38	48	1100×260×125	16.4		
C-TLN-1180W-FN-X	○	10-50	2×500	2×10.41	48	1200×260×125	17.8		
C-TLN-1280W-FN-X	○	10-50	2×530	2×11.04	48	1300×260×125	19.2		
C-TLN-1380W-FN-X	○	10-50	2×570	2×11.88	48	1400×260×125	20.6		
C-TLN-1480W-FN-X	○	10-50	4×305	4×6.35	48	1500×260×125	22.0	4 FCB-LN3-6P-3(A.1)	4 PSC5-60048-1
C-TLN-1580W-FN-X	○	10-50	4×325	4×6.77	48	1600×260×125	23.4		

★3 The normal tolerance is +/-10% between the actual product power and power table content

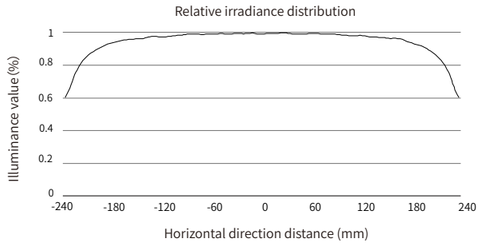


Remark: A indicates the emitting length

Illuminance and Working Distance Curve

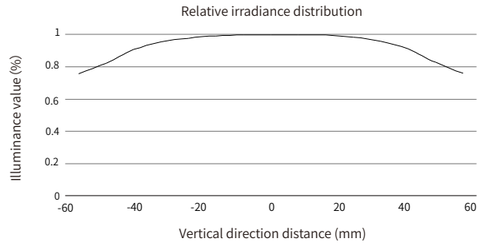


Transverse Light Intensity Curve (example: C-TLN-480W-FN-X)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: C-TLN-480W-FN-X)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Multi-Angle Line Light

Super-high brightness, more reflective illuminance
Central highest illuminance is up to 5 million lx ★1

Applications

- Cell phone glass cover appearance inspection, such as scratches, bubbles, stains and so on
- LCD substrate appearance inspection
- PCB bare board appearance inspection
- More industry applications to be explored…

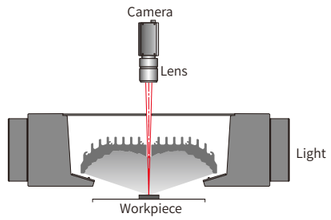
Technical Specification

Input Voltage	DC 48V
LED Color	W/R/B
Light Color (wavelength) ★2	Red: 620-630nm Blue: 460-475nm
Color Temperature (white) ★2	5800-7300K
Cooling Method	Fan cooling
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-consendation)
Supporting Controller	PSC5 series controller
Custom Length Limit	Emitting length ⩽700mm
Product Development	Custom light to get best effects

★1 Includes no diffuser, data for reference only, actual value may be different
★2 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

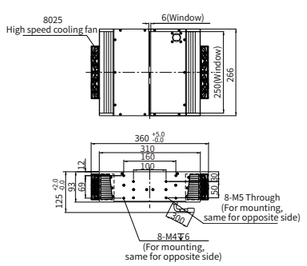
Model Code Description

LNMA	-	250	W	-	G	FN
Model		Emitting surface length	Color		Glass	Fan cooling

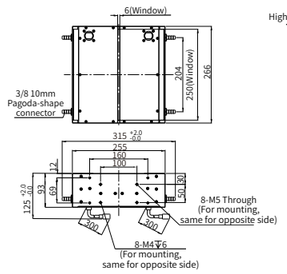


Series	Model	Color	WD (mm)	Emitting Angle (°)	Emitting Area (mm)	Power (W)★3	L × W × H (mm)	Weight (kg)	Compatible Extension Cable	Compatible Controller
LNMA	LNMA-250W/B-GFN-A	○ ●	11-12	143	250×6	580.0	266×360×93	7.7	FCB-LN3-6P-3(A.1)	PSC5-60048-1
	LNMA-250R-GFN-A	●	11-12	143	250×6	262.5	266×360×93	7.7	FCB-LN3-4P-3(A.1)	PSC5-35048-2
	LNMA-250W-GWC-A	○	11-12	143	250×6	2×350	266×315×93	6.8	FCB-LN3-6P-3(A.1)	2 PSC5-60048-1
	LNMA-400W-GFN-A	○	11-12	143	400×6	2×368	416×360×93	10.5	FCB-LN3-6P-3(A.1)	2 PSC5-60048-1
	LNMA-600W-GFN	○	11-12	143	600×6	2×420	616×360×93	18.0		

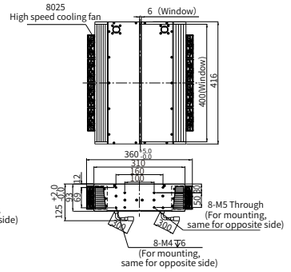
★3 The normal tolerance is +/-10% between the actual product power and power table content



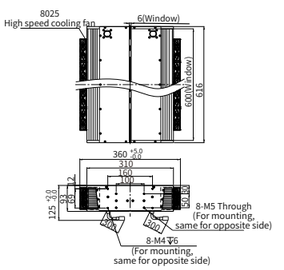
LNMA-250W/B/R-GFN-A



LNMA-250W-GWC-A

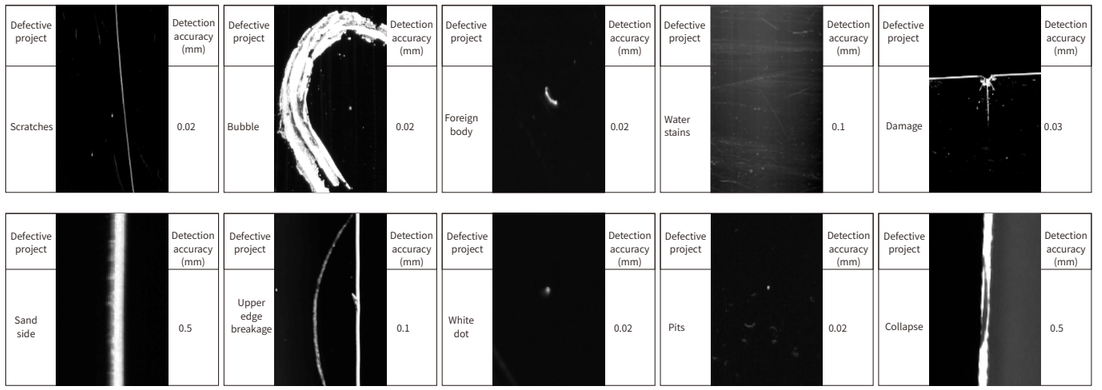


LNMA-400W-GFN-A



LNMA-600W-GFN

Detection results of phone glass cover before silk-screen process



High-Angle Ring Light

360° direct illumination, which reduces shadow

Applications

- Character recognition
- Product appearance inspection
- QR code recognition
- Connector pins inspection

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm Blue: 460-475nm	Green: 520-530nm
Color Temperature (white)★1	6500-8500K	
Operating Environment (indoors)	Temperature: 0~40℃, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer plate 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

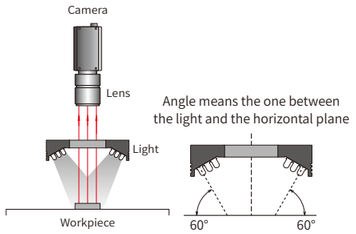
Model Code Description

HDR3	–	50	–	90	R
Model		OD		LED angle	Color

Real Product image of Diffuser

Flat diffuser

Cambered diffuser

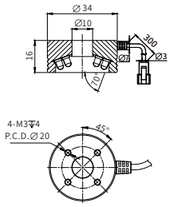


Model	Color	LED rings	WD(mm)	Flat Diffuser	Cambered Diffuser	Voltage (V)	Rated Power (W)★2			OD×ID×H (mm)	Weight (g)
							●	○	● ●		
HDR3-34-70	● ○ ● ●	2	15-25	OT-HDR3-34-70-A0-006	-	24	1.3	1.5	2.0	34×10×16	30
HDR3-37-90	● ○ ● ●	2	15-25	OT-HDR3-37-90-A0-006	-	24	0.9	1.8	1.8	37×14×18	35
HDR3-42-65	● ○ ● ●	2	19-29	OT-HDR3-42-65-A0-006	-	24	1.8	1.9	2.3	42×18×18	42
HDR3-50-45	● ○ ● ●	3	4-16	OT-HDR3-50-45-A0-006	-	24	3.1	3.6	3.6	50×20×19	54
HDR3-50-60	● ○ ● ●	2	22-31	OT-HDR3-50-60-A0-006	OT-HDR3-50-60-A2-010	24	2.2	2.6	2.6	50×24×16	46
HDR3-50-75	● ○ ● ●	2	56-72	OT-HDR3-50-75-A0-006	-	24	1.8	2.6	2.6	50×28×16	44
HDR3-50-90	● ○ ● ●	2	26-36	OT-HDR3-50-90-A0-006	-	24	1.8	2.3	2.9	50×25×19	52
HDR3-60-60	● ○ ● ●	2	30-38	OT-HDR3-60-60-A0-006	-	24	2.6	3.0	3.0	60×33.5×16	60
HDR3-66-60	● ○ ● ●	3	27-43	OT-HDR3-66-60-A0-006	OT-HDR3-66-60-A2-010	24	4.4	4.4	4.4	66×30×17	87
HDR3-70-45	● ○ ● ●	3	12-35	OT-HDR3-70-45-A0-006	OT-HDR3-70-45-A2-010	24	4.8	5.1	5.1	70×38×21	100
HDR3-70-60	● ○ ● ●	3	28-46	OT-HDR3-70-60-A0-006	OT-HDR3-70-60-A2-010	24	4.4	4.9	4.9	70×30×20	114
HDR3-70-90	● ○ ● ●	3	36-46	OT-HDR3-70-90-A0-006	-	24	4.4	5.8	5.8	70×35×22	113
HDR3-74-60	● ○ ● ●	3	28-45	OT-HDR3-74-60-A0-006	OT-HDR3-74-60-A2-010	24	5.2	5.4	5.4	74×35×20	114
HDR3-90-45	● ○ ● ●	3	50-90	OT-HDR3-90-45-A0-006	OT-HDR3-90-45-A2-010	24	6.0	6.1	6.1	90×56×20.5	129
HDR3-90-70	● ○ ● ●	4	68-103	OT-HDR3-90-70-A0-006	OT-HDR3-90-70-A2-010	24	6.3	6.3	6.3	90×50×20	151
HDR3-100-90	● ○ ● ●	5	100-150	OT-HDR3-100-90-A0-006	-	24	7.0	7.1	7.1	100×40×20	229
HDR3-110-65	● ○ ● ●	5	50-100	OT-HDR3-110-65-A0-006	OT-HDR3-110-65-A2-010	24	9.0	9.0	9.0	110×60×25	266
HDR3-120-50	● ○ ● ●	4	30-48	OT-HDR3-120-50-A0-006	OT-HDR3-120-50-A2-010	24	9.8	9.8	9.9	120×80×21	215
HDR3-120-75	● ○ ● ●	5	100-134	OT-HDR3-120-75-A0-006	OT-HDR3-120-75-A2-010	24	11.4	11.4	11.4	120×65×17	240
HDR3-120-90	● ○ ● ●	6	120-200	OT-HDR3-120-90-A0-006	-	24	11.0	11.3	11.3	120×50×18	311
HDR3-150-90	● ○ ● ●	9	150-240	OT-HDR3-150-90-A0-006	-	24	13.6	13.7	13.7	150×25×22.5	603
HDR3-180-60	● ○ ● ●	5	106-140	OT-HDR3-180-60-A0-006	OT-HDR3-180-60-A2-010	24	18.9	19.0	19.0	180×126×23	488
HDR3-210-60	● ○ ● ●	6	116-166	OT-HDR3-210-60-A0-006	OT-HDR3-210-60-A2-010	24	28.8	28.8	28.8	210×145×25	691

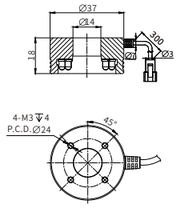
★2 When equipped with the standard flat diffuser, LED shadow is eliminated and uniformity is improved, resulting in model designation: HDR3-XX-DFF

★3 When equipped with the standard angled diffuser, LED shadow is eliminated, uniformity is improved, and a wider range of lighting angles is provided, resulting in model designation: HDR3-XX-DFA

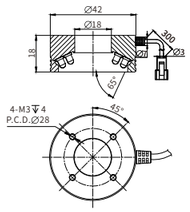
★4 The normal tolerance is +/-10% between the actual product power and power table content



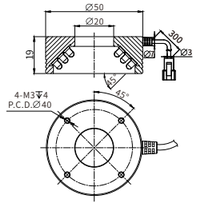
HDR3-34-70



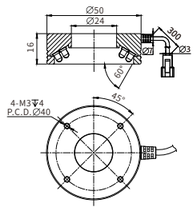
HDR3-37-90



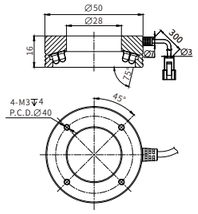
HDR3-42-65



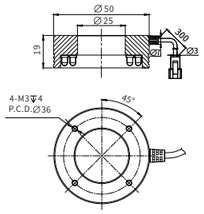
HDR3-50-45



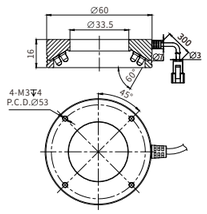
HDR3-50-60



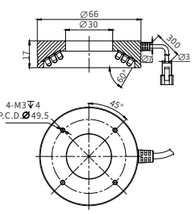
HDR3-50-75



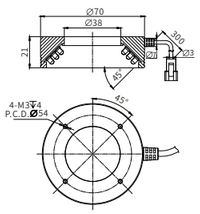
HDR3-50-90



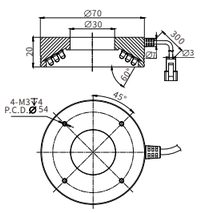
HDR3-60-60



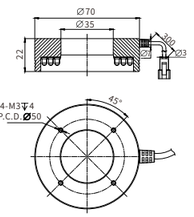
HDR3-66-60



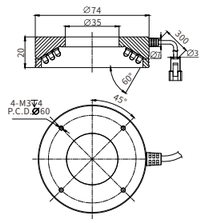
HDR3-70-45



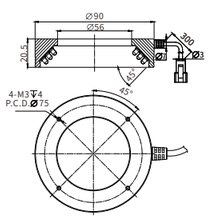
HDR3-70-60



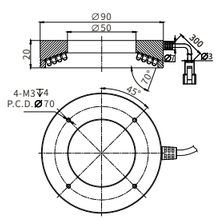
HDR3-70-90



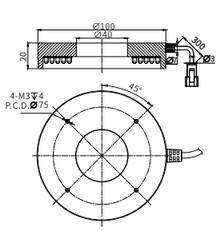
HDR3-74-60



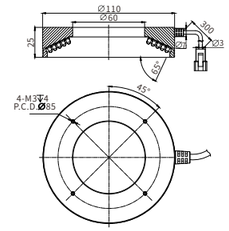
HDR3-90-45



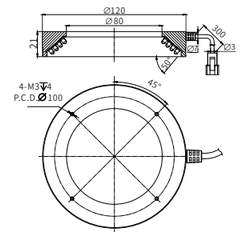
HDR3-90-70



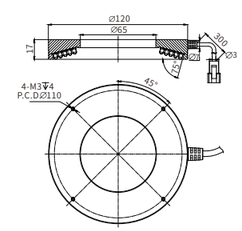
HDR3-100-90



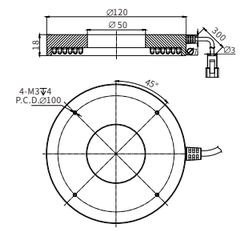
HDR3-110-65



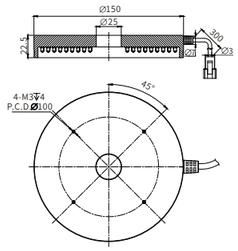
HDR3-120-50



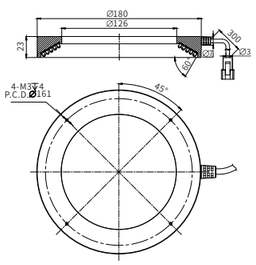
HDR3-120-75



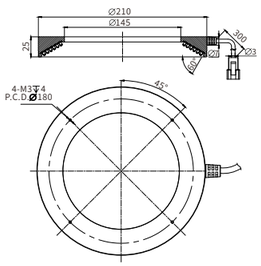
HDR3-120-90



HDR3-150-90



HDR3-180-60



HDR3-210-60

Low-Angle Ring Light

Ideal for edge detection

Applications

- Defect on metal surface
- Edge detection of metal pieces
- PCB positioning

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6500-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer plate	
	2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

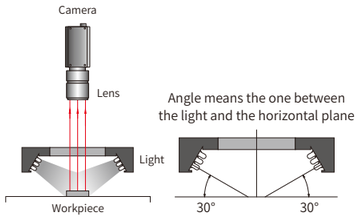
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

LAR3	-	50	-	30	W
Model		OD		LED angle	Color

Real Product Image of Diffuser

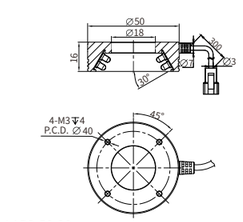
Cambered diffuser



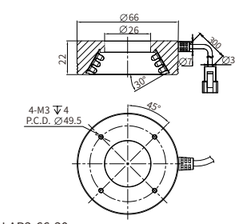
Model	Color	LED ring	WD (mm)	Cambered Diffuser	Voltage (V)	Rated Power (W)★2			OD×ID×H (mm)	Weight (g)
						●	○	● ●		
LAR3-50-30	● ○ ● ●	2	5	OT-LAR3-50-30-A2-010	24	1.8	2.6	2.6	50×18×16	53
LAR3-66-30	● ○ ● ●	3	0-10	OT-LAR3-66-30-A2-010	24	4.4	4.4	4.4	66×26×22	122
LAR3-74-30	● ○ ● ●	2	9-14	OT-LAR3-74-30-A2-010	24	3.5	4.2	5.1	74×44×19	86
LAR3-100-30	● ○ ● ●	3	12-21	OT-LAR3-100-30-A2-010	24	7.7	9.5	9.5	100×66×22	150
LAR3-120-30	● ○ ● ●	3	17-27	OT-LAR3-120-30-A2-010	24	10	11.9	11.9	120×80×22	190
LAR3-132-15	● ○ ● ●	3	3-12	OT-LAR3-132-15-A2-010	24	8.9	10.7	13.1	132×96×22	260
LAR3-150-30	● ○ ● ●	4	15-29	OT-LAR3-150-30-A2-010	24	15.2	15.2	15.9	150×108×22	270
LAR3-180-30	● ○ ● ●	5	24-34	OT-LAR3-180-30-A2-010	24	20.5	20.5	20.5	180×132×29	471
LAR3-208-25	● ○ ● ●	3	31-41	OT-LAR3-208-25-A2-010	24	13.9	19.2	19.2	208×172×22	443
LAR4-50-00	● ○ ● ●	1	0-10	OT-LAR4-50-00-A0-010	24	0.8	1.2	1.2	50×18×11	43
LAR4-75-00	● ○ ● ●	1	0-10	OT-LAR4-75-00-A0-010	24	1.2	1.9	1.9	75×39×11	70
LAR4-96-00	● ○ ● ●	1	0-10	OT-LAR4-96-00-A0-010	24	2.3	2.7	2.7	96×60×11	90
LAR4-120-00	● ○ ● ●	1	0-10	OT-LAR4-120-00-A0-010	24	2.3	3.5	3.5	120×86×11	120
LAR4-146-00	● ○ ● ●	1	0-10	OT-LAR4-146-00-A0-010	24	3.0	4.2	4.2	146×104×11	164
LAR4-176-00	● ○ ● ●	1	0-10	OT-LAR4-176-00-A0-010	24	4.6	5.4	5.4	176×134×11	200
LAR4-206-00	● ○ ● ●	1	0-10	OT-LAR4-206-00-A0-010	24	4.6	6.5	6.5	206×164×11	239

★2 Eliminate LED shadow, improve uniformity, and provides a wider range of lighting angles, resulting in model designations: LAR3-XX-DFA or LAR4-XX-DFA

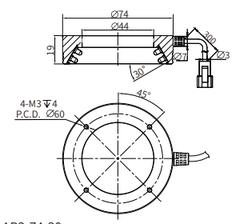
★3 The normal tolerance is +/-10% between the actual product power and power table content



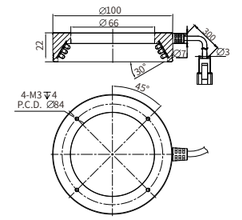
LAR3-50-30



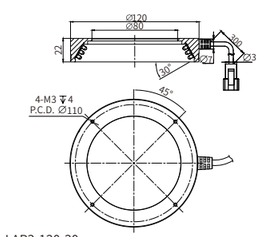
LAR3-66-30



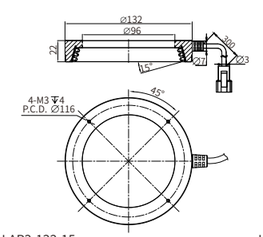
LAR3-74-30



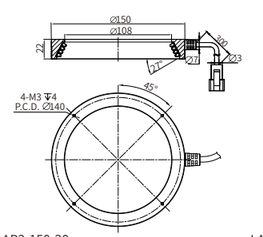
LAR3-100-30



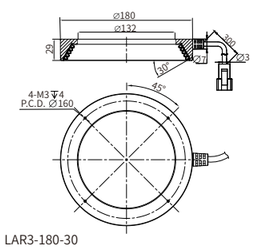
LAR3-120-30



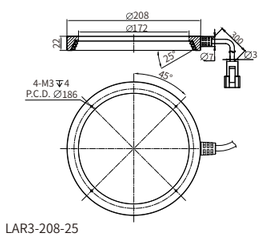
LAR3-132-15



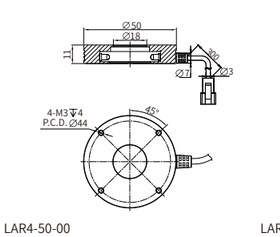
LAR3-150-30



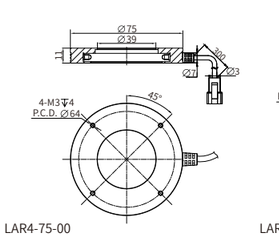
LAR3-180-30



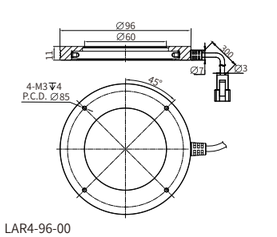
LAR3-208-25



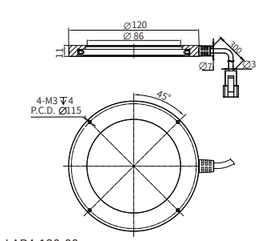
LAR4-50-00



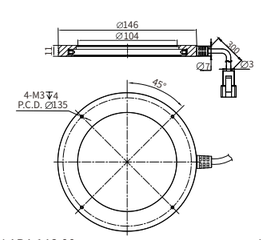
LAR4-75-00



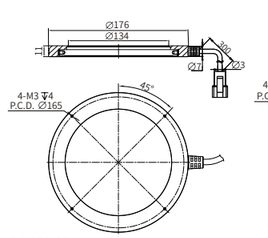
LAR4-96-00



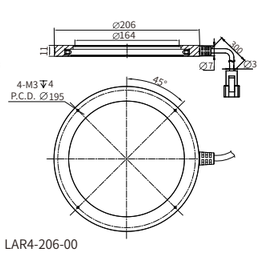
LAR4-120-00



LAR4-146-00



LAR4-176-00



LAR4-206-00

High-Power Ring Light

Three times brighter than regular ring light under recommended working distance*[1]

Applications

- High-speed shooting illumination
- Long-distance illumination

Technical Specification

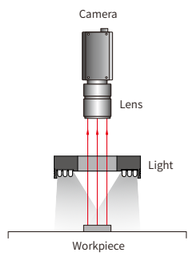
Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)*[2]	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)*[2]	5800-7300K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer plate	
	2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

*[1] The data is for reference only, and the actual values may vary

*[2] Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

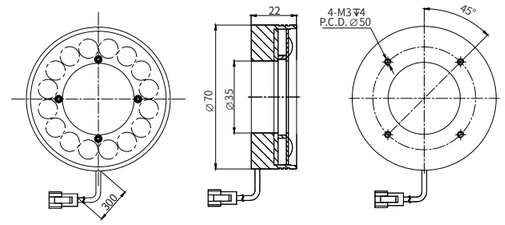
Model Code Description

HR	–	70	–	90	W
Model		OD		LED angle	Color

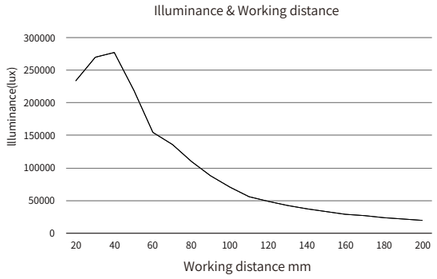


Series	Model	Color	WD (mm)	Voltage (V)	Rated Power(W)*[3]	OD×ID×H(mm)	Weight (g)
HR	HR-70-90W	○	60-70	24	5.3	70X35X22	115

*[3] The normal tolerance is +/-10% between the actual product power and power table content

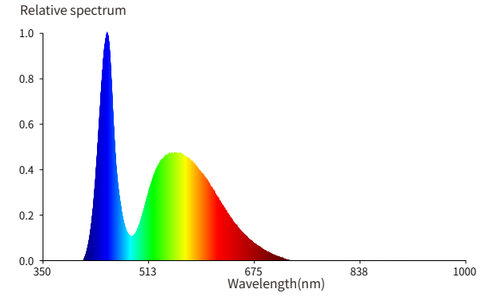


Working Distance-illuminance Curve (example: HR-70-90W)



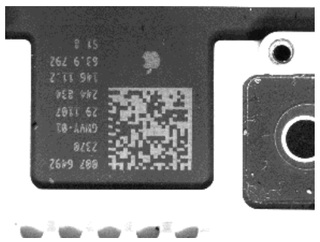
Brightness 100%, at different working distance, may differ in real value

Spectrum Chart (example: HR-70-90W)

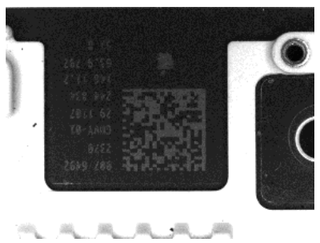


Imaging Example (example: HR-70-90W)

Same lens, aperture, exposure time, light brightness



High power ring light, grey value 195 (QR code area)



Regular ring light, grey value 60 (QR code area)

Bar Light

SMD LEDs with special optical lens. High light efficiency

Applications

- Defect inspection on metal surface
- Character recognition of printings
- Absence inspection of PCB components
- Position and recognition inspection of large field objects

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm Blue: 460-475nm	Green: 520-530nm
Color Temperature (white)★1	5800-7300K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer 2. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	
Product DeveloPment	Custom light to get best effects	

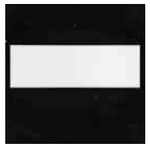
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

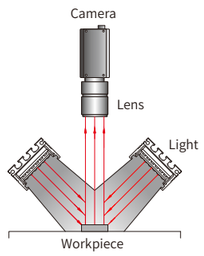
HDL3	-	194	X	30	R
Model		Emitting surface length		Emitting surface width	Color

Real Product Image of Diffuser

High transmittance diffuser



Low transmittance diffuser

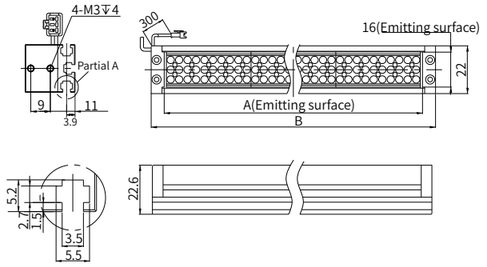


Model	Color	LED Rows	Emitting Surface L × W (mm)	High Transmittance Diffuser	Low Transmittance Diffuser	Voltage (V)	Rated Power (W)★2		L × W × H (mm)	Weight (g)
							●	○ ● ●		
HDL3-41X16	● ○ ● ●	3	41×16	P-HDL3-41X16-004	OT-HDL3-41X16-A1-005	24	1.3	1.7	53×22×22.6	50
HDL3-80X16	● ○ ● ●	3	80×16	P-HDL3-80X16-004	OT-HDL3-80X16-A1-005	24	2.7	3.4	92×22×22.6	80
HDL3-119X16	● ○ ● ●	3	119×16	P-HDL3-119X16-004	OT-HDL3-119X16-A1-005	24	4.0	5.1	131×22×22.6	100
HDL3-158X16	● ○ ● ●	3	158×16	P-HDL3-158X16-004	OT-HDL3-158X16-A1-005	24	5.5	6.9	170×22×22.6	120
HDL3-197X16	● ○ ● ●	3	197×16	P-HDL3-197X16-004	OT-HDL3-197X16-A1-005	24	6.6	8.6	209×22×22.6	150
HDL3-275X16	● ○ ● ●	3	275×16	P-HDL3-275X16-004	OT-HDL3-275X16-A1-005	24	6.6	12.1	287×22×22.6	210
HDL3-50X30	● ○ ● ●	6	50×30	OT-HDL3-50X30-A0-004	OT-HDL3-50X30-A1-005	24	1.7	2.9	62×36×22.6	80
HDL3-74X30	● ○ ● ●	6	74×30	OT-HDL3-74X30-A0-004	OT-HDL3-74X30-A1-005	24	2.6	4.4	86×36×22.6	100
HDL3-98X30	● ○ ● ●	6	98×30	OT-HDL3-98X30-A0-004	OT-HDL3-98X30-A1-005	24	3.5	5.8	110×36×22.6	120
HDL3-122X30	● ○ ● ●	6	122×30	OT-HDL3-122X30-A0-004	OT-HDL3-122X30-A1-005	24	4.7	6.6	134×36×22.6	140
HDL3-146X30	● ○ ● ●	6	146×30	OT-HDL3-146X30-A0-004	OT-HDL3-146X30-A1-005	24	5.2	8.7	158×36×22.6	160
HDL3-170X30	● ○ ● ●	6	170×30	OT-HDL3-170X30-A0-004	OT-HDL3-170X30-A1-005	24	6.1	10.2	182×36×22.6	180
HDL3-194X30	● ○ ● ●	6	194×30	OT-HDL3-194X30-A0-004	OT-HDL3-194X30-A1-005	24	7.0	12.1	206×36×22.6	200
HDL3-218X30	● ○ ● ●	6	218×30	OT-HDL3-218X30-A0-004	OT-HDL3-218X30-A1-005	24	7.8	13.7	230×36×22.6	220
HDL3-242X30	● ○ ● ●	6	242×30	OT-HDL3-242X30-A0-004	OT-HDL3-242X30-A1-005	24	9.0	15.5	254×36×22.6	240
HDL3-266X30	● ○ ● ●	6	266×30	OT-HDL3-266X30-A0-004	OT-HDL3-266X30-A1-005	24	9.6	16.7	278×36×22.6	260
HDL3-290X30	● ○ ● ●	6	290×30	OT-HDL3-290X30-A0-004	OT-HDL3-290X30-A1-005	24	10.5	18.2	302×36×22.6	280
HDL3-338X30	● ○ ● ●	6	338×30	OT-HDL3-338X30-A0-004	OT-HDL3-338X30-A1-005	24	12.2	21.5	350×36×22.6	325
HDL3-386X30	● ○ ● ●	6	386×30	OT-HDL3-386X30-A0-004	OT-HDL3-386X30-A1-005	24	14.6	25.3	398×36×22.6	370
HDL3-434X30	● ○ ● ●	6	434×30	OT-HDL3-434X30-A0-004	OT-HDL3-434X30-A1-005	24	16.4	28.5	446×36×22.6	410
HDL3-506X30	● ○ ● ●	6	506×30	OT-HDL3-506X30-A0-004	OT-HDL3-506X30-A1-005	24	19.5	33.5	518×36×22.6	470
HDL3-578X30	● ○ ● ●	6	578×30	OT-HDL3-578X30-A0-004	OT-HDL3-578X30-A1-005	24	21.9	38.0	590×36×22.6	530
HDL3-626X30	● ○ ● ●	6	626×30	OT-HDL3-626X30-A0-004	OT-HDL3-626X30-A1-005	24	25.0	39.5	638×36×22.6	640
HDL3-698X30	● ○ ● ●	6	698×30	P-HDL3-698X30-004	OT-HDL3-698X30-A1-005	24	28.0	40.0	710×36×22.6	680
HDL3-794X30	● ○ ● ●	6	794×30	P-HDL3-794X30-004	OT-HDL3-794X30-A1-005	24	30.0	42.0	806×36×22.6	700
HDL3-842X30	● ○ ● ●	6	842×30	P-HDL3-842X30-004	OT-HDL3-842X30-A1-005	24	35.0	46.0	854×36×22.6	760
HDL3-1202X30	● ○ ● ●	6	1202×30	P-HDL3-1202X30-004	OT-HDL3-1202X30-A1-005	24	43.6	70.0	1214×36×22.6	1080
HDL3-1298X30	● ○ ● ●	6	1298×30	OT-HDL3-1298X30-A0-004	OT-HDL3-1298X30-A0-005	24	2×27	2×35.5	1310×36×22.6	1120

★2 When equipped with the standard high-transmission diffuser, LED shadow is eliminated and uniformity is improved, resulting in model designations: HDL3-XX*16-DF or HDL3-XX*30-DF

★3 When equipped with the standard low-transmission diffuser, it can be used as a backlight, resulting in model designations: HDL3-XX*16-DFL or HDL3-XX*30-DFL.

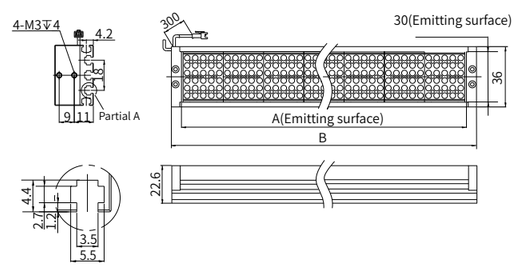
★4 The normal tolerance is +/-10% between the actual product power and power table content



Partial view of mounting slot for M3 nut

Model	Size(mm) A	Size(mm) B	Rated power(W) R	Rated power(W) W/G/B	Weight (g)
HDL3-41X16	41	53	1.3	1.7	50
HDL3-80X16	80	92	2.7	3.4	80
HDL3-119X16	119	131	4.0	5.1	100
HDL3-158X16	158	170	5.5	6.9	120
HDL3-197X16	197	209	6.6	8.6	150
HDL3-275X16	275	287	6.6	12.1	210

Please refer to the marks shown above



Partial view of mounting slot for M3 nut

Model	Size(mm) A	Size(mm) B	Rated Power(W) R	Rated Power(W) W/G/B	Weight (g)
HDL3-50X30	50	62	1.7	2.9	80
HDL3-74X30	74	86	2.6	4.4	100
HDL3-98X30	98	110	3.5	5.8	120
HDL3-122X30	122	134	4.7	6.6	140
HDL3-146X30	146	158	5.2	8.7	160
HDL3-170X30	170	182	6.1	10.2	180
HDL3-194X30	194	206	7.0	12.1	200
HDL3-218X30	218	230	7.8	13.7	220
HDL3-242X30	242	254	9.0	15.5	240
HDL3-266X30	266	278	9.6	16.7	260
HDL3-290X30	290	302	10.5	18.2	280

Model	Size(mm) A	Size(mm) B	Rated Power(W) R	Rated Power(W) W/G/B	Weight (g)
HDL3-338X30	338	350	12.2	21.5	325
HDL3-386X30	386	398	14.6	25.3	370
HDL3-434X30	434	446	16.4	28.5	410
HDL3-506X30	506	518	19.5	33.5	470
HDL3-578X30	578	590	21.9	38.0	530
HDL3-626X30	626	638	25.0	39.5	640
HDL3-698X30	698	710	28.0	40.0	680
HDL3-794X30	794	806	30.0	42.0	700
HDL3-842X30	842	854	35.0	46.0	760
HDL3-1202X30	1202	1214	43.6	70.0	1080
HDL3-1298X30	1298	1310	2X27	2X35.5	1120

Please refer to the marks shown above

Single-Row Bar Light

Single-row DIP LED, compact size, good directivity

Application

- Pin position inspection on special-shape DIP units

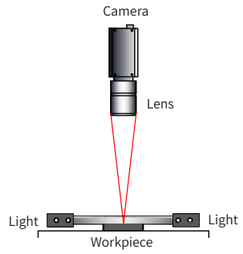
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength) ★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white) ★1	6500-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer 2. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

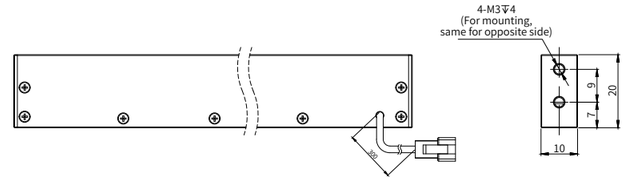
Model Code Description

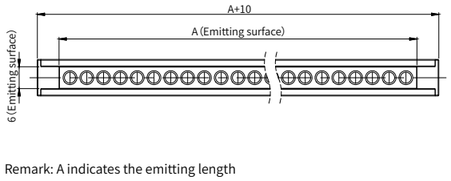
HBL	-	100	X	6	W
Model		Emitting surface length		Emitting surface width	Color



Series	Model	Color	LED Rows	Voltage (V)	Power (W) ★2	L × W × H (mm)	Weight (g)	Compatible controller
HBL	HBL-30X6	○●	1	24	0.7	40×20×10	20	PD5-6024-4
	HBL-60X6	○●	1	24	1.2	70×20×10	35	
	HBL-70X6	○●	1	24	1.2	80×20×10	40	
	HBL-100X6	○●	1	24	1.8	110×20×10	55	
	HBL-150X6	○●	1	24	2.6	160×20×10	80	

★2 The normal tolerance is +/-10% between the actual product power and power table content





Remark: A indicates the emitting length

Combined Bar Light

Multiple bar lights combination, each angle and brightness of bar lights can be adjusted individually

Applications

- Absence inspection of PCB components
- Position and identification of large-field object
- Directional defect inspection for concave & convex and scratches

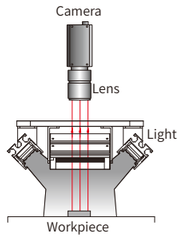
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5800-7300K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer 2. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

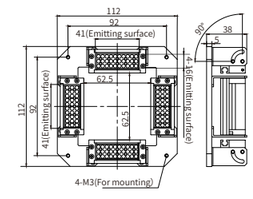
Model Code Description

HDLM3	-	119	X	119	R	-	A
Model		Emitting surface length		Emitting surface width	Color		Version

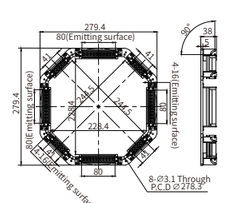


Series	Model	Color	Opening Hole L × W (mm)	Voltage (V)	Rated Power (single) (W)★2		L × W × H (mm)	Weight (g)
					●	○ ● ●		
HDLM3-A	HDLM3-41X41-A	● ○ ● ●	62.5×62.5	24	4×1.3	4×1.7	112×112×38	300
	HDLM3-80X41-A	● ○ ● ●	228.4×228.4	24	4×2.7+4×1.3	4×3.4+4×1.3	279.4×279.4×38	750
	HDLM3-80X80-A	● ○ ● ●	101.5×101.5	24	4×2.7	4×2.7	151×151×38	400
	HDLM3-119X119-A	● ○ ● ●	140.5×140.5	24	4×4	4×5.1	190×190×38	580
	HDLM3-218X146-A	● ○ ● ●	235.5×163.5	24	2×7.8+2×5.2	2×13.7+2×8.7	307.5×235.5×38	1100
	HDLM3-218X218-A	● ○ ● ●	235.5×235.5	24	4×7.8	4×13.7	307.5×307.5×38	1200
	HDLM3-290X290-A	● ○ ● ●	307.5×307.5	24	4×10.5	4×18.2	379.5×379.5×38	1510
	HDLM3-386X386-A	● ○ ● ●	403.5×403.5	24	4×14.6	4×25.3	475.5×475.5×38	1950

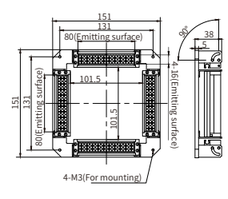
★2 The normal tolerance is +/-10% between the actual product power and power table content



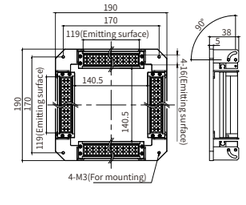
HDLM3-41X41



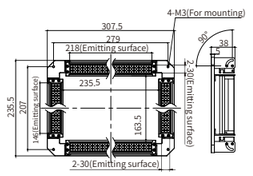
HDLM3-80X41



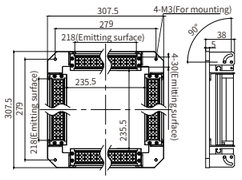
HDLM3-80X80



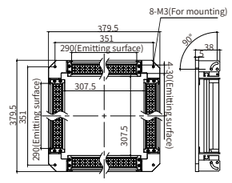
HDLM3-119X119



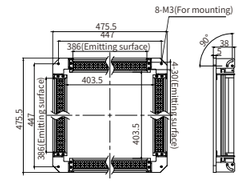
HDLM3-218X146



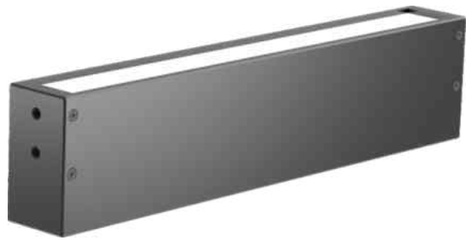
HDLM3-218X218



HDLM3-290X290



HDLM3-386X386



Narrow-Angle Bar Light

High directivity, dark-field lighting for large-field object. Illuminance is up to 135klx*[1] (WD: 50mm)

Applications

- Dust detection for LCD module
- Dirt inspection on glass cover-plate
- Surface detection like crack and so on

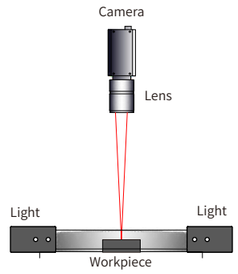
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/B/G	
Light Color (wavelength)*[2]	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)*[2]	5500-7000K	
Cooling Method	Natural cooling	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer 2. Anti-static plate (surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	

*[1] This data includes grating plate, hence for reference only, actual value may be different
*[2] Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

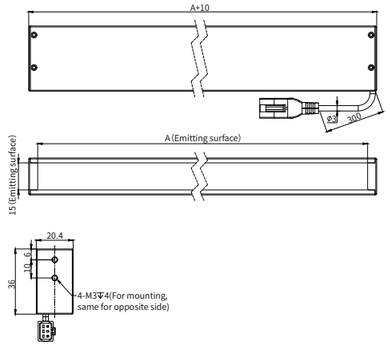
Model Code Description

HLD	-	200	X	15	W
Model		Emitting surface length		Emitting surface width	Color

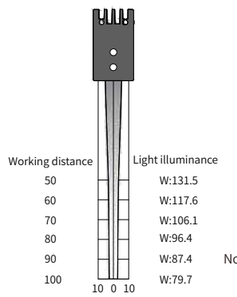


Series	Model	Color	WD (mm)	Voltage (V)	Power (W)*[3]	L × W × H (mm)	Weight (g)	Compatible Controller
HLD	HLD-50X15	● ○ ● ●	50-100	24	3.5	60×20.4×36	70	PS2C-3624-2 PD5-6024-4
	HLD-100X15	● ○ ● ●	50-100	24	5.4	110×20.4×36	110	
	HLD-150X15	● ○ ● ●	50-100	24	7.3	160×20.4×36	150	
	HLD-200X15	● ○ ● ●	50-100	24	9.2	210×20.4×36	190	
	HLD-250X15	● ○ ● ●	50-100	24	11.1	260×20.4×36	230	
	HLD-300X15	● ○ ● ●	50-100	24	13.0	310×20.4×36	270	
	HLD-350X15	● ○ ● ●	50-100	24	14.9	360×20.4×36	310	
	HLD-400X15	● ○ ● ●	50-100	24	16.8	410×20.4×36	350	
	HLD-450X15	● ○ ● ●	50-100	24	18.7	460×20.4×36	390	
	HLD-500X15	● ○ ● ●	50-100	24	20.5	510×20.4×36	430	

*[3] The normal tolerance is +/-10% between the actual product power and power table content



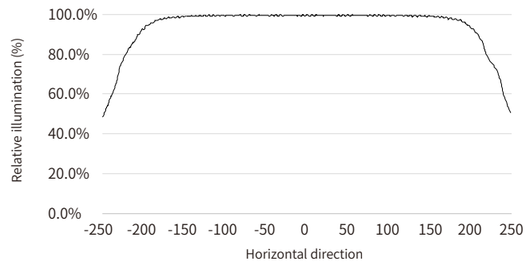
Divergence Angle and Illuminance Chart



Note: Distance width unit: mm
Illuminance distance: klx
Above test data for HLD-500X15W. Data for reference only

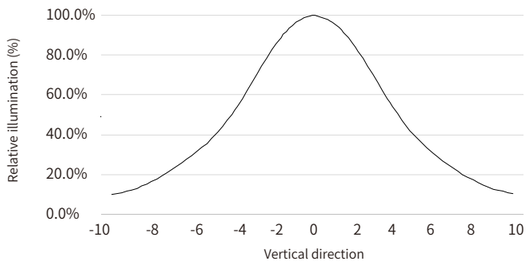
Remark: A indicates the emitting length

Transverse Light Intensity Curve (example: HLD-500X15W)



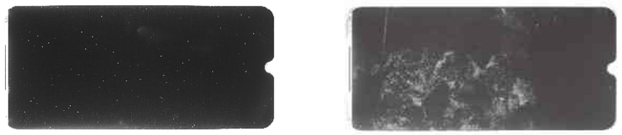
Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Longitudinal Light Intensity Curve (example: HLD-500X15W)



Theoretical values at 100% brightness and 50mm working distance; actual measurements may vary.

Imaging Example (example: HLD-250X15W)



Long-Distance Bar Light

High brightness, long distance, illuminance achieves 7klx*[1] at 2m distance

Applications

- Logistics transportation, track and vehicle inspection
- Dusty and humid environment
- More long-distance applications are to be explored...

Technical Specification

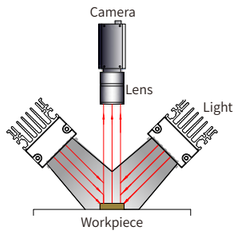
Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)*[2]	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)*[2]	5800-7300K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer 2. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

*[1] The data is for reference only, and the actual values may vary

*[2] Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

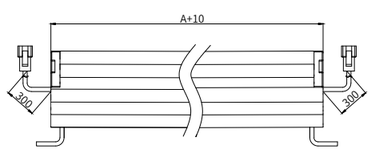
Model Code Description

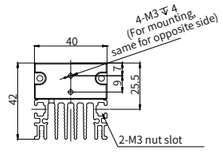
HL2	-	150	X	30	W
Model		Emitting surface length		Emitting surface width	Color



Series	Model	Color	WD (mm)	Voltage (V)	Rated Power (W)*[2]	L × W × H (mm)	Weight (g)
HL2	HL2-150X30	○	500-1000	24	15	160×40×42	287
	HL2-300X30	○	500-1000	24	30	310×40×42	546
	HL2-450X30	○	500-1000	24	45	460×40×42	805
	HL2-600X30	○	500-1000	24	60	610×40×42	1064
	HL2-750X30	○	500-1000	24	70	760×40×42	1323
	HL2-900X30	○	500-1000	24	2×45	910×40×42	1582
	HL2-1050X30	○	500-1000	24	2×53	1060×40×42	1841
	HL2-1200X30	○	500-1000	24	2×60	1210×40×42	2100
	HL2-1500X30	○	500-1000	24	2×70	1510×40×42	2400

*[2] The normal tolerance is +/-10% between the actual product power and power table content

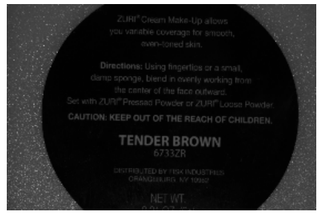




Model	Size(mm) A	Rated Power(W) W/R/G/B	Weight (g)
HL2-150X30	150	15	287
HL2-300X30	300	30	546
HL2-450X30	450	45	805
HL2-600X30	600	60	1064
HL2-750X30	750	70	1323
HL2-900X30	900	90	1582
HL2-1050X30	1050	105	1841
HL2-1200X30	1200	120	2100
HL2-1500X30	1500	140	2400

70W < Rated power means 2CH
Rated power ⩽ 70W means 1CH

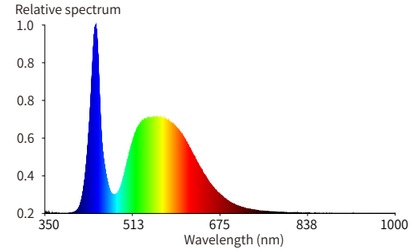
Imaging Example (same exposure time)



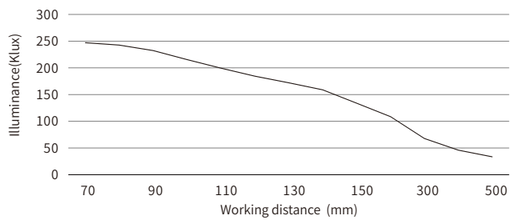
HDL3-146X30W imaging

HL2-150X30W imaging

Spectrum Chart (example: HL2-150X30W)

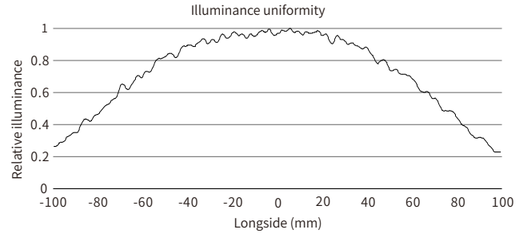


Working Distance-illumination Curve (example: HL2-150X30W)

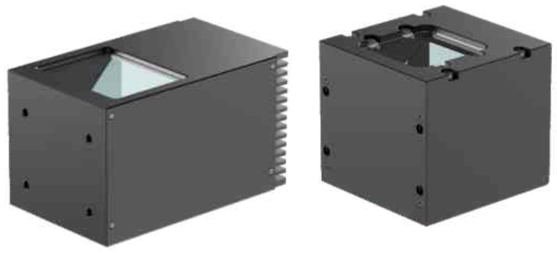


Brightness 100%, at different working distance, may differ in real value

Uniformity Curve (example: HL2-150X30W)



Brightness 100%, working distance 500mm, may differ in real value



Coaxial Light

CO3 series has integrated enclosure
More stable in structure, with faster delivery time and lower cost

Applications

- Appearance inspection of smooth surface
- Mark point position
- Defects inspection on PCB like short and cut circuit,ect.

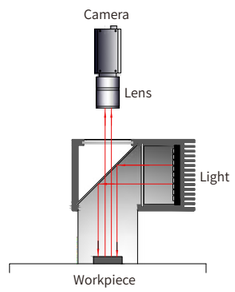
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

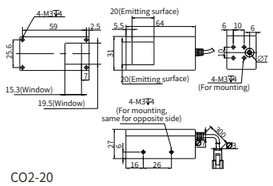
Model Code Description

CO3	-	50	R
Model		Emitting surface	Color

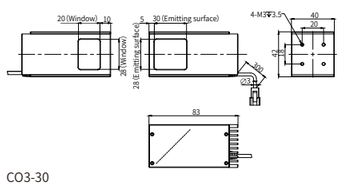


Series	Model	Color	Voltage (V)	Rated Power (W)★2		L × W × H (mm)	Weight (g)	Compatible Controller
CO2/CO3/ COSQ2	CO2-20	● ○ ● ●	24	2.2	2.1	64×31×27	110	PS2C-3624-2 PD5-6024-4
	CO3-30	● ○ ● ●	24	5.8	5.8	83×42×40	190	
	COSQ2-40	● ○ ● ●	24	2.7	3.3	52×50×47	125	
	CO3-40	● ○ ● ●	24	8.5	8.5	93×52×50	250	
	CO3-50	● ○ ● ●	24	10.5	10.5	103×62×60	350	
	CO3-60	● ○ ● ●	24	13.0	13.0	113×72×70	460	
	CO3-70	● ○ ● ●	24	17.0	17.0	123×82×80	590	
	CO3-80	● ○ ● ●	24	19.0	19.0	133×92×90.4	740	
	CO2-100	● ○ ● ●	24	17.7	26.8	146×110×107	1010	
	CO2-120	● ○ ● ●	24	21.2	27.0	166×130×127	1400	
	CO2-150X120	● ○ ● ●	24	17.0	20.7	166×160×127	1660	
	CO2-200X180	● ○ ● ●	24	24.2	25.2	310×212×187	4800	

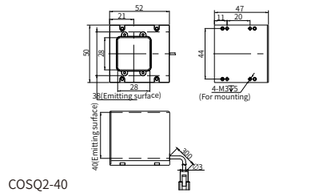
★2 The normal tolerance is +/-10% between the actual product power and power table content



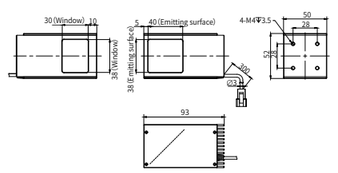
CO2-20



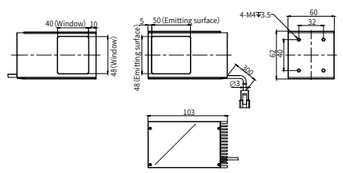
CO3-30



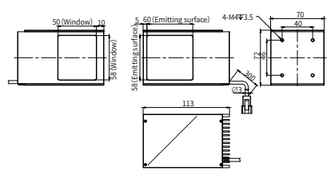
COSQ2-40



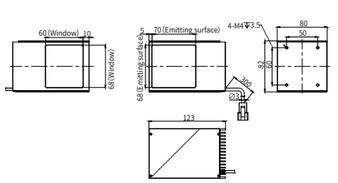
CO3-40



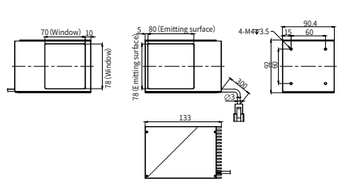
CO3-50



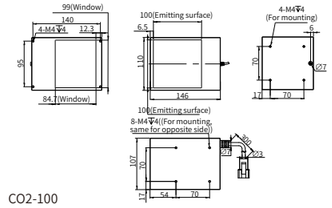
CO3-60



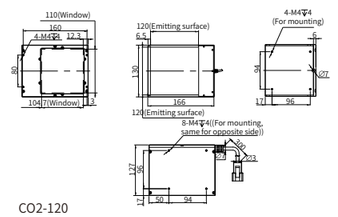
CO3-70



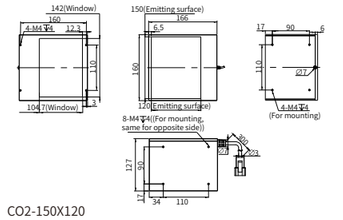
CO3-80



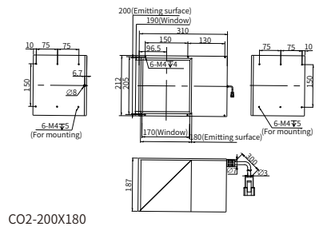
CO2-100



CO2-120



CO2-150X120



CO2-200X180

High-Brightness Coaxial Light

3-4 times brighter than regular CO3 series coaxial

Applications

- Reflective surface detection, like pits, damage, defects
- Printed circuit board detection, like character, pattern
- Mark point position
- Two-dimensional code recognition, etc

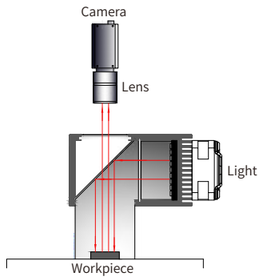
Technical Cpecification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

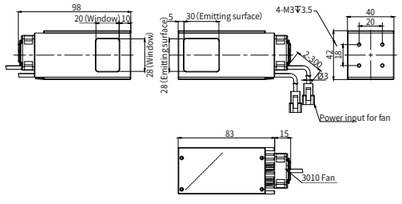
Model Code Description

COG	-	40	W
Model		Emitting surface	Color

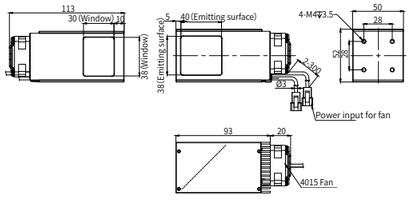


Series	Model	Color	WD (mm)	Power (W)★2	Voltage (V)	L × W × H (mm)	Weight (g)	Compatible Controller
COG	COG-30	● ○ ● ●	10-60	15.0+1.0	24	98×42×40	220	PS2C-3624-2 PD5-6024-4
	COG-40	● ○ ● ●	10-60	18.8+1.2	24	113×52×50	300	
	COG-50	● ○ ● ●	10-60	31.6+2.4	24	128×62×60	400	
	COG-60	● ○ ● ●	10-60	44.4+3.6	24	138×72×70	520	PS2C-15024-2H PD5-12024-4
	COG-70	● ○ ● ●	10-60	58.4+3.6	24	153×82×80	660	
	COG-80	● ○ ● ●	10-60	65.2+4.8	24	163×92×90.4	780	

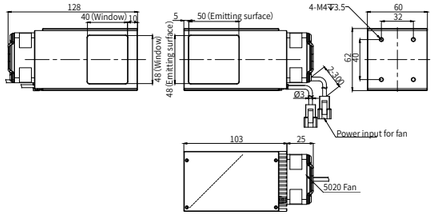
★2 The value includes the light power and fan power. Eg: if the power is 15.0+1, it indicates that the light power is 15W and the fan power is 1W
The normal tolerance is +/-10% between the actual product power and power table content



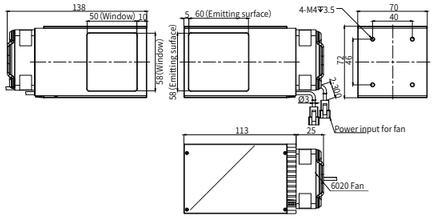
COG-30



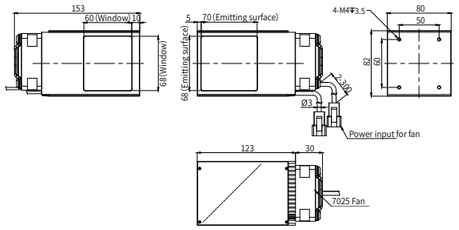
COG-40



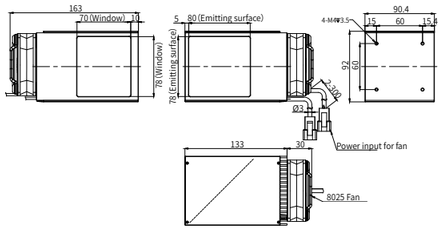
COG-50



COG-60



COG-70



COG-80

High-Precision Coaxial Light

High resolution
4 times brighter than regular CO2
Reduce shadow of high reflective object

Applications

- Defect detection of high-precision components
- High precision dimensional measurement
- Chip surface defect detection
- Wafer size measurement and defect detection
- Precise medical equipment components fouling detection

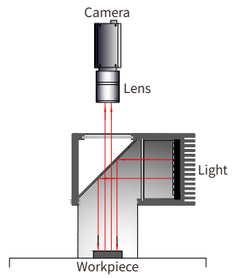
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

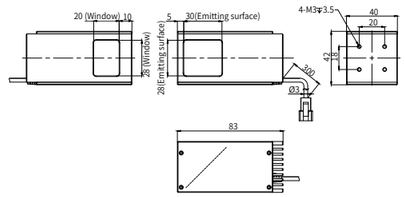
Model Code Description

COH	-	40	W
Model		Emitting surface	Color

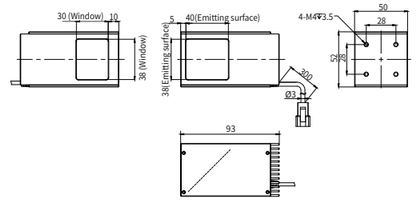


Series	Model	Color	WD (mm)	Power (W)★2	Voltage (V)	L × W × H (mm)	Weight (g)	Compatible Controller
COH	COH-30	● ○ ● ●	10-60	5.5	24	83X42X40	190	PS2C-3624-2 PD5-6024-4
	COH-40	● ○ ● ●	10-60	8.5	24	93X52X50	250	
	COH-50	● ○ ● ●	10-60	10.5	24	103X62X60	350	
	COH-60	● ○ ● ●	10-60	13.0	24	113X72X70	460	
	COH-70	● ○ ● ●	10-60	17.0	24	123X82X80	590	
	COH-80	● ○ ● ●	10-60	19.0	24	133X92X90.4	740	

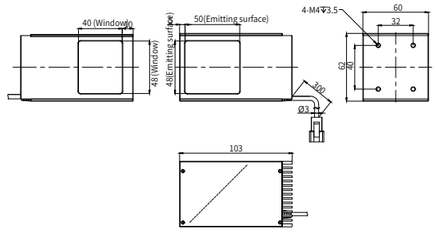
★2 The normal tolerance is +/-10% between the actual product power and power table content



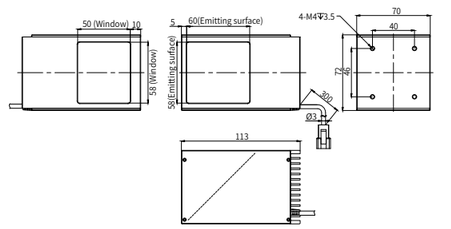
COH-30



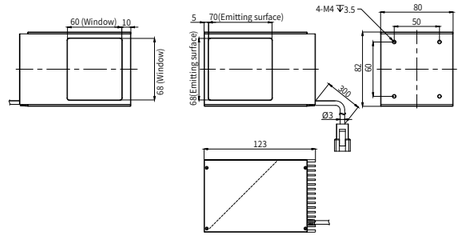
COH-40



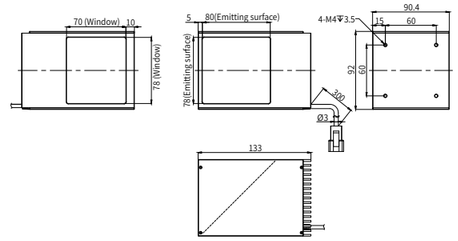
COH-50



COH-60

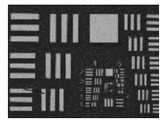
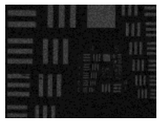
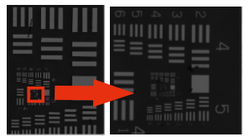
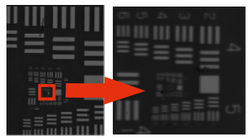


COH-70



COH-80

Example Imaging

	COH-40W	CO2-40W	Solution	Illustration
Image Brightness			Camera: 5MP camera Spec: 2.2um*2.2um 2592*1944 Exposure time: 5000us Lens magnification: 2X telecentric lens FOV: 2.85mm*2.14mm Theoretical precision: 1.1 um/px Working distance: 110mm Light working distance: 40mm	Under the same brightness level of controller, the image brightness of COH series is greatly improved.
Definition			Camera: 5MP camera Spec: 2.2um*2.2um 2592*1944 Exposure time: 5000us Lens magnification: 2X telecentric lens FOV: 2.85mm*2.14mm Theoretical precision: 1.1 um/px Working distance: 110mm Light working distance: 40mm	Under same gray value of image character, the image resolution of COH series is better.

Narrow-Angle Coaxial Light

High uniformity & directivity narrow-angle coaxial light

Applications

- Size, outline inspection
- Character detection on reflective metal surface
- Slight scratches on glossy surface

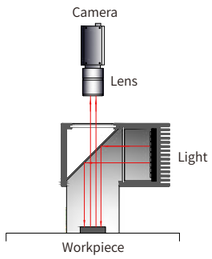
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6000-7500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

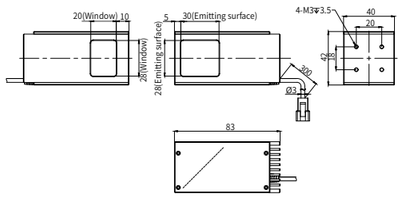
Model Code Description

COD2	-	40	W
Model		Emitting surface	Color

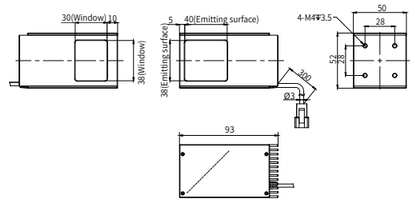


Series	Model	Color	WD (mm)	Power (W)★2	Voltage (V)	L × W × H (mm)	Weight (g)	Compatible Controller
COD2	COD2-30	● ○ ● ●	10-60	5.5	24	83×42×40	190	PS2C-3624-2 PD5-6024-4
	COD2-40	● ○ ● ●	10-60	8.5	24	93×52×50	250	
	COD2-50	● ○ ● ●	10-60	10.5	24	103×62×60	350	
	COD2-60	● ○ ● ●	10-60	13.0	24	113×72×70	460	
	COD2-70	● ○ ● ●	10-60	17.0	24	123×82×80	590	
	COD2-80	● ○ ● ●	10-60	19.0	24	133×92×90.4	740	

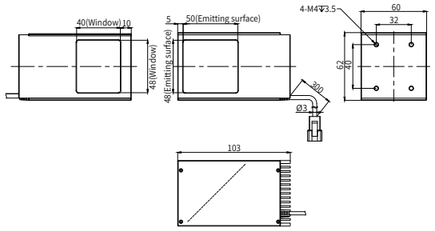
★2 The normal tolerance is +/-10% between the real product power and power table content



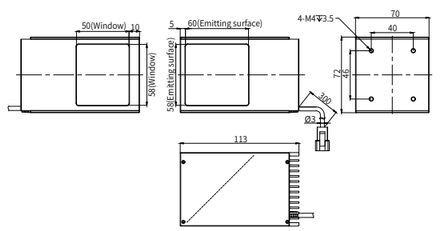
COD2-30



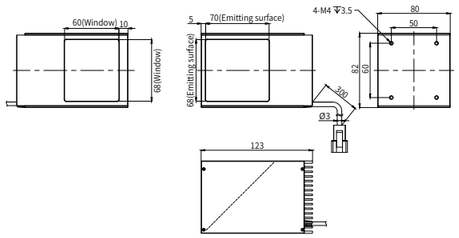
COD2-40



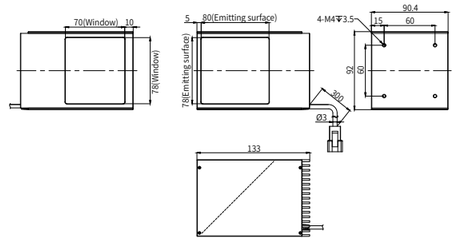
COD2-50



COD2-60



COD2-70



COD2-80

Imaging Example (example: COD2-40W)

Same lens, aperture, exposure time, light brightness

CO3 Series

COD2 Series

90°-Turning Coaxial Light

90° turning, compact size and space-saving

Applications

- Appearance inspection of smooth surface
- Mark point position
- Insufficient mounting space

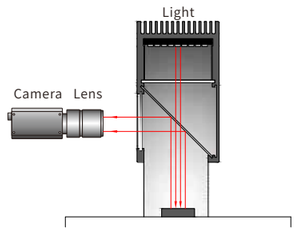
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Volor (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6000-7500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

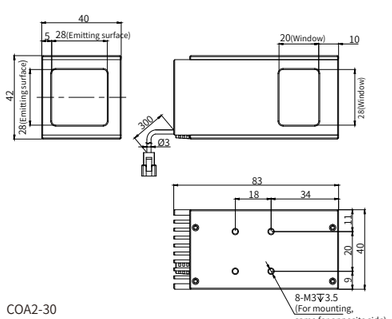
Model Code Description

COA2	-	40	R
Model		Emitting surface	Color

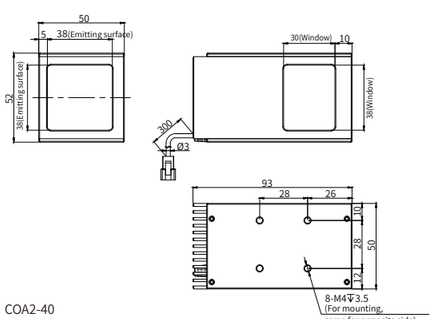


Series	Model	Color	WD (mm)	Power (W)★2	Voltage (V)	L × W × H (mm)	Weight (g)	Compatible Controller
COA2	COA2-30	● ○ ● ●	10-60	5.5	24	83×42×40	190	PS2C-3624-2 PD5-6024-4
	COA2-40	● ○ ● ●	10-60	8.5	24	93×52×50	250	
	COA2-50	● ○ ● ●	10-60	10.5	24	103×62×60	350	
	COA2-60	● ○ ● ●	10-60	13.0	24	113×72×70	460	
	COA2-70	● ○ ● ●	10-60	17.0	24	123×82×80	590	
	COA2-80	● ○ ● ●	10-60	19.0	24	133×92×90.4	740	

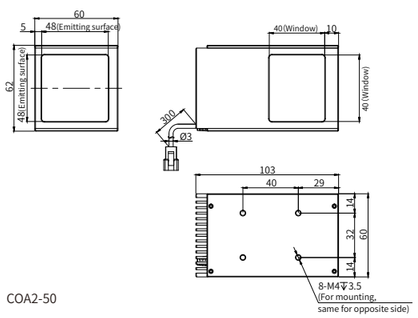
★2 The normal tolerance is +/-10% between the real product power and power table content



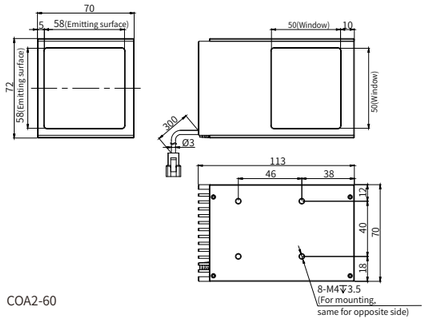
COA2-30



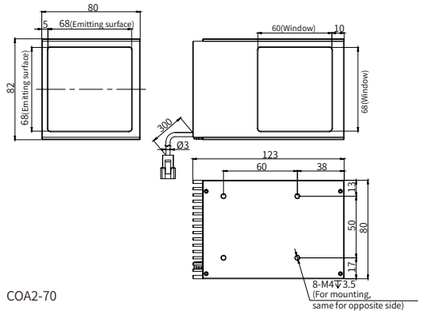
COA2-40



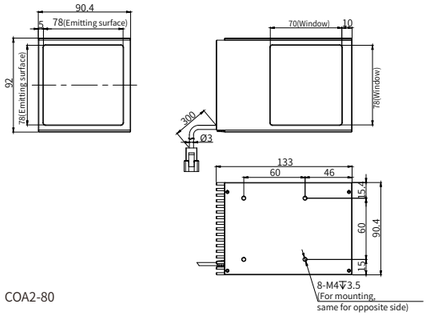
COA2-50



COA2-60



COA2-70



COA2-80

Inverted Coaxial Light

Clear image, collimated illumination

Applications

- Appearance inspection of smooth surface
- Mark point position inspection
- Defect inspection on PCB like short and open circuit, etc.

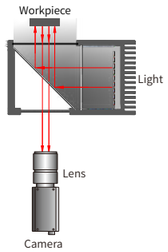
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6000-7500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Compatible Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effect	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

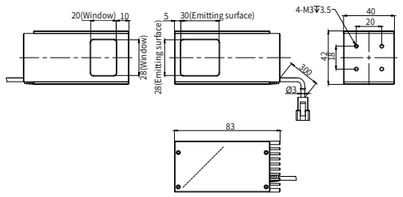
Model Code Description

COF2	-	40	W
Model		Emitting surface	Color

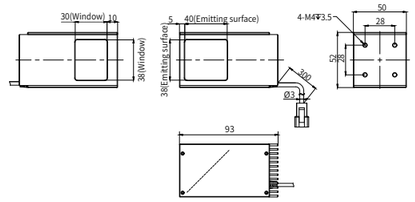


Series	Model	Color	WD (mm)	Power (W)★2	Voltage (V)	L×W×H (mm)	Weight (g)	Compatible Controller
COF2	COF2-30	● ○ ● ●	10-60	5.5	24	83×42×40	190	PS2C-3624-2 PD5-6024-4
	COF2-40	● ○ ● ●	10-60	8.5	24	93×52×50	250	
	COF2-50	● ○ ● ●	10-60	10.5	24	103×62×60	350	
	COF2-60	● ○ ● ●	10-60	13.0	24	113×72×70	460	
	COF2-70	● ○ ● ●	10-60	17.0	24	123×82×80	590	
	COF2-80	● ○ ● ●	10-60	19.0	24	133×92×90.4	740	

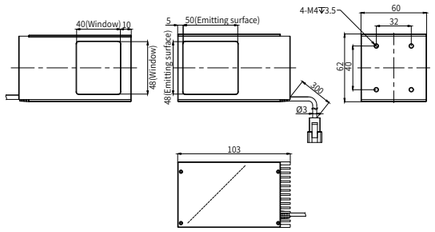
★2 The normal tolerance is +/-10% between the actual product power and power table content



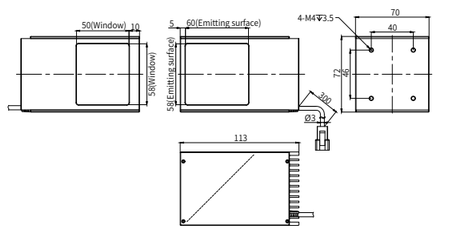
COF2-30



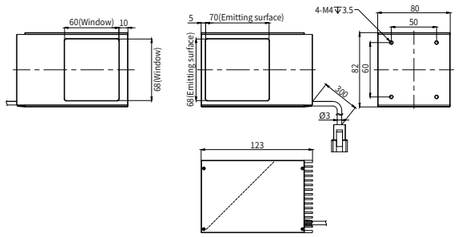
COF2-40



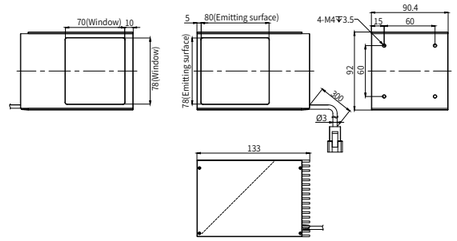
COF2-50



COF2-60



COF2-70



COF2-80

Parallel Coaxial Light

Special lens combination, high precision, highly collimated beam

Applications

- Detection of convex and convex points on arc surface of glass cover
- Bump point, small scratch detection of reflective plane
- Dimension measurement of reflective cylinder

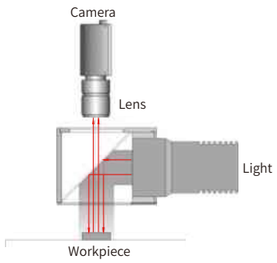
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	8000-9500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	Use the recommended controller	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

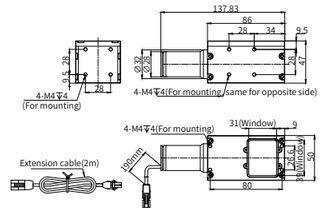
Model Code Description

COP	-	40	R
Model		Emitting surface	Color

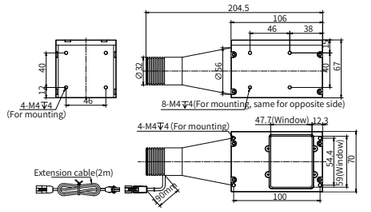


Series	Model	Color	WD (mm)	Divergence Angle (°)	Emitting Diameter (mm)	Voltage (V)	Rated Power(W)★2		L × W × H (mm)	Weight (g)	Compatible Controller
COP	COP-40	● ○ ● ●	56-156	0.1	22	5	1.1	3	137.83×50×47	380	PC-0605-2 PSC4-2005-4
	COP-60	● ○ ● ●	36-136	0.1	50	5	1.1	3	204.5×70×67	760	
	COP-80	● ○ ● ●	16-116	0.1	62	5	1.1	3	245×95.4×89	1410	
CCP2	CCP2-50	● ○ ● ●	50-100	2.5	50×50	5	3.0	3	131.2×58×60	400	PSC4-2005-4
	CCP2-60	● ○ ● ●	50-100	2.0	60×60	5	3.0	3	148.2×68×70	520	
	CCP2-80	● ○ ● ●	50-100	1.5	80×80	5	3.0	3	188.2×88×90	850	

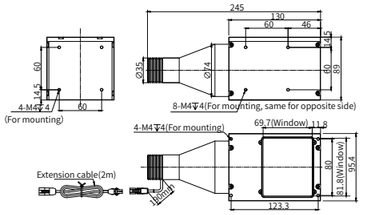
★2 The normal tolerance is +/-10% between the actual product power and power table content



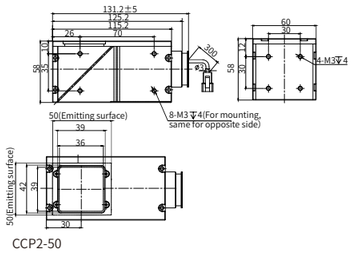
COP-40



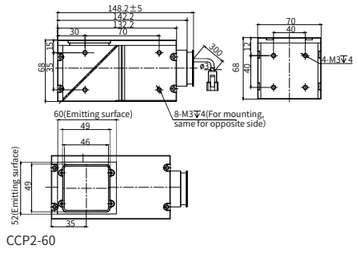
COP-60



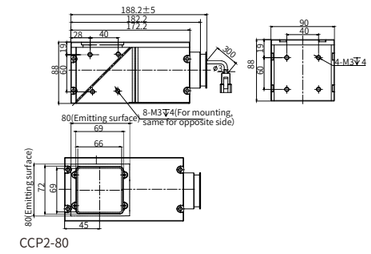
COP-80



CCP2-50

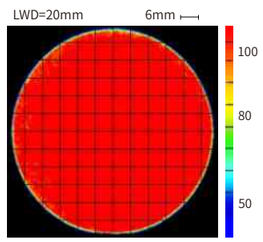


CCP2-60



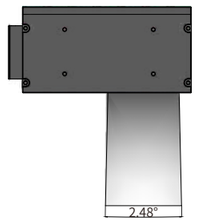
CCP2-80

Relative Illuminance Graph (example: COP-80R)



For reference only, may differ in real value

Divergence Angle (example: CCP2-50W)



Bottom-Lit Backlight

High intensity, various dimensions for large-field illumination

Applications

- Dimension measuring
- Positioning and absence inspection
- Appearance inspection of transmittable object

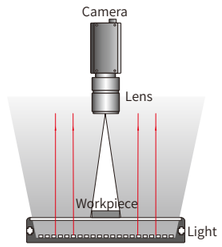
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

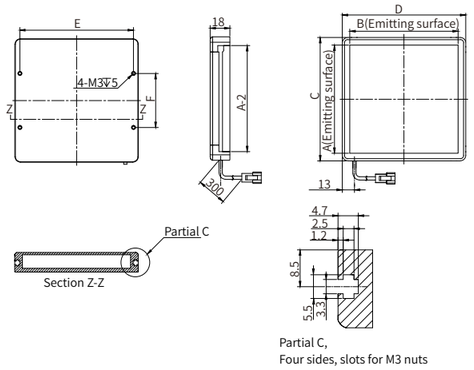
Model Code Description

FQ2	-	100	X	100	R
Model		Emitting surface length		Emitting surface width	Color



Series	Model	Color	WD(mm)	Voltage(V)	Rated Power(W)★2		L × W × H (mm)	Weight(g)
FQ2	FQ2-27X27		30-100	24	1.1	2.8	41×41×18	53
	FQ2-43X35		30-100	24	1.9	2.8	57×49×18	75
	FQ2-51X51		30-100	24	4.2	4.4	65×65×18	100
	FQ2-63X60		30-100	24	4.1	5.1	77×74×18	130
	FQ2-83X75		30-100	24	5.5	5.2	97×89×18	180
	FQ2-100X100		30-100	24	9.5	10.0	114×114×18	245
	FQ2-140X105		30-100	24	13.8	13.9	154×119×18	335
	FQ2-160X120		30-100	24	16.6	17.4	174×134×18	400
	FQ2-200X50		30-100	24	9.9	20.0	214×64×18	410
	FQ2-200X150		30-100	24	28.8	30.2	214×164×18	520
	FQ2-224X170		30-100	24	23.8	33.7	238×184×18	600
	FQ2-211X200		30-100	24	24.2	24.2	225×214×18	770

★2 The normal tolerance is +/-10% between the actual product power and power table content

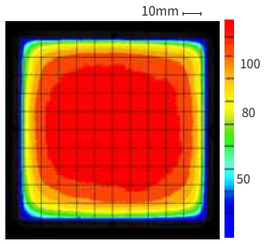


Partial C,
Four sides, slots for M3 nuts

Spec / Model	A	B	Size(mm) C	D	E	F	Rated Power(W) R	W/G/B	Weight (g)
FQ2-27X27	27	27	41	41	32	18	1.1	2.8	53
FQ2-43X35	43	35	57	49	40	18	1.9	2.8	75
FQ2-51X51	51	51	65	65	56	18	4.2	4.4	100
FQ2-63X60	63	60	77	74	65	25	4.1	5.1	130
FQ2-83X75	83	75	97	89	80	50	5.5	5.2	180
FQ2-100X100	100	100	114	114	105	50	9.5	10.0	245
FQ2-140X105	140	105	154	119	110	80	13.8	13.9	335
FQ2-160X120	160	120	174	134	125	80	16.6	17.4	400
FQ2-200X50	200	50	214	64	55	80	9.9	20.0	410
FQ2-200X150	200	150	214	164	155	80	28.8	30.2	520
FQ2-224X170	224	170	238	184	175	80	30.2	33.7	600
FQ2-211X200	211	200	225	214	205	80	24.2	24.2	770

Please cross check with letters in left drawing

Relative Illuminance Graph (example: FQ2-100X100W)



For reference only, may differ in real value

High-Uniformity Bottom-Lit Backlight

The uniformity is higher than FQ2 series, reaching more than 95%

Applications

- Dimension measuring
- Positioning and absence inspection
- Applications require high brightness and uniformity

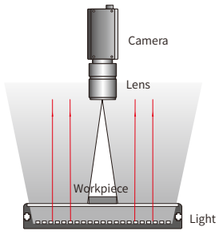
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Compatible Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product development	Custom light to get best effect	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

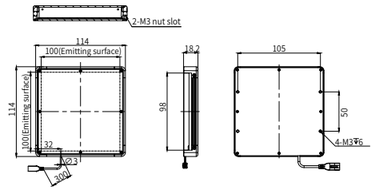
Model Code Description

FQU	-	100	X	100	W
Model		Emitting surface length		Emitting surface width	Color

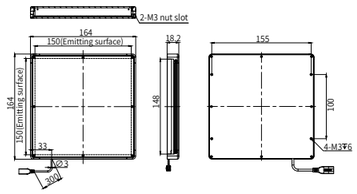


Series	Model	Color	WD(mm)	Power(W)★2	Voltage(V)	L×W×H(mm)	Weight(g)	Compatible Controller
FQU	FQU-100X100	● ○ ● ●	30-100	10	24	114×114×18	245	PD5-6024-4
	FQU-150X150	● ○ ● ●	30-100	20	24	164×164×18	450	
	FQU-200X200	● ○ ● ●	30-100	30	24	214×214×18	600	
	FQU-238X238	● ○ ● ●	30-100	42	24	252×252×18	800	
	FQU-250X250	● ○ ● ●	30-100	50	24	264×264×18	865	
	FQU-300X300	● ○ ● ●	30-100	60	24	314×314×18	1180	PD5-12024-4
	FQU-350X350	● ○ ● ●	30-100	60	24	364×364×18	1540	
	FQU-400X400	● ○ ● ●	30-100	60	24	414×414×18	2000	

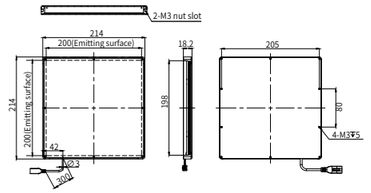
★2 The normal tolerance is +/-10% between the actual product power and power table content



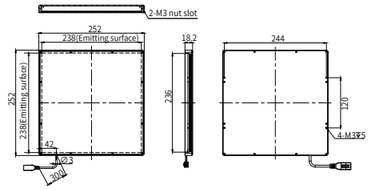
FQU-100X100



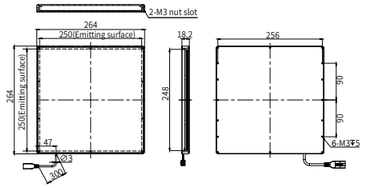
FQU-150X150



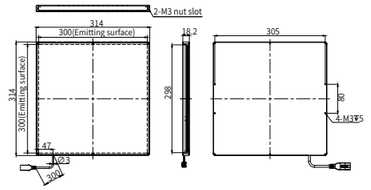
FQU-200X200



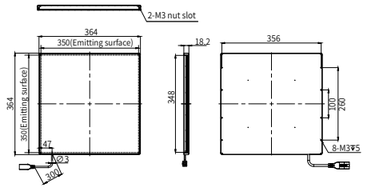
FQU-238X238



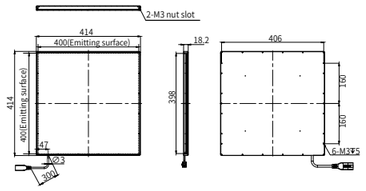
FQU-250X250



FQU-300X300

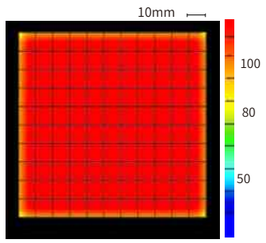


FQU-350X350



FQU-400X400

Relative Illuminance Graph (example: FQU-100X100W)



For reference only, may differ in real value

Bottom-Lit Collimated Backlight

High directivity, high brightness, designed for large-field illumination

Applications

- Dimension measurement and positioning
- Appearance inspection of transmittable object
- Other applications that require high brightness and uniformity

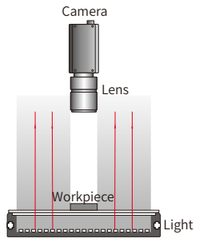
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5000-6500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

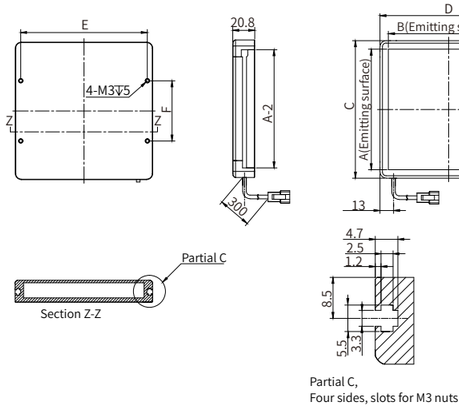
Model Code Description

FQP2	-	100	X	100	R
Model		Emitting surface length		Emitting surface width	Color



Series	Model	Color	WD(mm)	Voltage(V)	Rated Power(W)★2		L × W × H (mm)	Weight(g)
					R	W/G/B		
FQP2	FQP2-27X27	● ○ ● ●	30-100	24	1.1	2.8	41×41×20.8	60
	FQP2-43X35	● ○ ● ●	30-100	24	1.9	2.8	57×49×20.8	85
	FQP2-51X51	● ○ ● ●	30-100	24	4.2	4.4	65×65×20.8	115
	FQP2-63X60	● ○ ● ●	30-100	24	4.1	5.1	77×74×20.8	150
	FQP2-83X75	● ○ ● ●	30-100	24	5.5	5.2	97×89×20.8	210
	FQP2-100X100	● ○ ● ●	30-100	24	9.5	10.0	114×114×20.8	285
	FQP2-140X105	● ○ ● ●	30-100	24	13.8	13.9	154×119×20.8	390
	FQP2-160X120	● ○ ● ●	30-100	24	16.6	17.4	174×134×20.8	460
	FQP2-200X50	● ○ ● ●	30-100	24	9.9	20.0	214×64×20.8	475
	FQP2-200X150	● ○ ● ●	30-100	24	28.8	30.2	214×164×20.8	600
	FQP2-224X170	● ○ ● ●	30-100	24	30.2	33.7	238×184×20.8	690
	FQP2-211X200	● ○ ● ●	30-100	24	24.2	24.2	225×214×20.8	890

★2 The normal tolerance is +/-10% between the actual product power and power table content

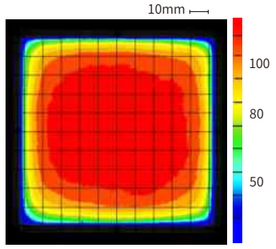


Partial C,
Four sides, slots for M3 nuts

Spec / Model	A	B	Size (mm) C	D	E	F	Rated Power(W) R	W/G/B	Weight (g)
FQP2-27X27	27	27	41	41	32	18	1.1	2.8	60
FQP2-43X35	43	35	57	49	40	18	1.9	2.8	85
FQP2-51X51	51	51	65	65	56	18	4.2	4.4	115
FQP2-63X60	63	60	77	74	65	25	4.1	5.1	150
FQP2-83X75	83	75	97	89	80	50	5.5	5.2	210
FQP2-100X100	100	100	114	114	105	50	9.5	10.0	285
FQP2-140X105	140	105	154	119	110	80	13.8	13.9	390
FQP2-160X120	160	120	174	134	125	80	16.6	17.4	460
FQP2-200X50	200	50	214	64	55	80	9.9	20.0	475
FQP2-200X150	200	150	214	164	155	80	28.8	30.2	600
FQP2-224X170	224	170	238	184	175	80	30.2	33.7	690
FQP2-211X200	211	200	225	214	205	80	24.2	24.2	890

Please cross check with letters in left drawing

Relative Illuminance Graph (example: FQP2-100X100W)



For reference only, may differ in real value

Bottom-Lit Direct Backlight

High brightness, frontal backlight for large-field illumination

Applications

- Dimension measurement
- Positioning and absence inspection
- Appearance inspection of transmittable object

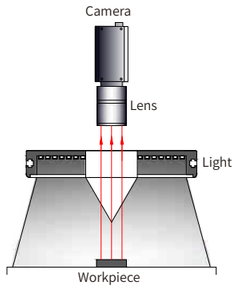
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength) ★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature(white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

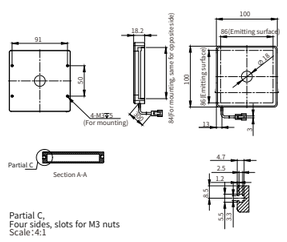
Model Code Description

C-FQH2	-	86	X	86	W	-	X
Model		Emitting surface length		Emitting surface width	Color		Version



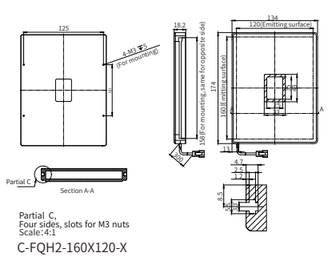
Series	Model	Color	Hole L × W/Diameter（mm）	Voltage(V)	Power (W)★2	L × W × H (mm)	Weight (g)
C-FQH2	C-FQH2-86X86-X	○	∅18	24	6.0	100×100×18	110
	C-FQH2-160X120-X	○	35X25	24	14.5	174×134×18	400
	C-FQH2-200X150-X	○	∅40	24	45.0	214×164×18	500
	C-FQH2-211X200-X	○	40X40	24	37.0	225×214×18	770
	C-FQH2-280X130-X	○	∅40	24	32.0	294×144×18	770

★2 The normal tolerance is +/-10% between the actual product power and power table content



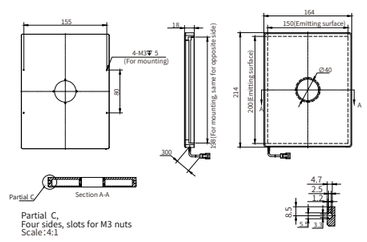
Partial C,
Four sides, slots for M3 nuts
Scale:4:1

C-FQH2-86X86-X



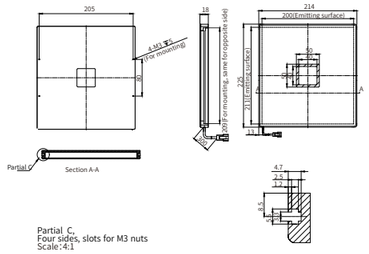
Partial C,
Four sides, slots for M3 nuts
Scale:4:1

C-FQH2-160X120-X



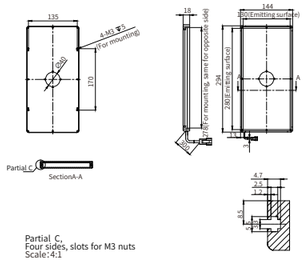
Partial C,
Four sides, slots for M3 nuts
Scale:4:1

C-FQH2-200X150-X



Partial C,
Four sides, slots for M3 nuts
Scale:4:1

C-FQH2-211X200-X



Partial C,
Four sides, slots for M3 nuts
Scale:4:1

C-FQH2-280X130-X

Side-Lit Backlight

Slim and light weight design, frequently used by large-field inspection

Applications

- Dimension measurement
- Positioning inspection
- Appearance inspection of transmittable object

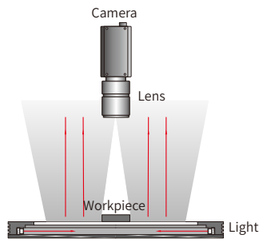
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm Blue: 460-475nm	Green: 520-530nm
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

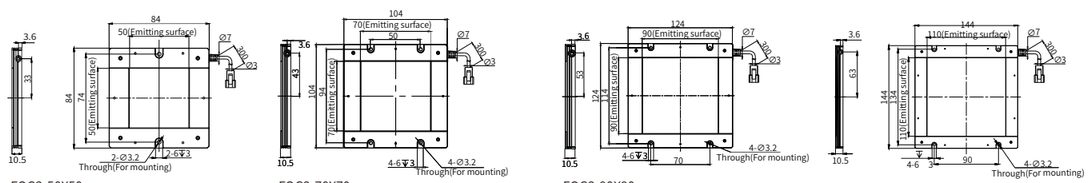
Model Code Description

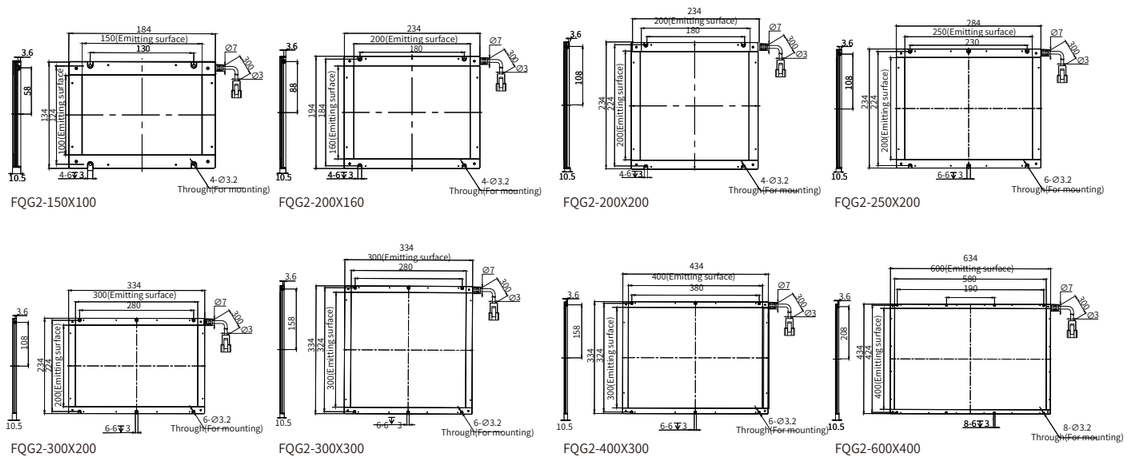
FQG2	-	100	X	100	R
Model		Emitting surface length		Emitting surface width	Color



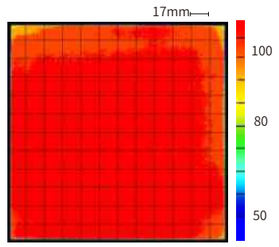
Series	Model	Color	WD(mm)	Voltage(V)	Rated Power(W)★2		L × W × H (mm)	Weight (g)
FQG2	FQG2-50X50	● ○ ● ●	30-100	24	3.0	10.9	84×84×10.5	150
	FQG2-70X70	● ○ ● ●	30-100	24	5.9	7.9	104×104×10.5	210
	FQG2-90X90	● ○ ● ●	30-100	24	6.3	12.6	124×124×10.5	330
	FQG2-110X110	● ○ ● ●	30-100	24	6.8	12.6	144×144×10.5	420
	FQG2-150X100	● ○ ● ●	30-100	24	4.4	10.0	184×134×10.5	430
	FQG2-200X160	● ○ ● ●	30-100	24	6.5	12.1	234×194×10.5	720
	FQG2-200X200	● ○ ● ●	30-100	24	6.7	26.3	234×234×10.5	880
	FQG2-250X200	● ○ ● ●	30-100	24	7.5	16.8	284×234×10.5	1040
	FQG2-300X200	● ○ ● ●	30-100	24	8.2	16.6	334×234×10.5	1230
	FQG2-300X300	● ○ ● ●	30-100	24	15.5	35.0	334×334×10.5	1670
	FQG2-400X300	● ○ ● ●	30-100	24	12.3	24.0	434×334×10.5	2100
	FQG2-600X400	● ○ ● ●	30-100	24	14.6	36.3	634×434×10.5	3980

★2 The normal tolerance is +/-10% between the actual product power and power table content





Relative Illuminance Graph (example: FQG2-90X90W)



For reference only, may differ in real value

Side-Lit Collimated Backlight

Highly collimated, high uniformity, designed for large-field flat illumination

Applications

- Dimension measurement for requirement of high precision
- Positioning inspection
- Appearance inspection of transmittable object

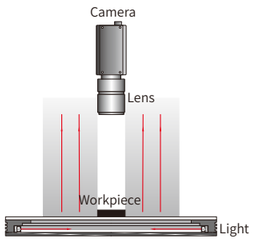
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength) ★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5000-6500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity：20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

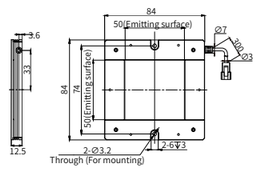
Model Code Description

FQGP2	-	100	X	100	R
Model		Emitting surface length		Emitting surface width	Color

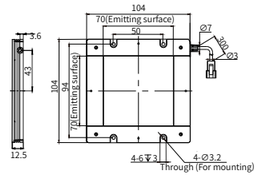


Series	Model	Color	WD(mm)	Voltage(V)	Rated Power(W)★2		L × W × H (mm)	Weight (g)
					●	○ ● ●		
FQGP2	FQGP2-50X50	● ○ ● ●	30-100	24	3.0	10.9	84×84×12.5	170
	FQGP2-70X70	● ○ ● ●	30-100	24	5.9	7.90	104×104×12.5	240
	FQGP2-90X90	● ○ ● ●	30-100	24	6.3	12.6	124×124×12.5	370
	FQGP2-110X110	● ○ ● ●	30-100	24	6.8	12.6	144×144×12.5	470
	FQGP2-150X100	● ○ ● ●	30-100	24	4.4	10.0	184×134×12.5	490
	FQGP2-200X160	● ○ ● ●	30-100	24	6.5	12.1	234×194×12.5	820
	FQGP2-200X200	● ○ ● ●	30-100	24	6.7	26.3	234×234×12.5	1020
	FQGP2-250X200	● ○ ● ●	30-100	24	7.5	16.8	284×234×12.5	1240
	FQGP2-300X200	● ○ ● ●	30-100	24	8.2	16.6	334×234×12.5	1450
	FQGP2-300X300	● ○ ● ●	30-100	24	15.5	35.0	334×334×12.5	1980
	FQGP2-400X300	● ○ ● ●	30-100	24	12.3	24.0	434×334×12.5	2500
	FQGP2-600X400	● ○ ● ●	30-100	24	14.6	36.3	634×434×12.5	4480

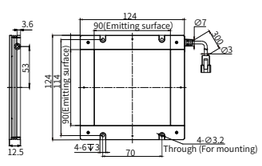
★2 The normal tolerance is +/-10% between the actual product power and power table content



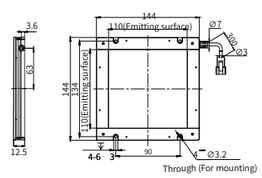
FQGP2-50X50



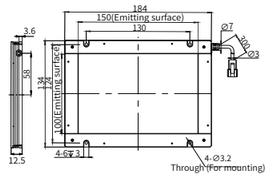
FQGP2-70X70



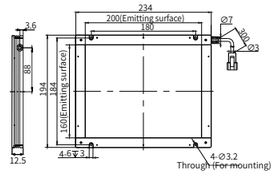
FQGP2-90X90



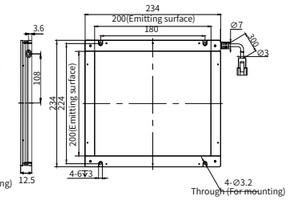
FQGP2-110X110



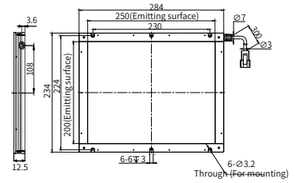
FQGP2-150X100



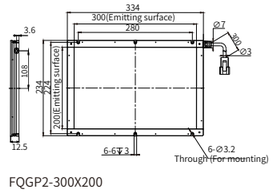
FQGP2-200X160



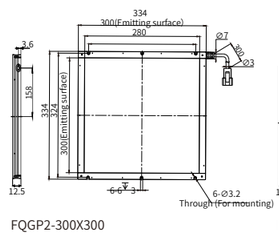
FQGP2-200X200



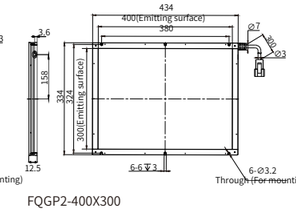
FQGP2-250X200



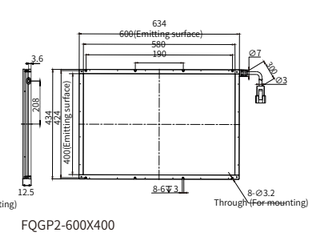
FQGP2-300X200



FQGP2-300X300

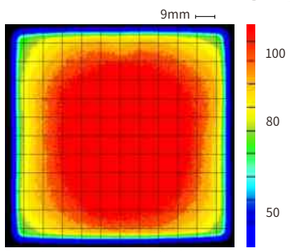


FQGP2-400X300



FQGP2-600X400

Relative Illuminance Graph (example: FQGP2-90X90B)



For reference only, may differ in real value

Side-Lit Direct Backlight

Size, shape, dimension, position can be customized, frontal backlight for large-field illumination with high uniformity

Applications

- Character and color recognition
- Positioning, absence and recognition inspection for large-field object
- Appearance inspection of transmittable object

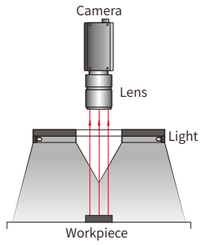
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

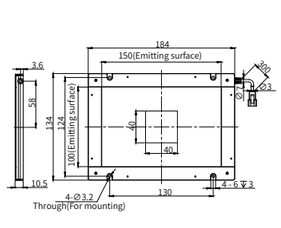
Model Code Description

FQGH2	-	100	X	100	R
Model		Emitting surface length		Emitting surface width	Color

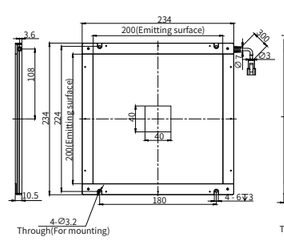


Series	Model	Color	Hole L × W/Diameter (mm)	Voltage (V)	Rated Power (W)★2		L × W × H (mm)	Weight (g)
FQGH2	FQGH2-150X100	● ○ ● ●	40×40	24	4.20	10.3	184×134×10.5	390
	FQGH2-200X200	● ○ ● ●	40×40	24	16.1	24.0	234×234×10.5	840
	FQGH2-250X200	● ○ ● ●	45×45	24	6.90	16.8	284×234×10.5	990
	FQGH2-350X350	● ○ ● ●	40×40	24	20.7	36.7	384×384×10.5	2080
	FQGH2-400X300	● ○ ● ●	∅50	24	11.5	24.0	434×334×10.5	2070
	FQGH2-600X400	● ○ ● ●	∅50	24	12.1	36.0	634×434×10.5	4400

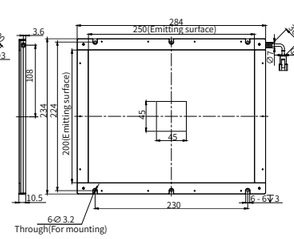
★2 The normal tolerance is +/-10% between the actual product power and power table content



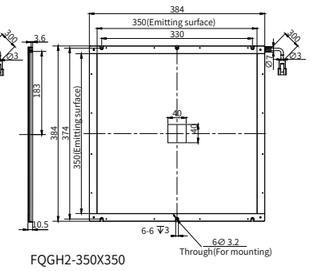
FQGH2-150X100



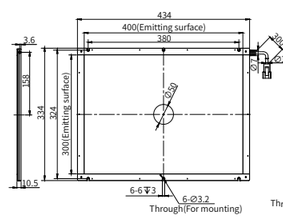
FQGH2-200X200



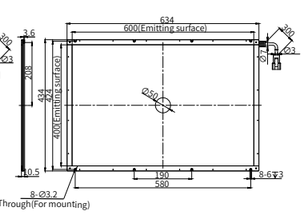
FQGH2-250X200



FQGH2-350X350



FQGH2-400X300



FQGH2-600X400

Side-Lit Direct Collimated Backlight

Size, shape, dimension, position can be customized, backlight for large-field illumination with high uniformity and highly collimated

Application

- Character and color recognition
- Positioning, absence and recognition inspection for large-field object
- Appearance inspection of transmittable object

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature(white)★1	5000-6500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<×<1x10^7Ω) 2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

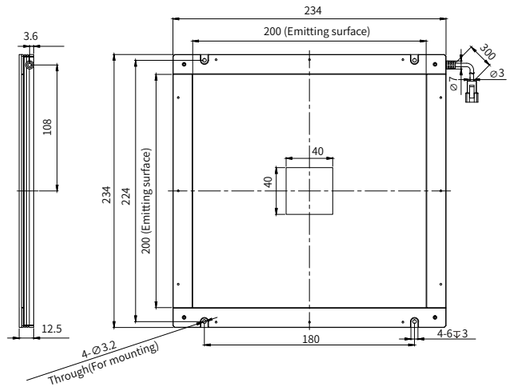
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

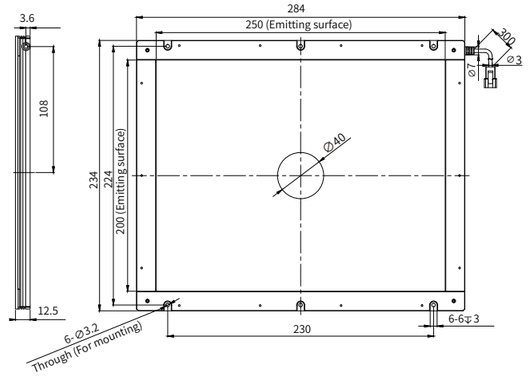
FQGHP2	-	200	×	200	B
Model		Emitting length		Emitting width	Color

Series	Model	Color	Hole L× W/Diameter (mm)	Voltage(V)	Rated Power(W)★2		L × W × H (mm)	Weight (g)
FQGHP2	FQGHP2-200X200	● ○ ● ●	40×40	24	6.7	26.0	234×234×12.5	1020
	FQGHP2-250X200	● ○ ● ●	∅40	24	8.4	16.8	284×234×12.5	1240

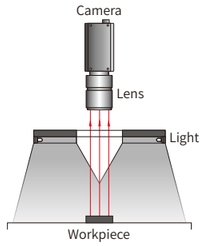
★2 The normal tolerance is +/-10% between the actual product power and power table content



FQGHP2-200X200



FQGHP2-250X200



Dome Light

Scattered illumination with high uniformity, eliminate interference from uneven product surfaces

Applications

- Character inspection of printings and color deviation inspection
- Curved or uneven surfaces
- Inspection for parts on electronic components

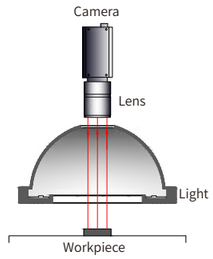
Technical Specification

Input Voltage	DC24V	
LED Lighting Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm Blue: 460-475nm	Green: 520-530nm
Color Temperature (white)★1	6500-8000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

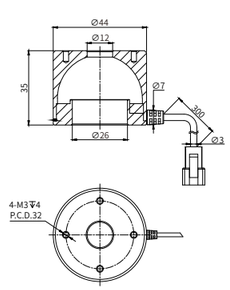
Model Code Description

SD3	-	100	W
Model		OD	Color

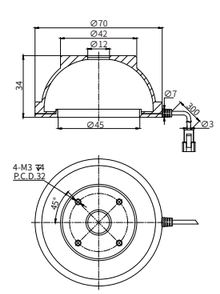


Series	Model	Color	WD (mm)	Hole Diameter★2	Power (W)★3	Voltage (V)	OD × Height (mm)	Weight (g)	Compatible Controller
SD2/SD3	SD2-44	● ○ ● ●	15-25	12	4.0	24	∅44×35	74	PS2C-3624-2 PD5-6024-4
	SD2-70	● ○ ● ●	15-25	12	6.5	24	∅70×34	66	
	SD3-80	● ○ ● ●	15-25	20	8.0	24	∅95×46	129	
	SD3-100	● ○ ● ●	15-25	25	12.0	24	∅116×56.1	150	
	SD3-120	● ○ ● ●	15-25	35	20.0	24	∅134×61.6	200	
	SD3-150	● ○ ● ●	15-25	35	24.0	24	∅166×80.8	320	
	SD3-180	● ○ ● ●	15-25	30	24.5	24	∅198×93.5	454	
	SD3-210	● ○ ● ●	20-50	50	26.0	24	∅230×113.5	590	
	SD3-250	● ○ ● ●	20-50	50	36.0	24	∅266×109.6	628	PS2C-15024-2H PD5-12024-4
	SD3-285	● ○ ● ●	20-50	55	48.0	24	∅300×140.5	722	

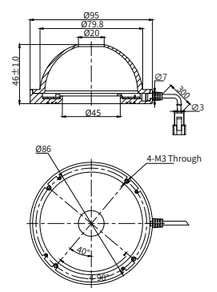
★2 The diameter of camera hole can be customized
★3 The normal tolerance is +/-10% between the actual product power and power table content



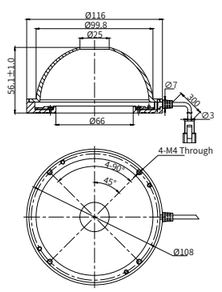
SD2-44



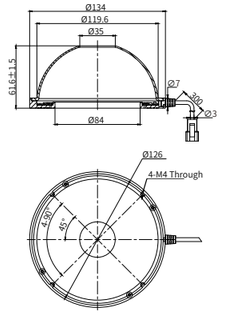
SD2-70



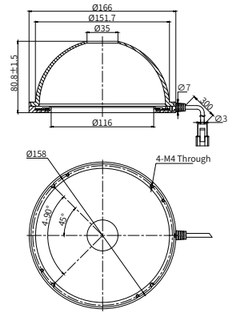
SD3-80



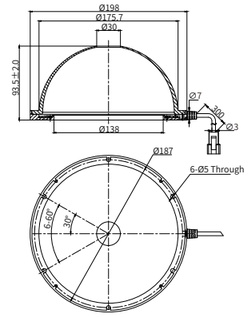
SD3-100



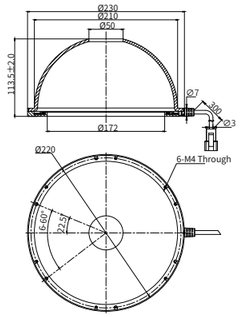
SD3-120



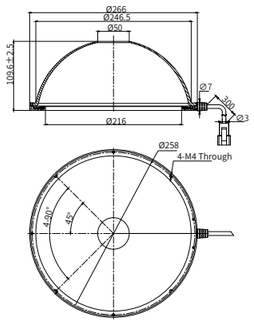
SD3-150



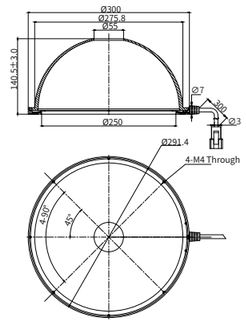
SD3-180



SD3-210



SD3-250



SD3-285

Tunneled Light

Scattered illumination with high uniformity for large-field object

Applications

- Character and defect detection of prints
- Appearance detection of PCB board
- Appearance detection of lithium battery tab

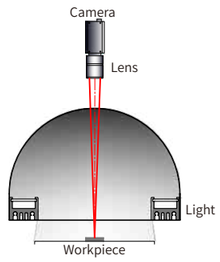
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

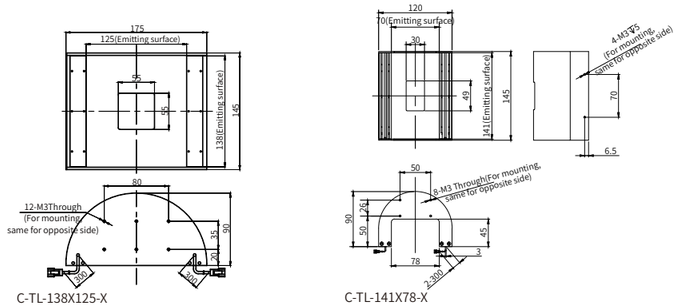
Model Code Description

C-TL	-	277	X	113	W
Model		Emitting length		Height	Color

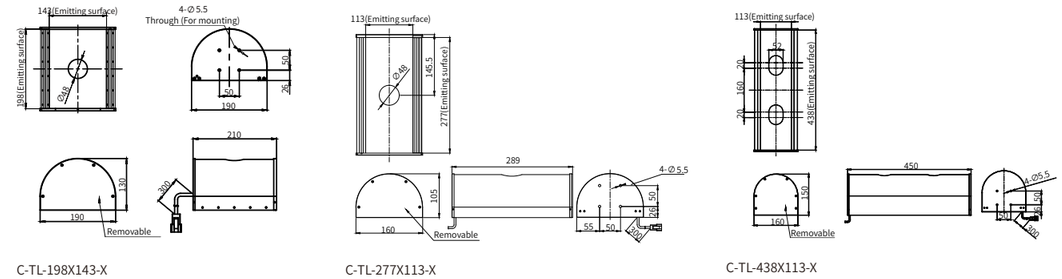


Series	Model	Color	Camera Window(mm)	Voltage(V)	Power(W)★2	L × W × H(mm)	Weight(kg)
C-TL	C-TL-138X125-X	○	55×55	24	2×7.5	175×145×90	0.5
	C-TL-141X78-X	○	49×30	24	2×7	145×120×90	0.4
	C-TL-183X118-X	○	48×35	24	18	187×160×105	0.6
	C-TL-198X143-X	○	∅48	24	25	210×190×130	0.8
	C-TL-277X113-X	○	∅48	24	25	289×160×105	0.7
	C-TL-438X113-X	○	∅2-52×20	24	41	450×160×150	3.4

★2 The normal tolerance is +/-10% between the actual product power and power table content

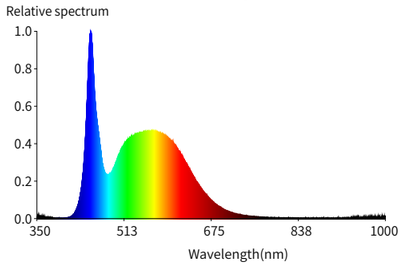


C-TL-138X125-X C-TL-141X78-X C-TL-183X118W-X



C-TL-198X143-X C-TL-277X113-X C-TL-438X113-X

Spectrum Chart (example: C-TL-138X125W-X)



Diffused Low-Angle Ring Light

Low angle uniform illumination. Reduce LED shadow in outline inspection

Applications

- Appearance detection
- OCR recognition on plastic surface
- Character recognition for electronical parts

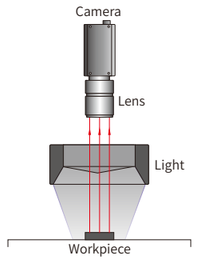
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6500-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

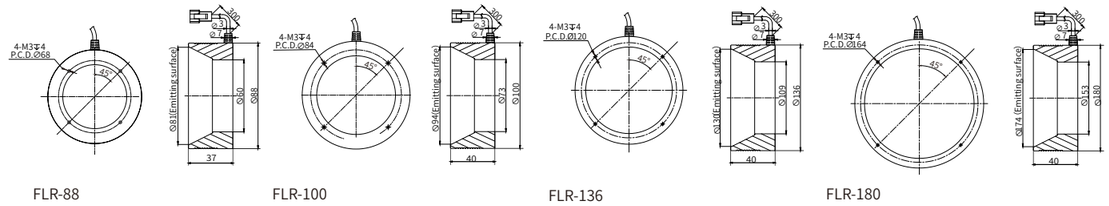
Model Code Description

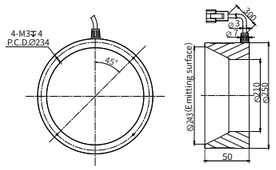
FLR	-	100	R
Model		OD	Color



Series	Model	Color	Voltage (V)	Rated Power (W)★2		OD × ID × H (mm)	Weight (g)
FLR	FLR-88	● ○ ● ●	24	4.6	7.5	88×60×37	180
	FLR-100	● ○ ● ●	24	4.9	7.8	100×73×40	210
	FLR-136	● ○ ● ●	24	6.6	12.4	136×109×40	300
	FLR-180	● ○ ● ●	24	9.5	13.8	180×153×40	390
	FLR-250	● ○ ● ●	24	13.1	32.8	250×210×50	960

★2 The normal tolerance is +/-10% between the actual product power and power table content





Diffused High-Brightness Ring Light

Compact light of high brightness for large-field illumination

Applications

- Appearance detection of highly reflective object
- Character inspection on electronics component
- Dimension inspection of metal parts

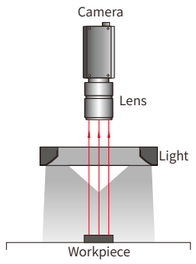
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5300-6800K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

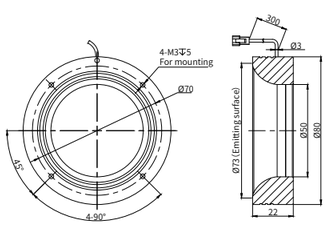
Model Code Description

HBD2	-	166	R
Model		Emitting surface	Color

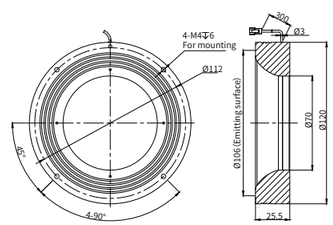


Series	Color	WD (mm)	Power(W)★2		Voltage (V)	L × W × H (mm)	Weight (g)	Compatible Controller
HBD2-80	● ○ ● ●	15-25	6.5	6.5	24	80×50×22	100	PS2C-3624-2 PD5-6024-4
HBD2-120	● ○ ● ●	15-25	10.4	12.5	24	120×70×25.5	230	
HBD2-132	● ○ ● ●	15-25	10.4	14.6	24	132×96×25.5	280	
HBD2-166	● ○ ● ●	15-25	12.5	16.7	24	166×116×25.5	330	
HBD2-196	● ○ ● ●	15-25	16.7	20.9	24	196×146×25.5	490	

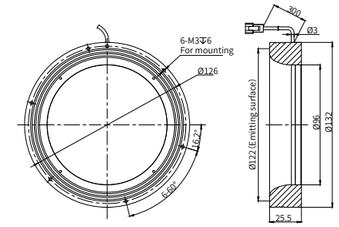
★2 The normal tolerance is +/- 10% between the actual product power and power table content



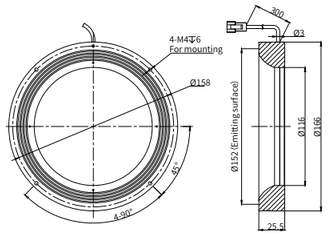
HBD2-80



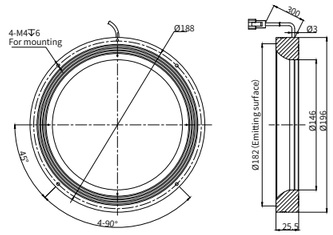
HBD2-120



HBD2-132



HBD2-166



HBD2-196

Diffused Ring Light

Direct illumination for reducing reflective interference

Applications

- Surface defects inspection on curved object
- Label character recognition
- Small metal object position and recognition

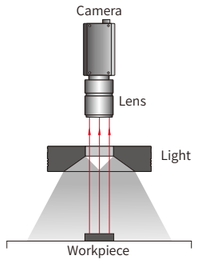
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6500-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

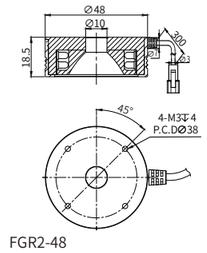
Model Code Description

FGR2	-	74	R
Model		OD	Color

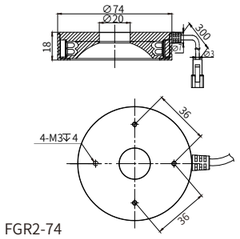


Series	Model	Color	Voltage (V)	Rated Power(W)★2		OD × ID × H (mm)	Weight(g)
FGR2	FGR2-48	● ○ ● ●	24	2.2	2.4	48×10×18.5	60
	FGR2-74	● ○ ● ●	24	3.6	6.3	74×20×18	110
	FGR2-100	● ○ ● ●	24	7.4	9.7	100×35×18	170
	FGR2-120	● ○ ● ●	24	9.9	12.7	120×55×18	250
	FGR2-150	● ○ ● ●	24	15.0	20.2	150×60×24	400

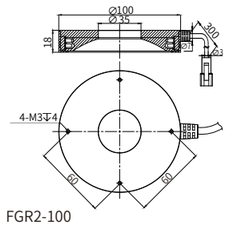
★2 The normal tolerance is +/-10% between the actual product power and power table content



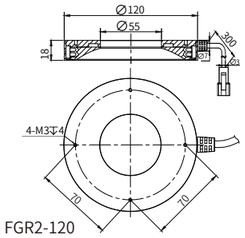
FGR2-48



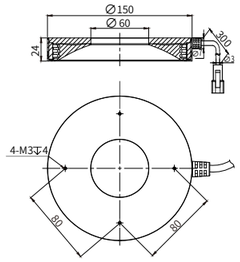
FGR2-74



FGR2-100



FGR2-120



FGR2-150

Diffused High-Brightness Square Dome Light

Diffused high-brightness square flat dome light, better uniformity, higher brightness

Applications

- Appearance inspection of electronic parts
- Character recognition
- Pin bending, shedding and dirt detection, etc

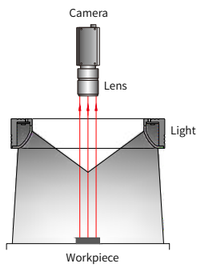
Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5500-7000K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Compatible Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable：1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

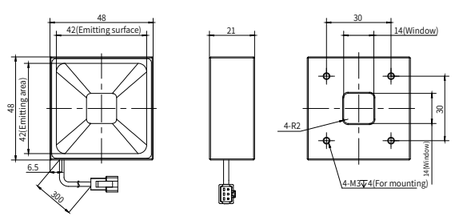
Model Code Description

SQH	-	48	W
Model		Emitting surface	Color

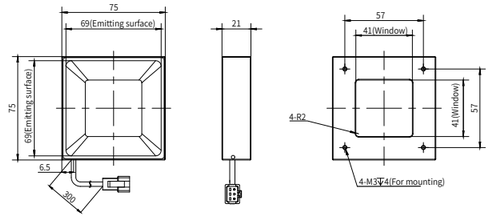


Series	Model	Color	WD(mm)	Power(W)★2	Voltage(V)	Window (mm)	L × W × H (mm)	Weight(g)	Compatible Controller
SQH	SQH-48	● ○ ● ●	10-30	6.2	24	14×14	48×48×21	70	PS2C-3624-2 PD5-6024-4
	SQH-75	● ○ ● ●	20-40	9.4	24	41×41	75×75×21	120	
	SQH-96	● ○ ● ●	30-50	11.5	24	62×62	96×96×21	170	
	SQH-120	● ○ ● ●	40-70	16.8	24	86×86	120×120×21	210	
	SQH-136	● ○ ● ●	40-80	20.0	24	91×91	136×136×28	340	
	SQH-200X120	● ○ ● ●	40-120	28.0	24	163×83	200×120×21	350	PS2C-15024-2H PD5-12024-4
	SQH-300X200	● ○ ● ●	90-180	50.0	24	263×163	300×200×21	875	

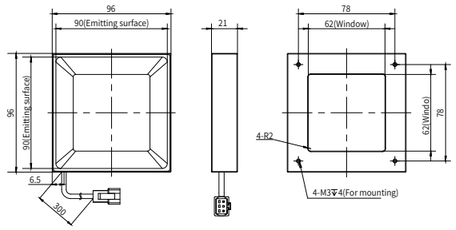
★2 The normal tolerance is +/-10% between the actual product power and power table content



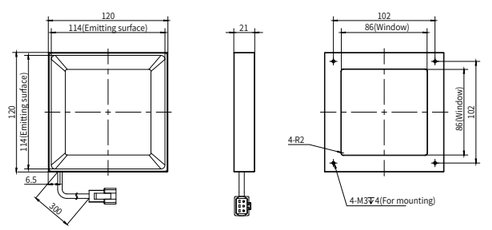
SQH-48



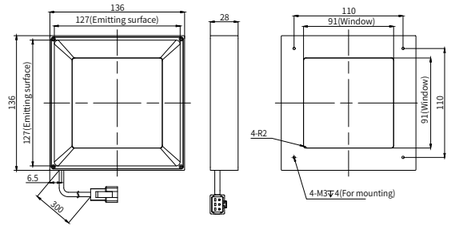
SQH-75



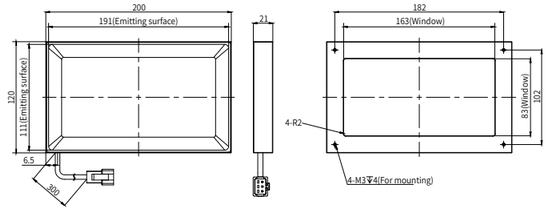
SQH-96



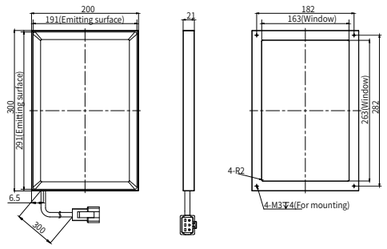
SQH-120



SQH-136



SQH-200X120



SQH-300X200

High Definition Flat Dome Light

Replace the combination of dome light and coaxial light, saving more space

Applications

- Date code on packaging
- Dust detection on glass cover
- Printing character and dirt inspection on pills

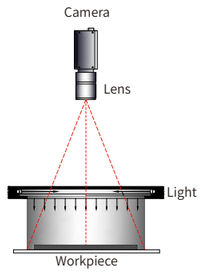
Technical Specification

Input Voltage	DC24V	
LED Color★1	W/R/B/G	
Light Color (wavelength)★1	Red：620-630nm Blue：460-475nm	Green：520-530nm
Color Temperature (white)	5500-6500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

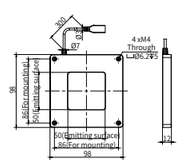
Model Code Description

FQSHA	-	210	X	210	W
Model		Emitting length		Emitting width	Color

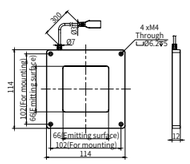


Series	Model	Color	WD(mm)	Voltage(V)	Power(W)★2	L × W × H (mm)	Weight (kg)	Compatible Controller
FQSHA	FQSHA-50X50	○	50-100	24	4.8	98×98×12	0.20	PS2C-3624-2 PD5-6024-4
	FQSHA-66X66	○	50-100	24	9.6	114×114×12	0.35	
	FQSHA-90X90	○	50-100	24	14.4	138×138×12	0.55	
	FQSHA-140X140	○	50-100	24	24.0	188×188×12	0.80	
	FQSHA-210X210	○	50-100	24	33.6	258×258×12	1.30	

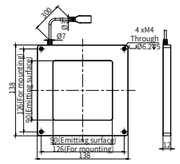
★2 The normal tolerance is +/-10% between the actual product power and power table content
★2 Maximum customizable size: 400×350 mm



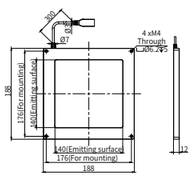
FQSHA-50X50



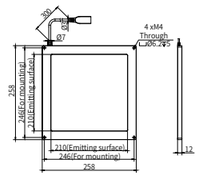
FQSHA-66X66



FQSHA-90X90

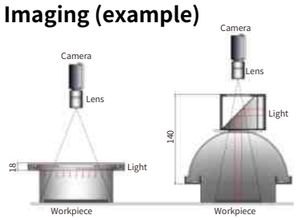


FQSHA-140X140



FQSHA-210X210

Imaging (example)

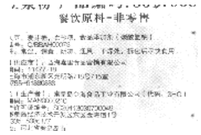


Schematic diagram

Character detection on package

Coaxial light

Dome light



Flat dome light
(more uniform, better effect)

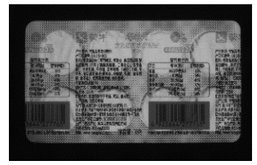
Images at ifferent WD

By changing distance between light and object, the imaging effect can also be changed. Recommended WD for character detection of irregular objects is 20-80mm

Character detection on milk tablet

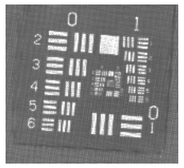
WD=45mm

WD=140mm

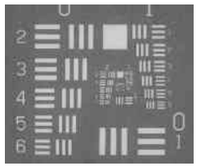


WD=265mm

Image contrast after upgrading (FQSHA has greater clarity and uniformity)



FQS2-150X150W
(There are dots in the image)



FQSHA-140X140W
(Clear image without dots)

Comparison of different light effect (flat dome light can be used for line scan to achieve a more uniform effect)

Tunneled line light

Flat dome light

*Note

1. Do not wipe the luminous surface with alcohol, naphtha, etc., to avoid fingerprints or dirt attached to light guide plate
2. If light guide plate is dirty, we should remove large dust particles on the surface by air blowing first, so as to avoid scratching the surface when wiping
3. When the dirt on the luminous surface is difficult to remove, 120 solvent gasoline can be used to clean it

Super High-Definition Flat Dome Light

Replace the combination of dome light and coaxial light, saving more space

Applications

- Date code on packaging
- Dust detection on glass cover
- Printing character and dirt inspection on pills

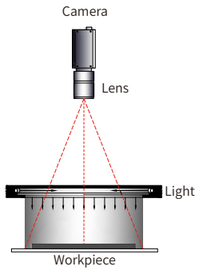
Technical Specification

Input Voltage	DC24V	
LED Color ★1	W/R/B/G	
Light Color (wavelength) ★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)	5500-6500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

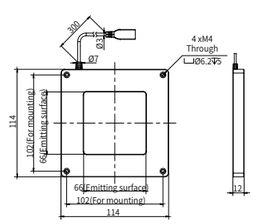
Model Code Description

FQSS	-	90	X	90	W
Model		Emitting length		Emitting width	Color

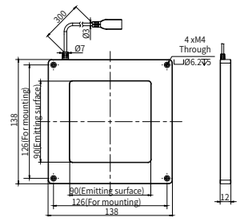


Series	Model	Color	WD(mm)	Voltage(V)	Power(W)★2	L × W × H (mm)★3	Weight (kg)	Compatible Controller
FQSS	FQSS-66X66	○	50-100	24	9.6	114×114×12	0.35	PS2C-3624-2
	FQSS-90X90	○	50-100	24	14.4	138×138×12	0.55	PD5-6024-4

★2 The normal tolerance is +/-10% between the actual product power and power table content
★3 Maximum customizable size: 300×300mm



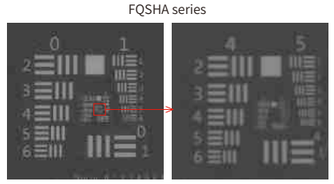
FQSS-66X66



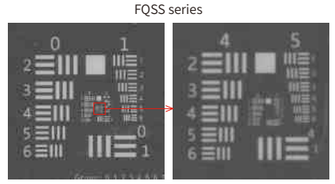
FQSS-90X90

Image Contrast

FQSHA series



FQSS series



FQSS series gets clearer image compared with FQSHA series

*Note

1. Do not wipe the luminous surface with alcohol, naphtha, etc., to avoid fingerprints or dirt attached to light guide plate
2. If light guide plate is dirty, we should remove large dust particles on the surface by air blowing first, so as to avoid scratching the surface when wiping
3. When the dirt on the luminous surface is difficult to remove, 120 solvent gasoline can be used to clean it

Flat Dome Light-Stripe Type

Resolving small concave point and convex point that are difficult to detect with coaxial light

Applications

- Concave point and convex point detection for polarizing plate
- Concave point and convex point detection for curved Lens
- Scratch detection for cover glass

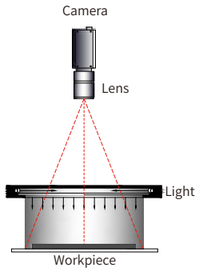
Technical Specification

Input Voltage	DC24V	
LED Color★1	W/R/B/G	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)	5500-6500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PSS、PS1C、PS2C、PD5、PDS5、PDMS2、PDM2、PBD2、PBDL2	
Accessories	Extension cable: 1m/2m/3m/5m/7m	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

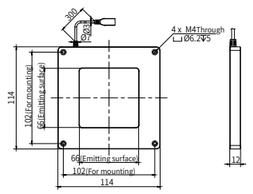
Model Code Description

FQPTG	-	90	X	90	W
Model		Emitting length		Emitting width	Color

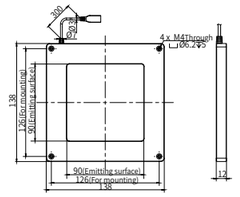


Series	Model	Color	WD(mm)	Voltage(V)	Power(W)★2	L × W × H (mm)	Weight (kg)	Compatible Controller
FQPTG	FQPTG-66X66	○	50-100	24	9.6	114×114×12	0.35	PS2C-3624-2
	FQPTG-90X90	○	50-100	24	14.4	138×138×12	0.55	PD5-6024-4

★2 The normal tolerance is +/-10% between the actual product power and power table content
★3 Maximum customizable size: 90×90mm

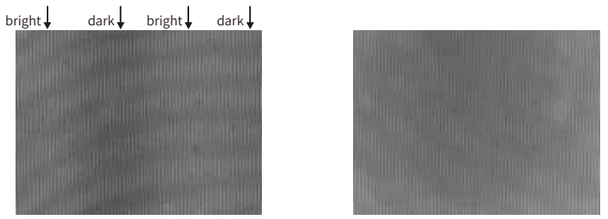


FQPTG-66X66



FQPTG-90X90

Definition and uniformity between FQPTA series and FQPTG series



FQPTA-140X140W (image not clear and have moire)

FQPTG-140X140W (image is uniform and no moire)

*Note

1. Do not wipe the luminous surface with alcohol, naphtha, etc., to avoid fingerprints or dirt attached to light guide plate
2. If light guide plate is dirty, we should remove large dust particles on the surface by air blowing first, so as to avoid scratching the surface when wiping
3. When the dirt on the luminous surface is difficult to remove, 120 solvent gasoline can be used to clean it

Single Fiber-Optic Cold Light

Constant current control with high stability; the illuminance at outlet is approx. 4.8 million lux*[1]
Support PLC or control board I/O to control the brightness of lights

Applications

- High-precision inspection of flat planes
- Conductive particle detection
- Semiconductor inspection
- High-magnification line scan system

Technical Specification

Model	PLF3-80W-1-E	PLF3-40R-1-E	PLF3-80B-1-E	PLF3-80G-1-E
Lighting Method	Constantly-on / Strobe			
Type of Drive	Constant current			
Dimming Type	Digital dimming			
Number of Channels	1 channel			
Single-Channel Output Power	80W	40W	80W	80W
Input Voltage	AC100-240V			
Trigger Method	External trigger			
Trigger Input Voltage	DC5-24V			
Trigger Response Time	＜10 us			
Strobe Time	1-999 us adjustable			
Brightness Level	0-999 adjustable			
Weight (kg)	3.18			
Overall Dimensions (mm)	181×137.6×205.8			
Operating Environment	Temperature 0~40°C; humidity 20~85%RH (non-condensation)			
Storage Environment	Temperature -20~65°C; humidity 20~85%RH (non-condensation)			
Type of Cooling	Fan cooling			
Material Surface Cooling	Painted SPCC surface			
Selection of Communication Method	E: 100Mbps Ethernet			
Options	AC power cable, network cable LSE-10/1000M-3, optical fibers			

★[1] The data is for reference only, it may be different from actual values

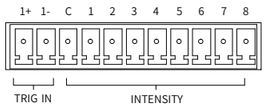
Model Code Description

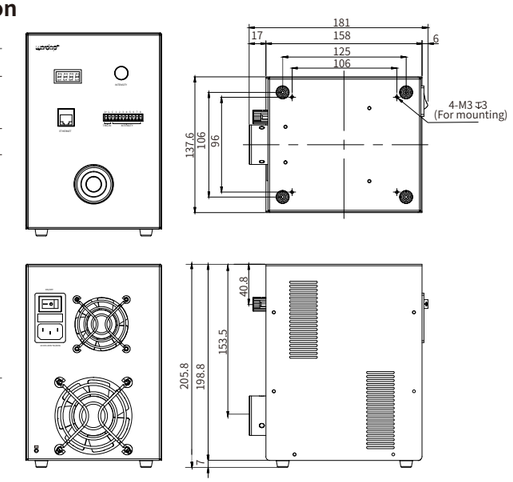
PLF3	-	80	W	-	1	-	E
Model		Power	Color		Output channel		Communication method

Controller External Terminal Connection Definition

Trigger port pin number	Trigger in connection definition		Input voltage
1+	1 channel	Trigger input +	DC 5～24V
1-		Trigger input -	

Trigger port pin number	Trigger in connection definition		Input voltage
C	Brightness level	Input +	DC 12~24V
1	4		
2	8		
3	16		
4	32	Input -(8 I/O interfaces to control the brightness of lights)	
5	64		
6	128		
7	256		
8	512		





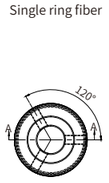
The optical fiber lengths and optical outlets are customizable (Optical fibers with temperature resistance above 200°C are recommended)

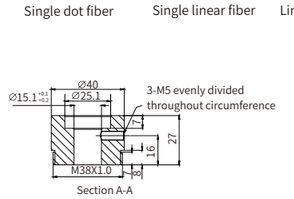

Single ring fiber


Single dot fiber

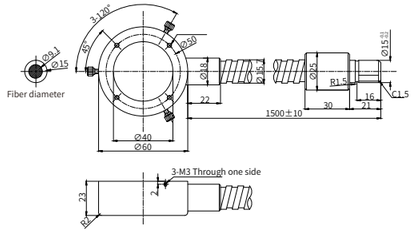

Single linear fiber


Linear fiber condenser

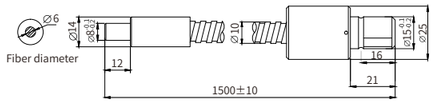




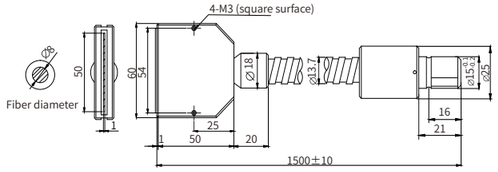
Optical fiber retaining ring (suitable for all customized optical fibers from our company)



Single ring fiber (FO-PLF3-WD30-S-R1540-1.5)

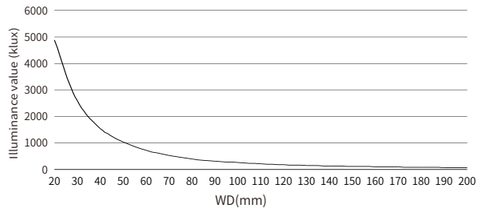


Single dot fiber (FO-PLF3-S-P1506-1.5)



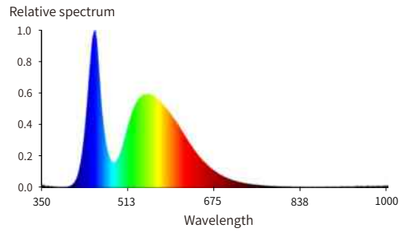
Single linear fiber (FO-PLF3-S-L1550-1.5)

WD vs. Illuminance Curve (example: PLF3-80W-1-E)



Note: 1.5m optical fiber (pass-through diameter of 6 mm) is used for the light. Measurements for dimming level 999; for reference only

Spectrum (example: PLF3-80W-1-E)



Note: This is a prototype test spectrogram. The data is for reference only, it may be different from actual values

Dual Fiber-Optic Cold Light

Constant current control and high stability; the illuminance at outlet is approx. 4.8 million lux*[1]
Lights of 2 channels can be turned on simultaneously; high-speed strobe is available for lights in each channel separately

Applications

- High-precision inspection of flat planes
- Light-and-dark field sequence-function imaging of semiconductor
- Light-and-dark field sequence-function imaging of high-power line scan

Technical Specification

Model	PLF3-80W-2-LSE	PLF3-40R-2-LSE	PLF3-80B-2-LSE	PLF3-80G-2-LSE
Lighting Method	Constantly-on / Strobe			
Type of Drive	Constant current			
Dimming Type	Digital dimming			
Number of Channels	2 channels			
Single-Channel Output Power	80W	40W	80W	80W
Input Voltage	AC100-240V			
Trigger Method	External trigger			
Trigger Input Voltage	DC5-24V			
Trigger Response Time	＜10us			
Strobe Time	1-999 us adjustable			
Brightness Level	0-999 adjustable			
Weight (kg)	5.01			
Overall Dimensions (mm)	181×187.6×205.8			
Operating Environment	Temperature 0~40°C; humidity 20~85%RH (non-condensation)			
Storage Environment	Temperature -20~65°C; humidity 20~85%RH (non-condensation)			
Type of Cooling	Fan cooling			
Material Surface Cooling	Painted SPCC surface			
Selection of Communication Method	LSE: RS232 & 100Mbps Ethernet			
Options	AC power cable, LS-232-3-B communication cable, network cable LSE-10/1000M-3, optical fiber			

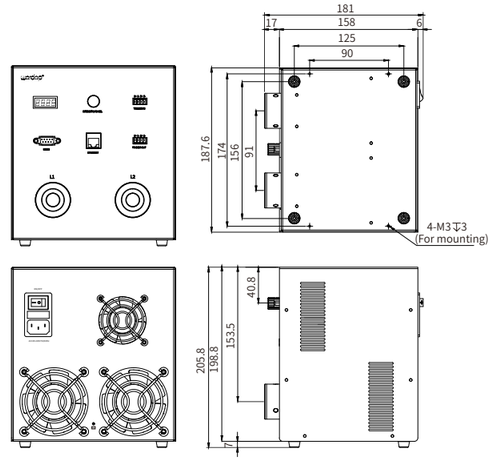
*[1] The data is for reference only, it may be different from actual values

Model Code Description

PLF3	-	80	W	-	2	-	LSE
Model		Single-channel power	Color		Output channel		Communication method

Controller external terminal connection definition

Trigger Port Pin Number	Trigger in Connection Definition		Input Voltage
1+	1 channel	Trigger input +	DC 5~24V
1-		Trigger input -	
2+	2 channel	Trigger input +	
2-		Trigger input -	
Trigger Port Pin Number	**Trigger Out Connection Definition**		**Output Voltage**
1+	1 channel	Trigger output +	DC 12V
1-		Trigger output -	
2+	2 channel	Trigger output +	
2-		Trigger output -	



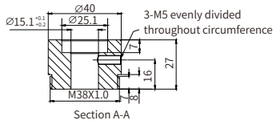
The optical fiber lengths and optical outlets are customizable (Optical fibers with temperature resistance above 200°C are recommended)


Single ring fiber

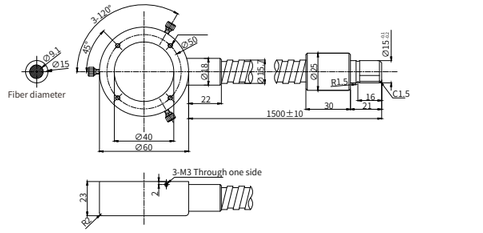

Single dot fiber


Single linear fiber

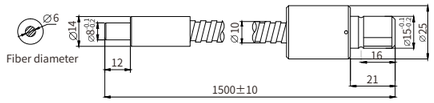

Linear fiber condenser



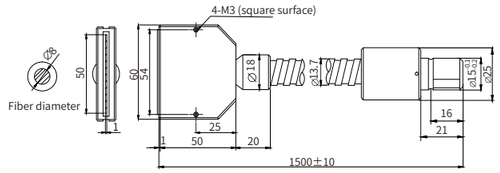
Optical fiber retaining ring (suitable for all customized optical fibers from our company)



Single ring fiber (FO-PLF3-WD30-S-R1540-1.5)

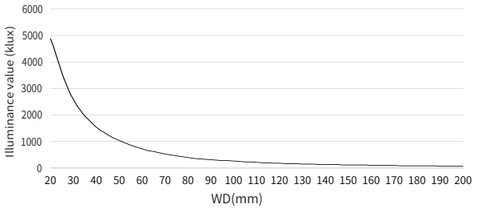


Single dot fiber (FO-PLF3-S-P1506-1.5)



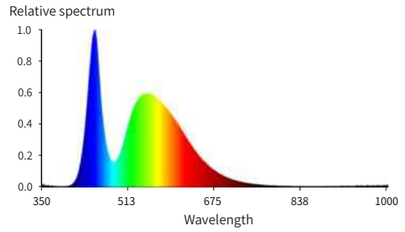
Single linear fiber (FO-PLF3-S-L1550-1.5)

WD vs. Illuminance Curve (example: PLF3-80W-2-E)



Note: 1.5m optical fiber (pass-through diameter of 6 mm) is used for the light. Measurements for dimming level 999; for reference only

Spectrum (example: PLF3-80W-2-E)



Note: This is a prototype test spectrogram. The data is for reference only, it may be different from actual values

Cold Light

High stability, with overdrive strobe illuminance of approximately 50 million lux.
Support operation modes of constant-on, trigger-on, and high-speed overdrive strobe lighting (compatible with both internal and external trigger modes)
Support automatic compensation function for light intensity and service life prediction function

Applications

- High-precision flat surface inspection
- High-speed semiconductor imaging
- High-magnification, high-speed line scan imaging

Technical Specification

Model	PLE-1000FC-LSE	PLE-2000FC-LSE	PLD-3000FC-LSE
Light Color	5-color motorized switching		
Lighting Method	Constantly-on / trigger / high speed overdrive strobe		
Drive Mode	Constant current		
Dimming Type	Digital dimming		
Input Voltage	AC100-240V(4A Max) 50/60HZ	AC100-240V(6A Max) 50/60HZ	AC100-240V(4A Max) 50/60HZ
No. of Channels	1 channels		
Total Output Power	200W	Continuous 270W, Strobe 450W	250W
Trigger Method	Internal trigger / External trigger / soft trigger		
Trigger Input Voltage	DC5-24V(20mA)		
Trigger Output	DC12V(10mA Max)		
Trigger Response Time	2us(Max)		
Brightness Level	0-999		
Protection & Display	Digital tube display and indicator light OCP: Overcurrent; Restore after power recovery		
Weight (kg)	14.1	15.3	13.4
Overall Dimensions (mm)	295.5×240×285		
Window (mm)	∅13	∅20	∅13
Operating Environment	Temperature 0~40°C; humidity 20~85%RH (non-condensation)		
Storage Environment	Temperature -20~65°C; humidity 20~85%RH (non-condensation)		
Type of Cooling	Fan cooling		
Material·Surface Treatment	Painted SPCC surface		
Communication	LSE: RS232/100Mbps Ethernet		
Additional Function	Specific light intensity compensation function, fiber optic monitoring function, temperature alarm function, accumulated Lifetime Log		
Options	AC power cord, LS-232-3-B communication cable, Ethernet cable LSE-10/1000M-3, fiber optic cable		

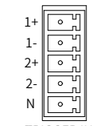
Model code description

PLE	-	1000	FC	-	LSE
Model		Model code	Automatic filter switching		Communication method

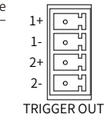
Controller External Terminal Connection Definition

Trigger Port Pin Number	Trigger In Connection Definition		Input Voltage
1+	Trigger Signal Interface	Trigger input +	DC 12～24V
1-		Trigger input -	
2+	Enable Interface	Trigger input +	
2-		Trigger input -	
N	/	/	

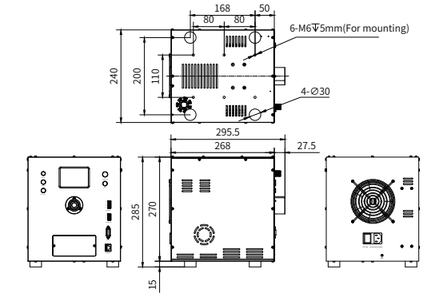
Trigger Port Ppin Number	Trigger Out Connection Definition		Output Voltage
1+	Trigger Synchronization Output Interface	Trigger input +	DC 12V
1-		Trigger input -	
2+	Fault Alarm Interface	Trigger input +	
2-		Trigger input -	



TRIGGER IN

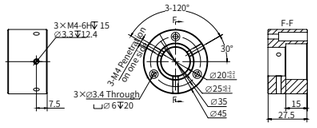


TRIGGER OUT

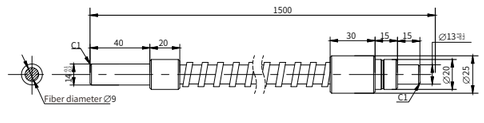


PLE-1000FC-LSE/PLE-2000FC-LSE/PLD-3000FC-LSE

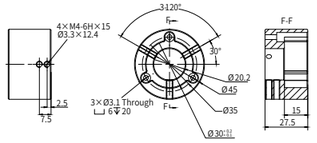
The optical fiber lengths and optical outlets are customizable (Optical fibers with temperature resistance above 200°C are recommended)



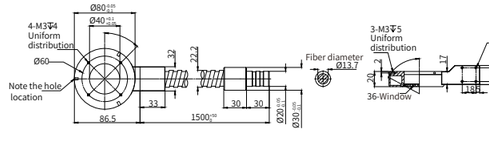
Optical fiber fixing ring (Compatible with all customized optical fibers of our company)



Single dot fiber (FOHS-SS/GS-P1309-1.5)

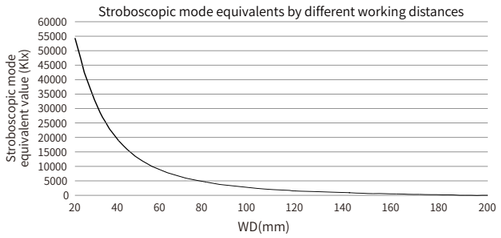


Optical fiber fixing ring (Compatible with all customized optical fibers of our company)



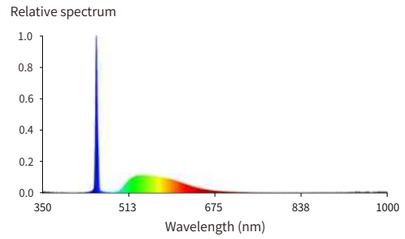
Ring glass fiber(FOHS-GS-R2040-1.5)

WD vs. Illuminance Curve (example: PLD-3000FC-LSE)



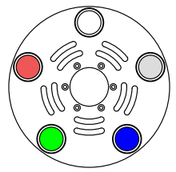
Note: The light is equipped with a 1.5-meter fiber optic cable with beam diameter 6mm and dimming level of 999. The measured value is for reference only.

Spectrum (example: PLD-3000FC-LSE)



Note: This spectrum chart is test by prototype sample, the data is for reference only. Actual values maybe different.

Models Equipped With Filter Convertor: PLD-3000FC-LSE



- White
- Red
- Green
- Blue
- Not

- Equipped with a 5-pack filter convertor
- Filters can be switched manually or by external communication
- Remove the front cover to replace the filter
- The option parts filter comes with four colors (quote separately)

Note: For the mounting method and settings of the filter, please refer to the user manual

Spot Light

Special lens combination to get bright and uniform illumination

Applications

- Work with coaxial lens
- LED die bonder machine
- Inspect characters on chip surface
- Mark point positioning

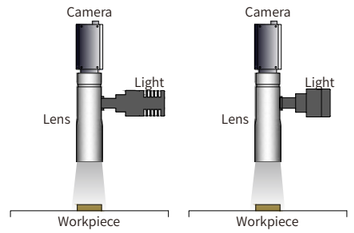
Technical Specification

Input Voltage	DC5V	
LED Color	W/R/G/B	
Light Color (wavelength) ★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5300-6800K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Compatible Controller	PSC4-2005-4	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

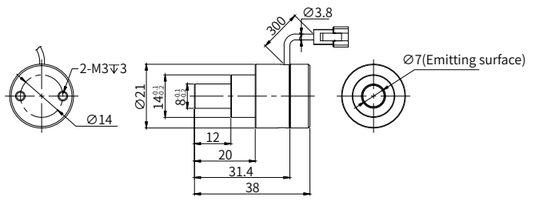
Model Code Description

PL2	-	21	08	-	1	W
Model		Max OD	Interface diameter		Power	Color

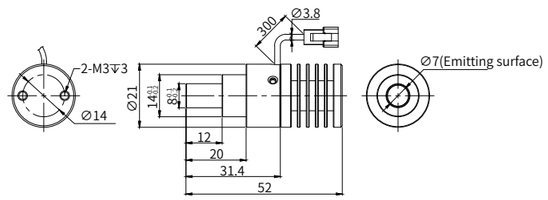


Series	Model	Color	Emitting Diameter(mm)	Interface Diameter(mm)	power(W)★2	Voltage(V)	OD × Height(mm)	Weight(g)	Compatible Controller
PL2	PL2-2108-1		7	8	1.0	5	21×38	22	PSC4-2005-4
	PL2-2108-3		7	8	3.0	5	21×52	32	

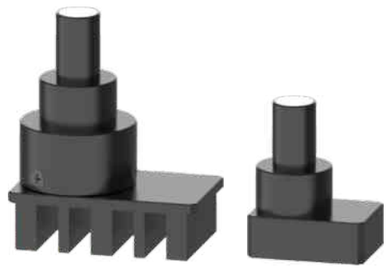
★2 The normal tolerance is +/-10% between the actual product power and power table content



PL2-2108-1



PL2-2108-3



Compact Spot Light

Special lens combination to get bright and uniform illumination

Applications

- Work with coaxial lens
- LED die bonder machine
- Inspect characters on chip surface
- Mark point positioning

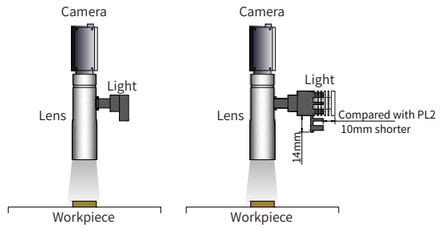
Technical Specification

Input Voltage	DC5V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	5300-6800K	
Operation (indoors)	Temperature: 0~40℃, humidity: 20~85% (non-condensation)	
Compatible Controller	PSC4-2005-4	
Accessories	Extension cable：1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

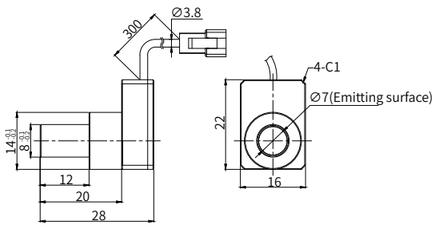
Model Code Description

PLS	-	28	08	-	1	W
Model		Height	Interface diameter		Power	Color

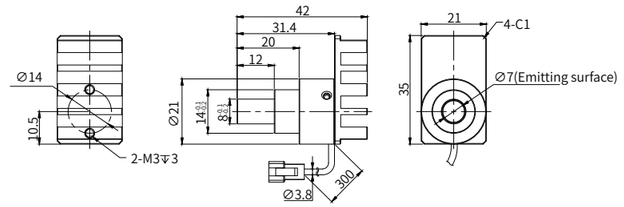


Series	Model	Color	Emitting Diameter(mm)	Interface Diameter(mm)	Power(W)★2	Voltage(V)	L × W × H(mm)	Weight(g)	Compatible Controller
PLS	PLS-2808-1	● ○ ● ●	7	8	1.0	5	22×16×28	8.5	PSC4-2005-4
	PLS-4208-3	● ○ ● ●	7	8	3.0	5	35×21×42	15	

★2 The normal tolerance is +/-10% between the actual product power and power table content



PLS-2808-1



PLS-4208-3

High-Brightness Spot Light

Special lens combination and efficient heat dissipation achieves illumination of high brightness, high power and high uniformity

Applications

- Capacitance appearance detection
- Welding spot detection of electronic components
- Contact spacing detection in connector hole
- Mark point positioning, etc

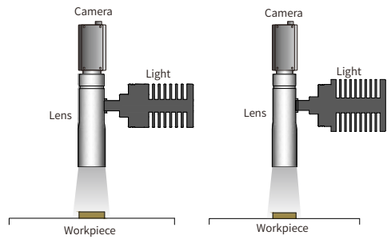
Technical Specification

Input Voltage	DC5V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6500-7500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Compatible Controller	PSC4-2005-4	
Accessories	Extension cable：1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

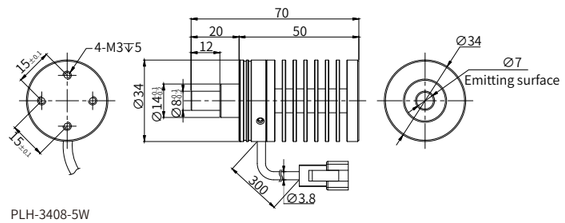
Model Code Description

PLH	-	34	08	-	5	W
Model		Max OD	Interface diameter		Power	Color

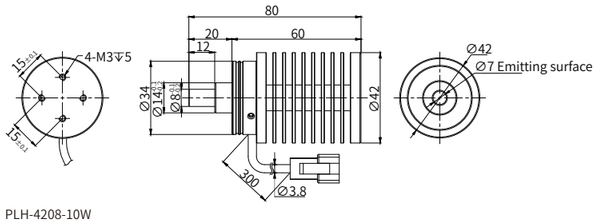


Series	Model	Color	Emitting Diameter(mm)	Interface Diameter(mm)	Power(W)★2	Voltage(V)	OD × H(mm)	Weight(g)	Compatible Controller
PLH	PLH-3408-5W	○	7	8	5.0	5	34×70	78	PSC4-2005-4
	PLH-4208-10W	○	7	8	10.0	5	42×80	119	

★2 The normal tolerance is +/-10% between the actual product power and power table content

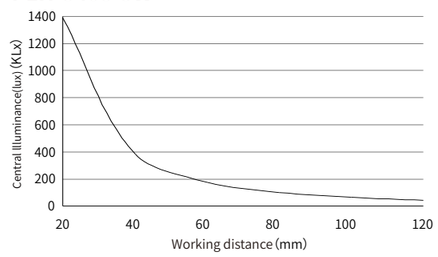


PLH-3408-5W

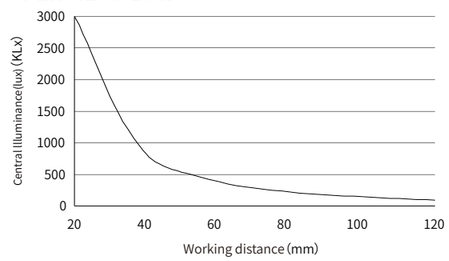


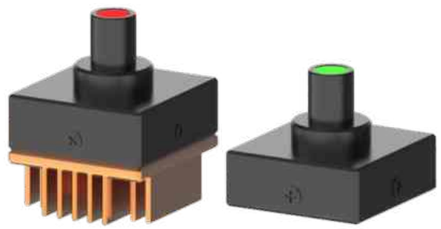
PLH-4208-10W

Working Distance-Illuminance Vurve：PLH-3408-5W



Working Distance-Illuminance Curve：PLH-4208-10W





Tri-Color High-Uniformity Spot Light

Special optical material achieves high uniformity illumination, RGB mixed into white color

Applications

- Capacitor appearance detection
- Welding spot detection of electronic components
- Contact spacing detection in connector hole
- Mark point positioning, etc

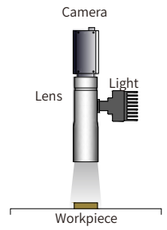
Technical Specification

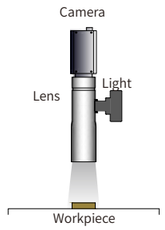
Input Voltage	DC5V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6500-7500K	
Operation (indoors)	Temperature: 0~40℃, humidity: 20~85% (non-condensation)	
Compatible Controller	PSC4-2005-4、C-PBD2-6012-6-LS-HW	
Accessories	Extension cable：1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

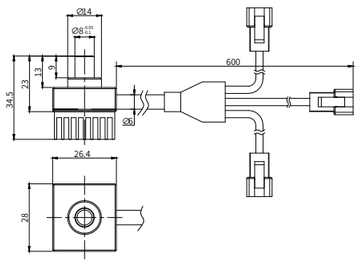
PLU	-	35	08	-	9	RGB
Model		Height	Interface diameter		Power	Color



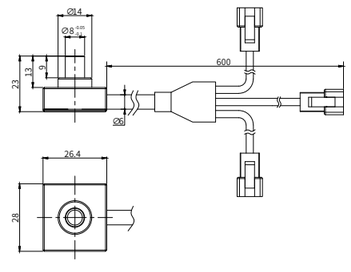


Series	Model	Color	Emitting Diameter(mm)	Interface Diameter(mm)	Current(A)★2	Voltage(V)	L×W×H(mm)	Weight(g)	Compatible Controller
PLU	PLU-3508-9RGB-H		7	8	3*0.8	5	28×26.4×34.5	15	PSC4-2005-4
	PLU-2308RGB-SF2		7	8	3*15	12	28×26.4×23	25	C-PBD2-6012-6-LS-HW

★2 The normal tolerance is +/-10% between the actual product power and power table content

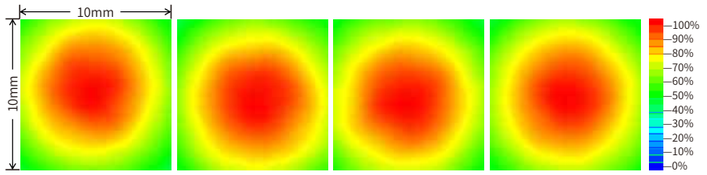


PLU-3508-9RGB-H



PLU-2308RGB-SF2

Relative Illuminance Graph



Red:WD:10mm Green:WD:10mm Blue:WD:10mm White:WD:10mm

UV Light

Imported UV LED creates high power output and stable illumination

Applications

- Recognition of UV glue
- Anti-counterfeiting code inspection
- ITO circuit inspection

Technical Specification

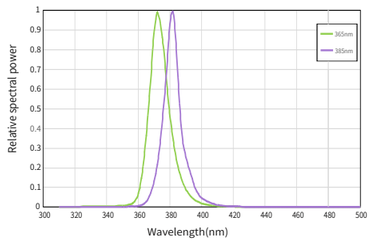
Light Color (wavelength)★1	365nm、385nm、405nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	Please refer to controller selection table P199-200
Accessories	Extension cable: 1m/2m/3m/5m/7m
Product Development	Custom light to get best effects

★1 Wavelength for different batches may be different, kindly refer to spec for details

Model Code Description

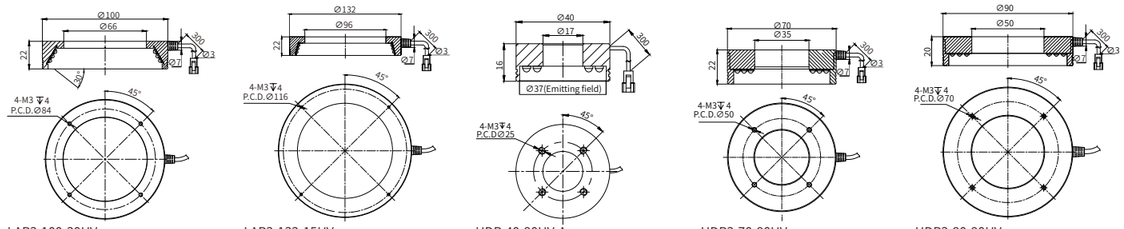
HDR3	-	70	-	90	UV385
Model		Emitting surface		LED angle	Wavelength

Spectral Distribution

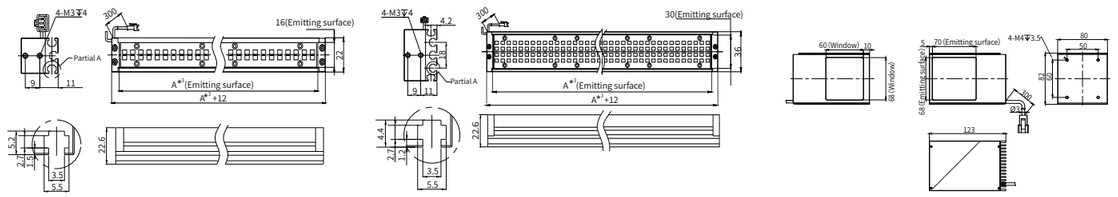


Series	Model	Voltage(V)	Rated power(W)★2	OD × ID× H(mm)/L× W× H(mm)	Weight(g)	Compatible Controller
UV	LAR3-100-30UV385	24	8.0	100×70×22	170	PD5 digital controller
	LAR3-132-15UV365	24	12.0	132×96×22	275	
	HDR-40-90UV365-A	24	3.0	40×17×16	30	
	HDR3-70-90UV365	24	7.2	70×35×22	115	
	HDR3-70-90UV385	24	7.2	70×35×22	115	
	HDR3-90-90UV365	24	14.4	90×50×20	150	
	HDL3-80X16UV385	24	2.4	92×36×22.6	80	
	HDL3-197X16UV385-A	24	6.0	209×22×22.6	150	
	HDL3-74X30UV385-A	24	4.8	86×36×22.6	100	
	HDL3-98X30UV385-A	24	7.2	110×36×22.6	120	
	HDL3-146X30UV365-A	24	9.6	158×36×22.6	160	
	HDL3-146X30UV385-A	24	9.6	158×36×22.6	160	
	HDL3-170X30UV365-A	24	12.0	182×36×22.6	180	
	HDL3-194X30UV385-A	24	14.4	206×36×22.6	200	
	HDL3-218X30UV385-A	24	14.4	230×36×22.6	220	
	HDL3-266X30UV365-A	24	17.6	278×36×22.6	260	
	HDL3-290X30UV385-A	24	21.6	302×36×22.6	280	
	HDL3-386X30UV365-A	24	28.8	398×36×22.6	370	
	HDL3-434X30UV385-A	24	28.8	446×36×22.6	410	
	CO3-70UV385	24	17.0	123×82×80	590	

★2 The normal tolerance is +/-10% between the actual product power and power table content



LAR3-100-30UV　LAR3-132-15UV　HDR-40-90UV-A　HDR3-70-90UV　HDR3-90-90UV



Partial A, Slot for M3 nuts. For mounting

HDL3-A★3X16UV-A

Partial A, Slot for M3 nuts. For mounting

HDL3-A★3X30UV-A

CO3-70UV385

★3 A means emitting surface of bar light (mm), for detailed information, please refer to spec. sheet for UV bar light

★ Above drawing suitable for UV 365、385 and 405

IR Light

Imported IR LED creates high power output and stable illumination

Applications

- Transmitted inspection of absence
- Character reading on plastic products
- LCD positioning identification inspection, etc

Technical Specification

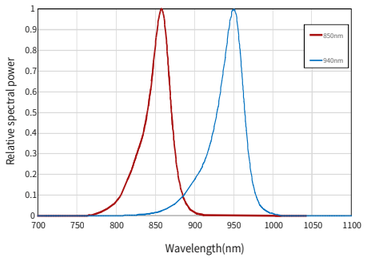
Light Color (wavelength)★1	850nm、940nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	Please refer to controller selection table P199-200
Accessories	Extension cable: 1m/2m/3m/5m/7m
Product Development	Custom light to get best effects

★1 Wavelength for different batches may be different, kindly refer to spec for details

Model Code Description

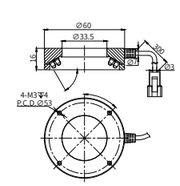
HDR3	-	70	-	90	IR850
Model		Emitting surface		LED angle	Wavelength

Spectral distribution

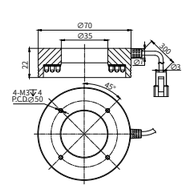


Series	Model	Voltage(V)	Rated Power(W)★2	OD×ID×H(mm)/L×W×H(mm)	Weight(g)	Compatible Controller
IR	HDR3-60-60IR940	24	2.6	∅60×33.5×16	60	PS2C-3624-2 PD5-6024-4
	HDR3-70-90IR940	24	2.8	∅70×35×22	115	
	HDR3-90-70IR850	24	3.8	∅90×50×20	160	
	HDR3-120-70IR940	24	9.8	∅120×65×20	250	
	LAR3-132-15IR940	24	8.0	∅132×96×22	275	
	CO3-50IR850	24	7.7	103×62×60	350	
	FQ2-43X35IR940	24	3.6	57×49×18	75	
	FQ2-51X51IR940	24	5.8	65×65×18	100	
	FQ2-100X100IR940	24	9.9	114×114×18	245	
	FQG2-300X300IR940	24	35	334×334×10.5	1670	
	HBL3-74X30IR940	24	2.8	86×36×22.6	100	
	HLD-50X15IR940	24	2.2	60×20.4×36	70	
	HDL3-50X30IR850	24	3.6	62×36×22.6	80	
	HDL3-98X30IR940	24	2.9	110×36×22.6	120	
	LNH2-200IR850-FN	48	38.4	210×46.8×99.5	800	PSC5-15048-2

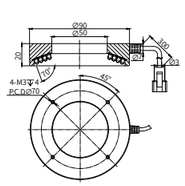
★2 The normal tolerance is +/-10% between the actual product power and power table content



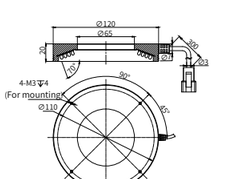
HDR3-60-60IR940



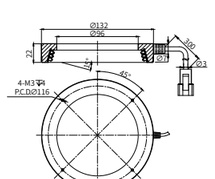
HDR3-70-90IR940



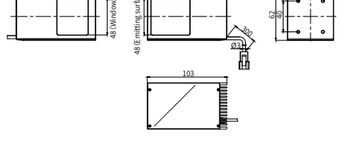
HDR3-90-70IR850



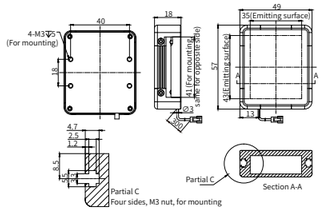
HDR3-120-70IR940



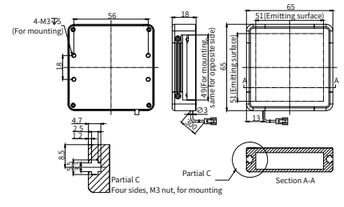
LAR3-132-15IR940



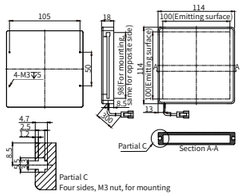
CO3-50IR850



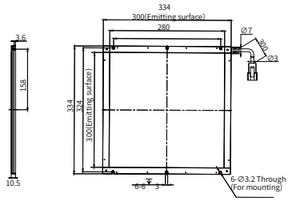
FQ2-43X35IR940



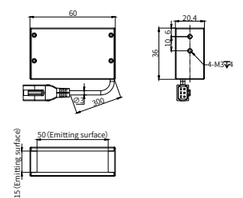
FQ2-51X51IR940



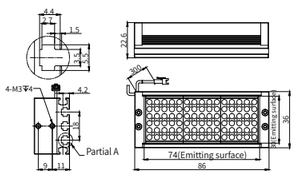
FQ2-100X100IR940



FQG2-300X300IR940

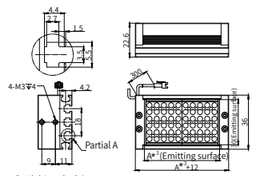


HLD-50X15IR940



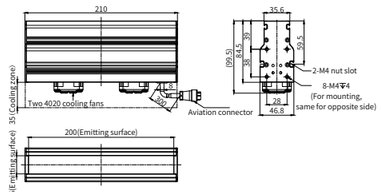
Partial A scale: 3:1
Slot for M3 nuts. For mounting

HBL3-74X30IR940



Partial A scale: 3:1
Slot for M3 nuts. For mounting

HDL3-A★3X30IR



LNH2-200IR850-FN

★3A is the emitting surface (mm) of bar light. For details, kindly refer to the above infrared bar light parameter table

RGB Light

Control single color, or different color combinations, on and off respectively
Suitable for a variety of applications that require color change

Applications

- Outer appearance inspection of printings
- Inspection of defects on colorful objects
- Positioning inspection of film

Technical Specification

Input Voltage	DC24V		
LED Color	R/G/B		
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm	Blue: 460-475nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)		
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2 (Recommend using digital controller)		
Accessories	Extension cable: 1m/2m/3m/5m7m		
Product Development	Custom light to get best effects		

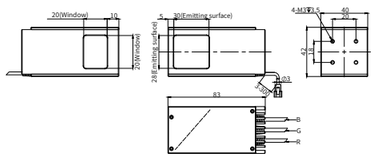
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

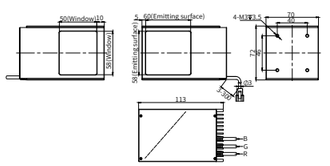
CO3	-	30	RGB
Model		Emitting surface	Color

Series	Model	Color	Voltage(V)	Rated Power(W)★2			L × W × H(mm)	Weight (g)
				R	B	G		
RGB Lights	CO3-30RGB		24	1.3	2.2	2.2	83×42×40	210
	CO3-40RGB		24	3.5	3.5	3.5	93×52×50	270
	CO3-50RGB		24	3.8	6.5	6.5	103×62×60	370
	CO3-60RGB		24	5.2	8.6	8.6	113×72×70	480
	CO3-70RGB		24	9.0	9.0	9.0	123×82×80	610
	CO3-80RGB		24	13.8	13.8	13.8	133×92×90.4	760
	HDL3-80X16RGB		24	1.5	2.0	2.0	92×22×22.6	80
	HDL3-119X16RGB		24	2.5	3.0	3.0	131×22×22.6	100
	HDL3-197X16RGB		24	4.0	6.0	6.0	209×22×22.6	150
	HDL3-98X30RGB		24	2.0	5.0	5.0	110×36×22.6	120
	HDL3-146X30RGB		24	5.0	8.0	8.0	158×36×22.6	160
	HDL3-194X30RGB		24	6.0	10.0	10.0	206×36×22.6	200
	HDL3-290X30RGB		24	5.0	12.0	12.0	302×36×22.6	280
	HDL3-386X30RGB		24	12.0	18.0	18.0	398×36×22.6	370
	HDL3-434X30RGB		24	10.0	16.0	16.0	446×36×22.6	410
	FQ2-100X100RGB		24	6.0	8.0	8.0	114×114×18	285
	FQ2-160X120RGB		24	10.0	12.0	12.0	174×134×18	460
	FQ2-200X150RGB		24	16.0	18.0	18.0	214×164×18	600
	FQ2-211X200RGB		24	25.0	28.0	28.0	225×214×18	890

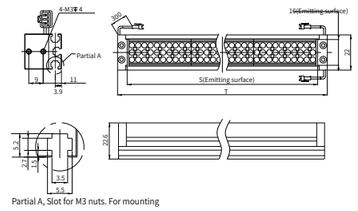
★2 Multi-color may increase the power of the light. Recommend lighting it separately. For details, kindly contact corresponding sale or technician.



CO3-30RGB



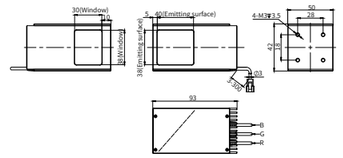
CO3-60RGB



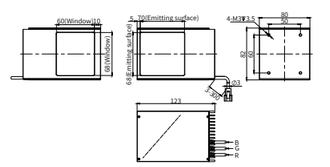
Partial A, Slot for M3 nuts. For mounting

HDL3-SX16RGB

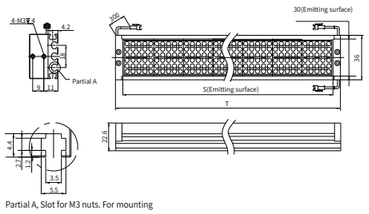
Model	Size(mm)		Rated Power(W)		Weight(g)
	S	T	R	W/G/B	
HDL3-80X16RGB	80	92	1.5	2.0	80
HDL3-119X16RGB	119	131	2.5	3.0	100
HDL3-197X16RGB	197	209	4.0	6.0	150



CO3-40RGB



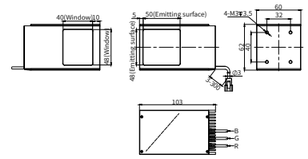
CO3-70RGB



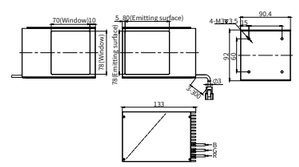
Partial A, Slot for M3 nuts. For mounting

HDL3-SX30RGB

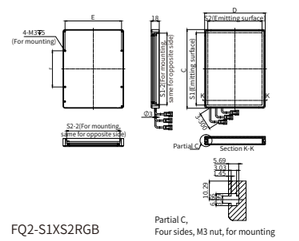
Model	Size(mm)		Rated Power(W)		Weight(g)
	S	T	R	W/G/B	
HDL3-98X30RGB	98	110	2.0	5.0	120
HDL3-146X30RGB	146	158	5.0	8.0	160
HDL3-194X30RGB	194	206	6.0	10.0	200
HDL3-290X30RGB	290	302	10.0	12.0	280
HDL3-386X30RGB	386	398	12.0	18.0	370
HDL3-434X30RGB	434	446	10.0	16.0	410



CO3-50RGB



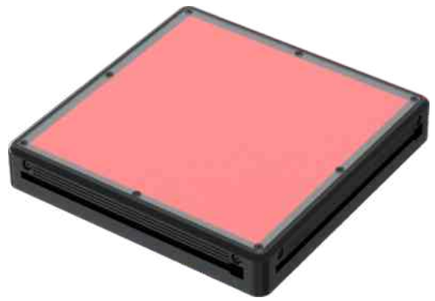
CO3-80RGB



Partial C,
Four sides, M3 nut, for mounting

FQ2-S1XS2RGB

Model	Size(mm)						Rated Power(W)		Weight(g)
	S1	S2	C	D	E	F	R	W/G/B	
FQ2-100X100RGB	100	100	114	114	105	50	6.0	8.0	285
FQ2-160X120RGB	160	120	174	134	125	80	10.0	12.0	460
FQ2-200X150RGB	200	250	214	164	155	80	16.0	18.0	600
FQ2-211X200RGB	211	200	225	214	205	80	25.0	28.0	890



RGB High Brightness Strobe Light

Can control the brightness of each color separately and has different color combinations
It is recommended to use a single color each time. When three colors are lit at the same time, the brightness level should within 85
Duty cycle should be less than 30% when in trigger mode

Applications

- Outer appearance inspection of printings
- Inspection of defects on colorful objects
- Positioning inspection of film

Technical Specification

Input Voltage	DC24V		
LED Color	R/G/B		
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm	Blue: 460-475nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)		
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2 (Recommend use digital controller)		
Accessories	Extension cable: 1m/2m/3m/5m7m		
Product Development	Custom light to get best effects		

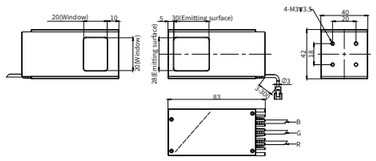
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

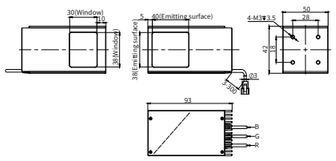
CO3	-	30	RGB	-	H
Model		Emitting surface	Color		High brightness

Series	Model	Color	Voltage(V)	Rated Power(W) ★2			L × W × H(mm)	Weight (g)
RGB high brightness strobe lights	CO3-30RGB-H	● ● ●	24	4.3	7.2	7.2	83×42×40	210
	CO3-40RGB-H	● ● ●	24	5.8	8.6	8.6	93×52×50	270
	CO3-50RGB-H	● ● ●	24	11.5	11.5	11.5	103×62×60	370
	CO3-60RGB-H	● ● ●	24	14.5	14.5	14.5	113×72×70	480
	CO3-70RGB-H	● ● ●	24	21.5	21.5	21.5	123×82×80	610
	CO3-80RGB-H	● ● ●	24	26.0	26.0	26.0	133×92×90.4	760
	HDL3-80X16RGB-H	● ● ●	24	2.6	4.0	4.0	92×22×22.6	80
	HDL3-119X16RGB-H	● ● ●	24	4.3	6.0	6.0	131×22×22.6	100
	HDL3-197X16RGB-H	● ● ●	24	6.0	10.5	10.5	209×22×22.6	150
	HDL3-98X30RGB-H	● ● ●	24	3.0	6.5	6.5	110×36×22.6	120
	HDL3-146X30RGB-H	● ● ●	24	6.2	10.5	10.5	158×36×22.6	160
	HDL3-194X30RGB-H	● ● ●	24	6.2	14.5	14.5	206×36×22.6	200
	HDL3-290X30RGB-H	● ● ●	24	9.3	22.0	22.0	302×36×22.6	280
	HDL3-386X30RGB-H	● ● ●	24	12.5	30.0	30.0	398×36×22.6	370
	HDL3-434X30RGB-H	● ● ●	24	19.0	32.0	32.0	446×36×22.6	410
	FQ2-100X100RGB-H	● ● ●	24	11.5	11.5	11.5	114×114×18	285
	FQ2-160X120RGB-H	● ● ●	24	20.0	20.0	20.0	174×134×18	460
	FQ2-200X150RGB-H	● ● ●	24	33.5	33.5	33.5	214×164×18	600
	FQ2-211X200RGB-H	● ● ●	24	48.5	48.5	48.5	225×214×18	890
	HDR3-50-90RGB-H	● ● ●	24	3.0	3.0	3.0	50×25×19	52
	HDR3-70-45RGB-H	● ● ●	24	5.0	5.0	5.0	70×38×21	100
	HDR3-70-90RGB-H	● ● ●	24	5.8	5.8	5.8	70×35×22	113
	HDR3-90-45RGB-H	● ● ●	24	6.0	6.0	6.0	90×56×20.5	129
	HDR3-100-90RGB-H	● ● ●	24	7.0	7.0	7.0	100×40×20	229
	HDR3-120-75RGB-H	● ● ●	24	11.4	11.4	11.4	120×65×17	240
	HDR3-120-90RGB-H	● ● ●	24	11.4	11.4	11.4	120×50×18	311
	HDR3-150-90RGB-H	● ● ●	24	13.6	13.6	13.6	150×25×22.5	603
	HDR3-180-60RGB-H	● ● ●	24	19.0	19.0	19.0	180×126×23	488
	LAR3-100-30RGB-H	● ● ●	24	9.5	9.5	9.5	100×66×22	150
	LAR3-120-00RGB-H	● ● ●	24	5.6	5.6	5.6	120×86×11	120
	LAR3-120-30RGB-H	● ● ●	24	12.0	12.0	12.0	120×80×22	190
	LAR3-150-30RGB-H	● ● ●	24	16.0	16.0	16.0	150×108×22	270
	LAR3-180-30RGB-H	● ● ●	24	20.5	20.5	20.5	180×132×29	471
	SD3-100RGB-H	● ● ●	24	10.8	10.8	10.8	Ø116×67	193
	SD3-120RGB-H	● ● ●	24	13.0	13.0	13.0	Ø134×63.7	236
	SD3-150RGB-H	● ● ●	24	15.0	15.0	15.0	Ø166×83	373
	SD3-180RGB-H	● ● ●	24	17.3	17.3	17.3	Ø198×98	554
	SD3-210RGB-H	● ● ●	24	19.5	19.5	19.5	Ø230×114	690
	SD3-250RGB-H	● ● ●	24	21.6	21.6	21.6	Ø266×127.5	828

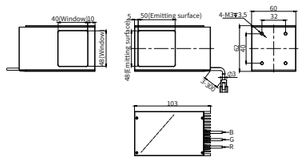
★2 Multi-color may increase the power of the light. Recommend lighting it separately. For details, kindly contact corresponding sale or technician.



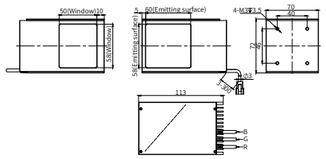
CO3-30RGB-H



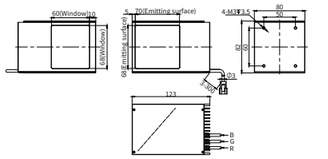
CO3-40RGB-H



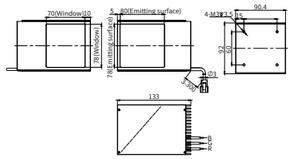
CO3-50RGB-H



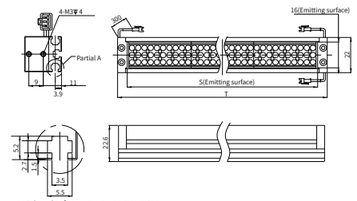
CO3-60RGB-H



CO3-70RGB-H



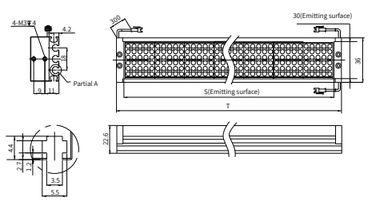
CO3-80RGB-H



Partial A, Slot for M3 nuts. For mounting

HDL3-SX16RGB-H

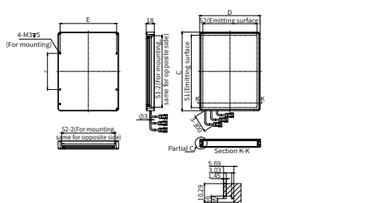
Model	Size(mm)		Rated Power(W)		Weight(g)
	S	T	R	W/G/B	
HDL3-80X16RGB-H	80	92	2.6	4.0	80
HDL3-119X16RGB-H	119	131	4.3	6.0	100
HDL3-197X16RGB-H	197	209	6.0	10.5	150



Partial A, Slot for M3 nuts. For mounting

HDL3-SX30RGB-H

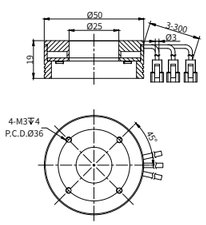
Model	Size(mm)		Rated Power(W)		Weight(g)
	S	T	R	W/G/B	
HDL3-98X30RGB-H	98	110	3.0	6.5	120
HDL3-146X30RGB-H	146	158	6.2	10.5	160
HDL3-194X30RGB-H	194	206	6.2	14.5	200
HDL3-290X30RGB-H	290	302	9.3	22.0	280
HDL3-386X30RGB-H	386	398	12.5	30.0	370
HDL3-434X30RGB-H	434	446	19.0	32.0	410



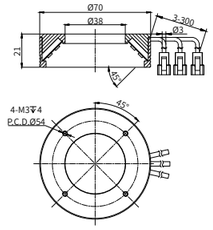
Partial C,
Four sides, M3 nut, for mounting

FQ2-S1XS2RGB-H

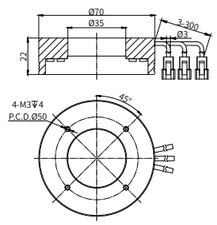
Model	Size(mm)						Rated Power(W)		Weight(g)
	S1	S2	C	D	E	F	R	W/G/B	
FQ2-100X100RGB-H	100	100	114	114	105	50	11.5	11.5	285
FQ2-160X120RGB-H	160	120	174	134	125	80	20.0	20.0	460
FQ2-200X150RGB-H	200	250	214	164	155	80	33.5	33.5	600
FQ2-211X200RGB-H	211	200	225	214	205	80	48.5	48.5	890



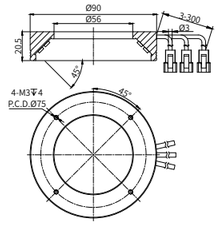
HDR3-50-90RGB-H



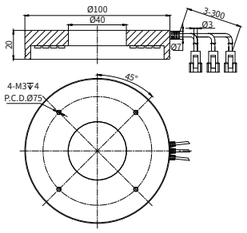
HDR3-70-45RGB-H



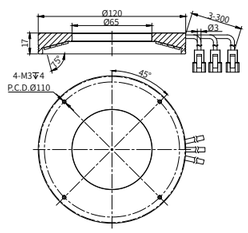
HDR3-70-90RGB-H



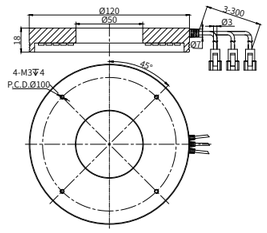
HDR3-90-45RGB-H



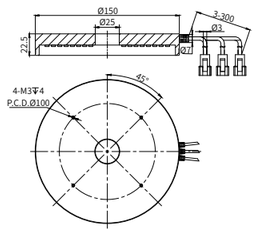
HDR3-100-90RGB-H



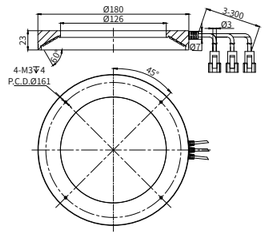
HDR3-120-75RGB-H



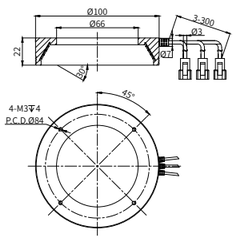
HDR3-120-90RGB-H



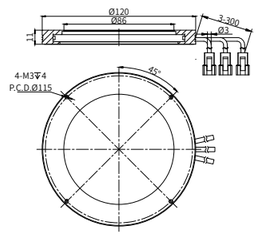
HDR3-150-90RGB-H



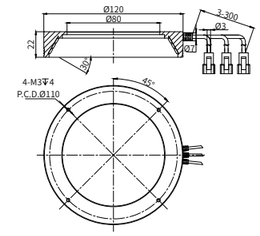
HDR3-180-60RGB-H



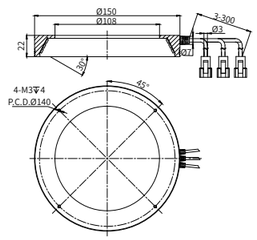
LAR3-100-30RGB-H



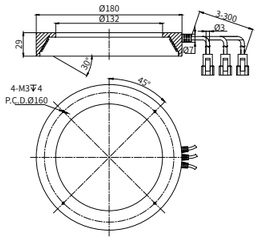
LAR3-120-00RGB-H



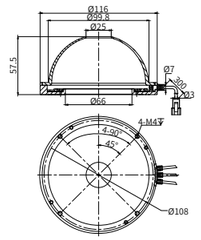
LAR3-120-30RGB-H



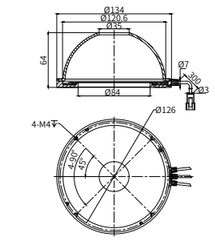
LAR3-150-30RGB-H



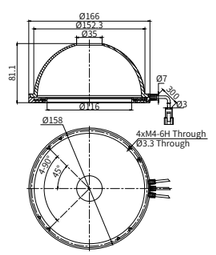
LAR3-180-30RGB-H



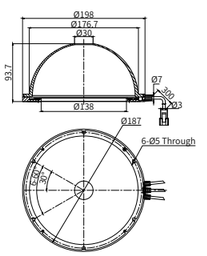
SD3-100RGB-H



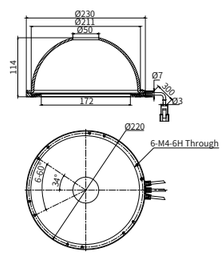
SD3-120RGB-H



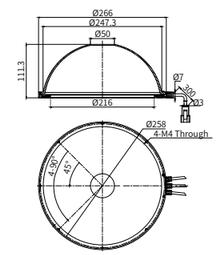
SD3-150RGB-H



SD3-180RGB-H



SD3-210RGB-H



SD3-250RGB-H

RGB Overdrive Light

Different colors combination. Can control on/off of each color individually
Suitable for a variety of applications that require color change

Applications

- Outer appearance inspection of printings
- Inspection of defects on colorful objects
- Positioning inspection of film

Technical Specification

Input Voltage	DC24V
LED Color	R/G/B
Light Color (wavelength)★1	Red: 620-630nm Green: 520-530nm Blue: 460-475nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Supporting Controller	PBD2、PBDL2
Accessories	Extension cable: 1m/2m/3m/5m7m
Product Development	Custom light to get best effects
Directions for Use	Strobe duty cycle less than 5‰

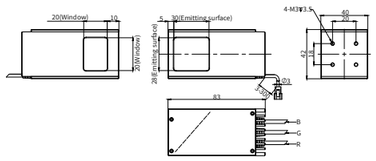
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

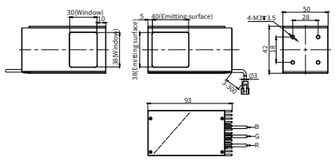
CO3	-	30	RGB	-	SF
Model		Emitting surface	Color		Overdrive

Series	Model	Color	Voltage(V)	Rated Theoretical Current ★2			L × W × H(mm)	Weight (g)
	CO3-30RGB-SF	● ● ●	44	6	6	6	83×42×40	210
	CO3-40RGB-SF	● ● ●	44	6	6	6	93×52×50	270
	CO3-50RGB-SF	● ● ●	44	9	9	9	103×62×60	370
	CO3-60RGB-SF	● ● ●	44	12	12	12	113×72×70	480
	CO3-70RGB-SF	● ● ●	44	15	15	15	123×82×80	610
	CO3-80RGB-SF	● ● ●	44	20	20	20	133×92×90.4	760
	HDL3-80X16RGB-SF	● ● ●	44	6	6	6	92×22×22.6	80
	HDL3-119X16RGB-SF	● ● ●	44	6	6	6	131×22×22.6	100
	HDL3-197X16RGB-SF	● ● ●	44	12	12	12	209×22×22.6	150
	HDL3-98X30RGB-SF	● ● ●	44	15	15	15	110×36×22.6	120
	HDL3-146X30RGB-SF	● ● ●	44	18	18	18	158×36×22.6	160
	HDL3-194X30RGB-SF	● ● ●	44	21	21	21	206×36×22.6	200
	HDL3-290X30RGB-SF	● ● ●	44	25	25	25	302×36×22.6	280
	HDL3-386X30RGB-SF	● ● ●	44	25	25	25	398×36×22.6	370
	HDL3-434X30RGB-SF	● ● ●	44	25	32	25	446×36×22.6	410
	FQ2-100X100RGB-SF	● ● ●	44	15	15	15	114×114×18	285
	FQ2-160X120RGB-SF	● ● ●	44	20	20	20	174×134×18	460
	FQ2-200X150RGB-SF	● ● ●	44	25	25	25	214×164×18	600
	FQ2-211X200RGB-SF	● ● ●	44	25	25	25	225×214×18	890
RGB overdrive light	HDR3-50-90RGB-SF	● ● ●	44	4.5	4.5	4.5	50×25×19	52
	HDR3-70-45RGB-SF	● ● ●	44	6.5	6.5	6.5	70×38×21	100
	HDR3-70-90RGB-SF	● ● ●	44	7	7	7	70×35×22	113
	HDR3-90-45RGB-SF	● ● ●	44	8	8	8	90×56×20.5	129
	HDR3-100-90RGB-SF	● ● ●	44	9	9	9	100×40×20	229
	HDR3-120-75RGB-SF	● ● ●	44	13	13	13	120×65×17	240
	HDR3-120-90RGB-SF	● ● ●	44	13	13	13	120×50×18	311
	HDR3-150-90RGB-SF	● ● ●	44	15	15	15	150×25×22.5	603
	HDR3-180-60RGB-SF	● ● ●	44	21	21	21	180×126×23	488
	LAR3-100-30RGB-SF	● ● ●	44	10	10	10	100×66×22	150
	LAR3-120-00RGB-SF	● ● ●	44	6	6	6	120×86×11	120
	LAR3-120-30RGB-SF	● ● ●	44	13	13	13	120×80×22	190
	LAR3-150-30RGB-SF	● ● ●	44	17	17	17	150×108×22	270
	LAR3-180-30RGB-SF	● ● ●	44	21.5	21.5	21.5	180×132×29	471
	SD3-100RGB-SF	● ● ●	44	12	12	12	Ø116×67	193
	SD3-120RGB-SF	● ● ●	44	15	15	15	Ø134×63.7	236
	SD3-150RGB-SF	● ● ●	44	20	20	20	Ø166×83	373
	SD3-180RGB-SF	● ● ●	44	25	25	25	Ø198×98	554
	SD3-210RGB-SF	● ● ●	44	25	25	25	Ø230×114	690
	SD3-250RGB-SF	● ● ●	44	25	25	25	Ø266×127.5	828

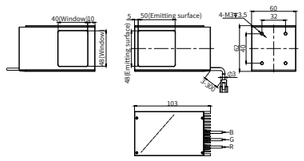
★2 Multi-color may increase the power of the light. Recommend lighting it separately. For details, kindly contact corresponding sale or technician.



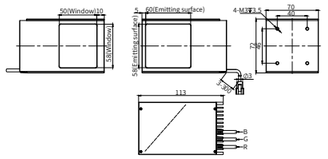
CO3-30RGB-SF



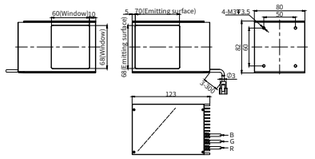
CO3-40RGB-SF



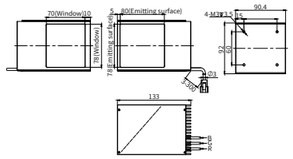
CO3-50RGB-SF



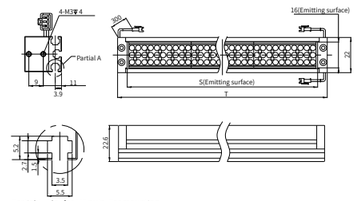
CO3-60RGB-SF



CO3-70RGB-SF



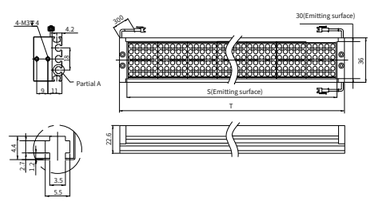
CO3-80RGB-SF



Partial A, Slot for M3 nuts. For mounting

HDL3-SX16RGB-SF

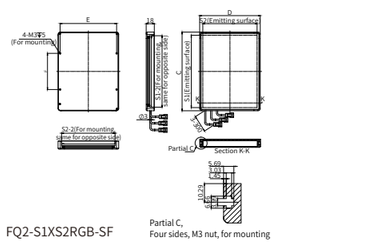
Model	Size(mm)		Strobe Current (A)		
	S	T	R	W/G/B	Weight(g)
HDL3-80X16RGB-SF	80	92	6	6	80
HDL3-119X16RGB-SF	119	131	6	6	100
HDL3-197X16RGB-SF	197	209	12	12	150



Partial A, Slot for M3 nuts. For mounting

HDL3-SX30RGB-SF

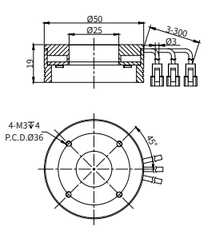
Model	Size(mm)		Strobe Current (A)		
	S	T	R	W/G/B	Weight(g)
HDL3-98X30RGB-SF	98	110	15	15	120
HDL3-146X30RGB-SF	146	158	18	18	160
HDL3-194X30RGB-SF	194	206	21	21	200
HDL3-290X30RGB-SF	290	302	25	25	280
HDL3-386X30RGB-SF	386	398	25	25	370
HDL3-434X30RGB-SF	434	446	25	25	410



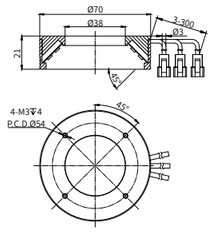
Partial C,
Four sides, M3 nut, for mounting

FQ2-S1XS2RGB-SF

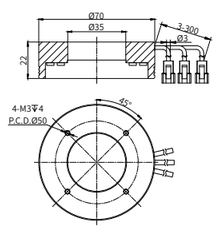
Model	Size(mm)						Strobe Current (A)		
	S1	S2	C	D	E	F	R	W/G/B	Weight(g)
FQ2-100X100RGB-SF	100	100	114	114	105	50	15	15	285
FQ2-160X120RGB-SF	160	120	174	134	125	80	20	20	460
FQ2-200X150RGB-SF	200	250	214	164	155	80	25	25	600
FQ2-211X200RGB-SF	211	200	225	214	205	80	25	25	890



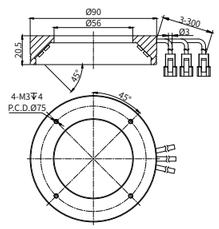
HDR3-50-90RGB-SF



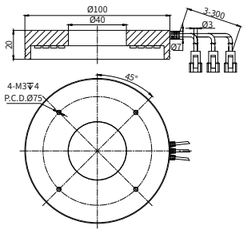
HDR3-70-45RGB-SF



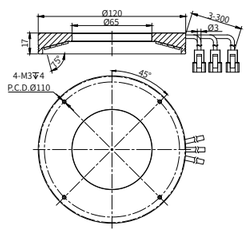
HDR3-70-90RGB-SF



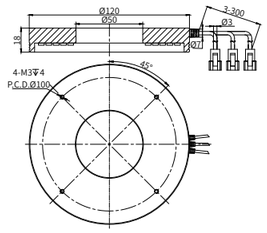
HDR3-90-45RGB-SF



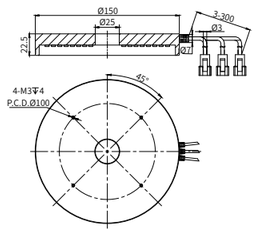
HDR3-100-90RGB-SF



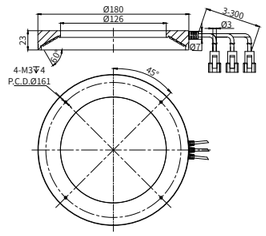
HHDR3-120-75RGB-SF



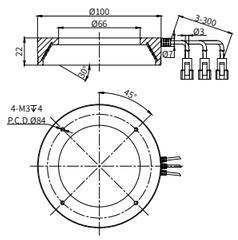
HDR3-120-90RGB-SF



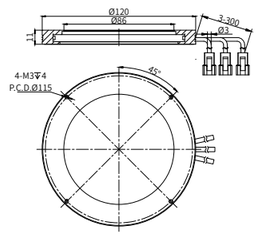
HDR3-150-90RGB-SF



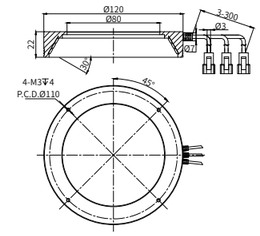
HDR3-180-60RGB-SF



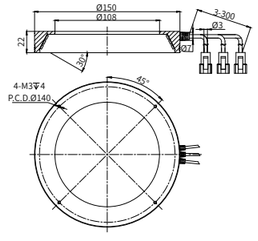
LAR3-100-30RGB-SF



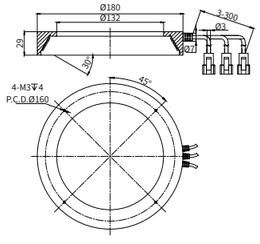
LAR3-120-00RGB-SF



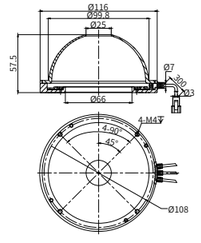
LAR3-120-30RGB-SF



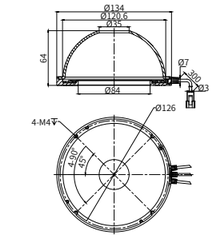
LAR3-150-30RGB-SF



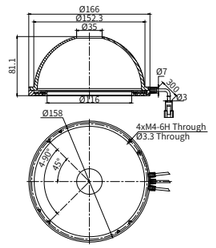
LAR3-180-30RGB-SF



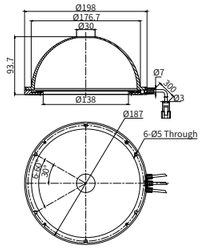
SD3-100RGB-SF



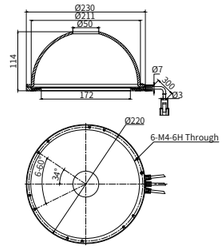
SD3-120RGB-SF



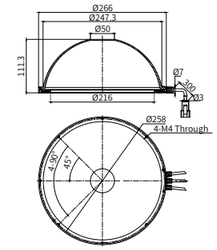
SD3-150RGB-SF



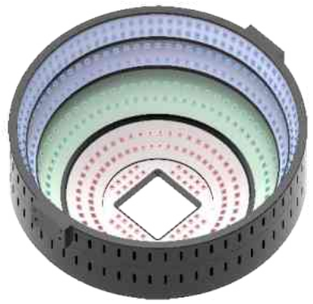
SD3-180RGB-SF



SD3-210RGB-SF



SD3-250RGB-SF



AOI Light

Multi-color illumination from different angles, 3D information can be highlighted

Applications

- Solder inspection on PCB
- Appearance inspection on multi-level objects

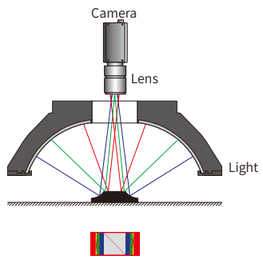
Technical Specification

Input Voltage	DC24V		
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm	Blue: 460-475nm
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)		
Supporting Controller	PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2		
Accessories	Extension cable: 1m/2m/3m/5m/7m		
Product Development	Custom light to get best effects		

★ Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

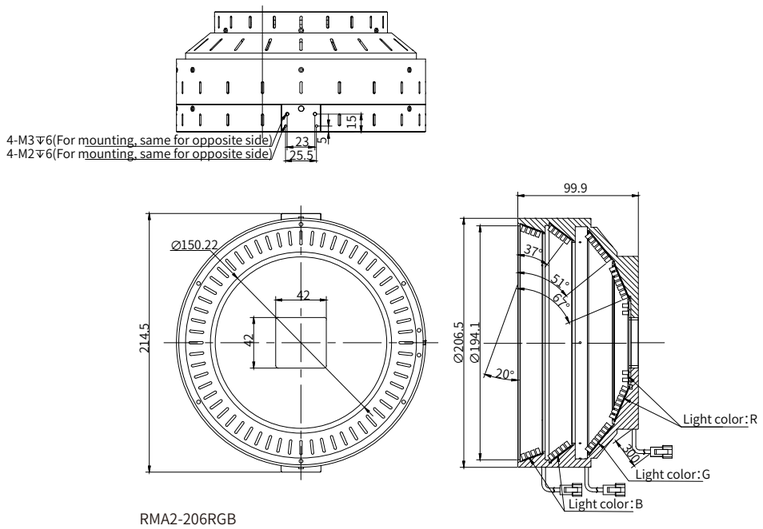
Model Code Description

RMA2	-	206	RGB
Model		Emitting width	Color



Series	Model	WD (mm)	Inner Diameter(mm)	Voltage(V)	Rated Power(W) ★2	OD × ID × H(mm)	Weight (g)
RMA2	RMA2-206RGB	25-45	42	24	R1：2.3 R2:18.2 G:28.5 B1：33.6 B2:28.5	206.5×42×99.9	560

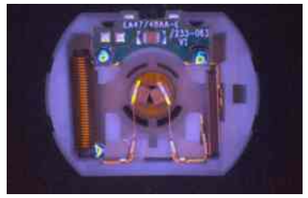
★2 The normal tolerance is +/-10% between the actual product power and power table content



RMA2-206RGB

Imaging Example (example: RMA2-206RGB)

Solder joint inspection



Solder joint inspection

Overdrive Light

Ideal for high-speed inspection*[1]

Applications

- High speed alignment inspection of film
- PCB board positioning inspection
- Defect inspection of cambered surface of glass cover

Technical Specification

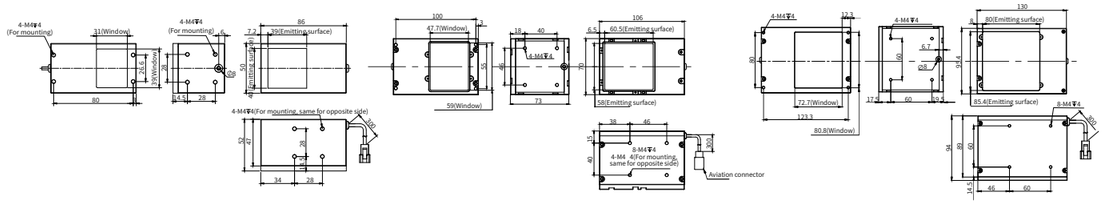
Input Voltage	DC44V	
LED Color	W/R/G/B	
Light Color (wavelength)*[2]	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)*[2]	6000-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PBD2、PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizer plate	
	2. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	
User Instruction	Duty cycle within 1%	

*[1] Overdrive strobe lights cannot be turned to continuously-on mode as it is the high-power light, the specific duty cycle depends on power level
*[2] Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

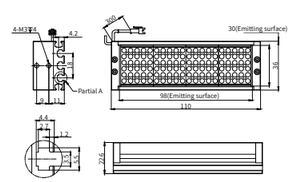
Model Code Description

COF	-	40	W	-	SF
Model		Emitting surface	Color		Overdrive

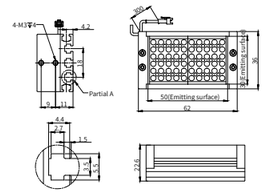
Series	Model	Color	Voltage(V)	Overdrive Current(A)	OD × ID × H(mm) L × W × H(mm)	Weight (g)
Overdrive light	COF-40-SF	○	44	18	86×50×47	240
	COF-60-SF	○	44	18.7	106×70×73	460
	COF-80-SF	○	44	25	130×95.4×94	780
	C-HDL3-98X30-SF	○	44	20	110×36×23	120
	HDL3-50X30-SF2	○	44	3.8	62×36×22.6	80
	CO2-60-SF2	○	44	23	106×70×67	420
	HDR3-70-60-SF2	○	44	1.2	70×30×20	114



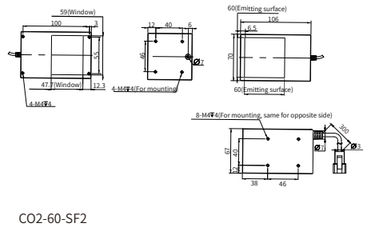
COF-40-SF



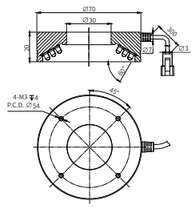
COF-60-SF



COF-80-SF



C-HDL3-98X30-SF



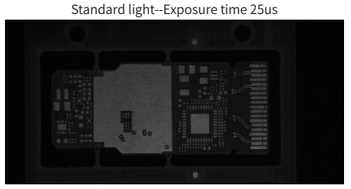
HDL3-50X30-SF2

CO2-60-SF2

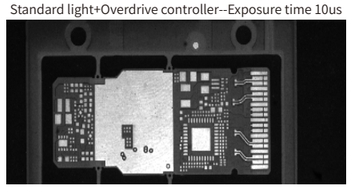
HDR3-70-60-SF2

Sample Image

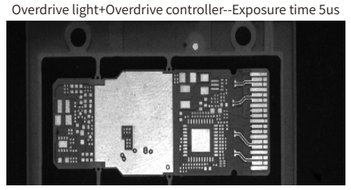
Standard light--Exposure time 25us



Standard light+Overdrive controller--Exposure time 10us



Overdrive light+Overdrive controller--Exposure time 5us



*Overdrive light can be used in a variety of fields to meet the needs of high-speed fly-shot inspection, which improves inspection efficiency and image quality

High-Brightness Overdrive Strobe Light

High-brightness overdrive light, instant brightness can be extremely high, up to 10 million lux★[1]

Applications

- PCB board positioning inspection
- Defect detection on cambered surface of glass cover
- High-speed fly-shot, etc

Technical Specification

Input Voltage	DC44V	
LED Color	W/R/G/B	
Light Color (wavelength) ★[2]	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white) ★[2]	6000-8500K	
Operation (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PUD-12048-4	
Accessories	1. Diffuser, anti-static diffuser, polarizer plate	
	2. Extension cable: FCB-2PIN-2C-1(A.1)/FCB-2PIN-2C-3(A.1)	
Product Development	Custom light to get best effects	

★[1] The specific duty cycle is a high-power light, so it cannot be continuous on, and the overdrive strobe lights depends on power

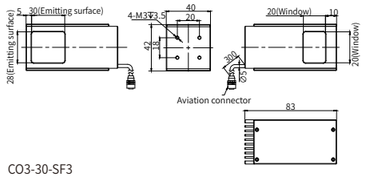
★[2] Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

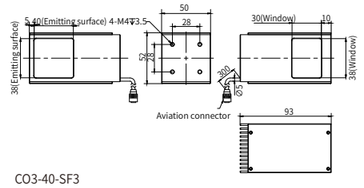
CO3	-	40	W	-	SF3
Model		Emitting surface	Color		Overdrive

Series	Model	Color	Voltage(V)	Overdrive★[3] Current(A)	OD×ID×H(mm) L×W×H(mm) OD×H(mm)	Weight(g)	The brightness ratio over the standard light of the same model	Compatible Extension Cable	Compatible Controller
High-brightness overdrive strobe lights	CO3-30-SF3	○	44	32.4	83×42×40	210	77	FCB-2PIN-2C-1 (A.1) FCB-2PIN-2C-3-A (A.1)	PUD-12048-4
	CO3-40-SF3	○	44	32.4	93×52×50	270	55		
	CO3-50-SF3	○	44	45.0	103×62×60	370	55		
	CO3-60-SF3	○	44	45.0	113×72×70	480	46		
	CO3-70-SF3	○	44	45.0	123×82×80	610	35		
	CO3-80-SF3	○	44	45.0	133×92×90.4	760	43		
	FQ2-100X100-SF3	○	44	52.8	114×114×18	245	120		
	HDL3-170X30-SF3	○	44	46.4	182×36×22.6	180	55		
	HDR3-60-60-SF3	○	44	28.0	66×33.5×16	60	40		
	HDR3-90-70-SF3	○	44	43.0	90×50×20	151	61		
	LAR3-74-30-SF3	○	44	32.8	74×44×19	86	44		
	LAR3-100-30-SF3	○	44	41.6	100×66×22	150	45		
	SD2-100-SF3	○	44	34.4	116×67	193	40		

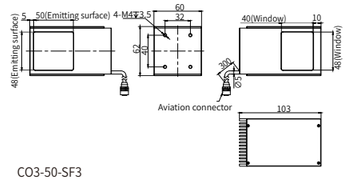
★[3] The normal tolerance is +/-10% between the actual product power and power table content



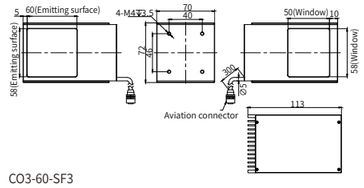
CO3-30-SF3



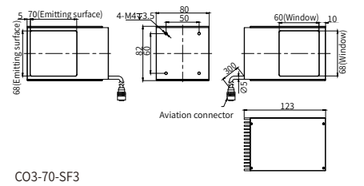
CO3-40-SF3



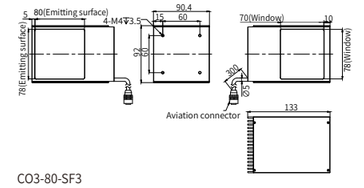
CO3-50-SF3



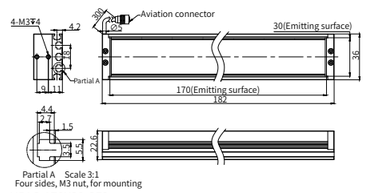
CO3-60-SF3



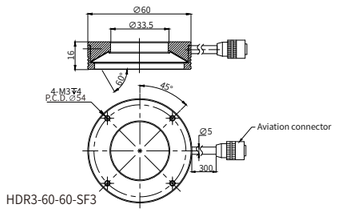
CO3-70-SF3



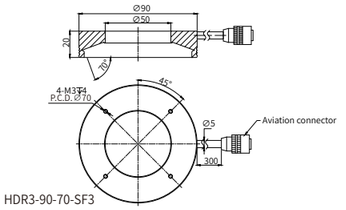
CO3-80-SF3



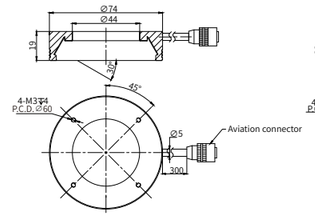
HDL3-170X30-SF3



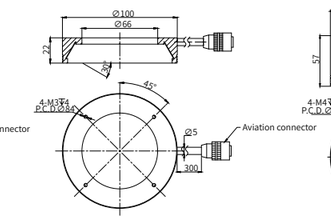
HDR3-60-60-SF3



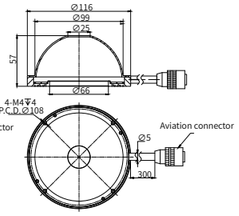
HDR3-90-70-SF3



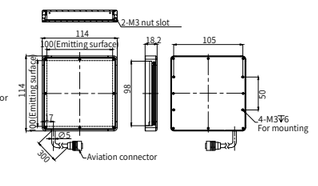
LAR3-74-30-SF3



LAR3-100-30-SF3



SD2-100-SF3



FQ2-100X100-SF3

Waterproof Light

IP67 water-proof level, suitable for different rugged environment

Applications

- Corrosive environment
- Underwater testing
- Medical inspection

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6000-7500K	
Operating Environment (indoors)	IP67 protective level	
Supporting Controller	PSS, PS1C, PS2C, PD5, PD6, PDS5, PDMS2, PDM2, PBD2, PBDL2	
Accessories	1. Diffuser, anti-static diffuser, polarizing plate 2. Anti-static plate (Surface friction voltage <100v, surface resistance: 1x10^4Ω<X<1x10^7Ω) 3. Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

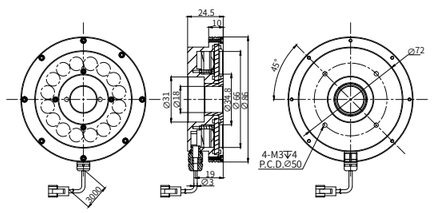
HL2	-	150	X	30	IP67
Model		Emitting length		Emitting width	Protective level

TEST REPORT

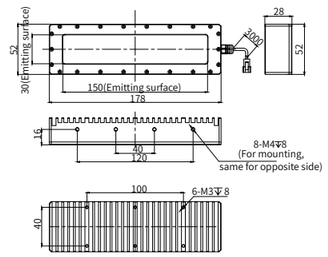
IP67 testing report

Series	Model	Color	Voltage (V)	Rated Power(W)★2	OD × ID × H(mm) L × W × H(mm)	Weight (g)
Waterproof Light	HR-86-90W-IP67	○	24	5.3	86×18×24.5	217.3
	HL2-150X30-IP67-A	○	24	15	178×52×28	427.3

★2 The normal tolerance is +/-10% between the actual product power and power table content



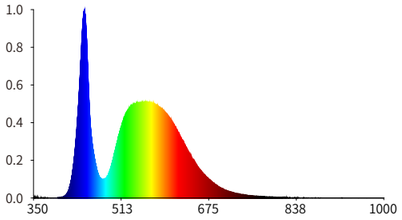
HR-86-90W-IP67



HL2-150X30-IP67-A

Spectrum Chart (example: HL2-150X30-IP67-A)

Relative spectrum



Structured Light

It needs to be used with FA lens with adjustable rear focal length and without adapter ring
Grille patterns can be customized according to different applications
(— type, cross type, stripe, grid, ring type, etc.)
The grid angle is adjustable

Applications

- 3D analysis and reconstruction
- Measurement of objects with complex structures or bevels
- Dimension measurement of electronic components
- Product flatness inspection
- Robot pickup positioning and calibration

Technical Specification

Input Voltage	DC24V	
LED Color	W/R/G/B	
Light Color (wavelength)★1	Red: 620-630nm	Green: 520-530nm
	Blue: 460-475nm	
Color Temperature (white)★1	6000-8500K	
Operating Environment (indoors)	Temperature: 0~40°C, humidity: 20~85% (non-condensation)	
Supporting Controller	PC/PSC4 series controller	
Accessories	Extension cable: 1m/2m/3m/5m/7m	
Product Development	Custom light to get best effects	

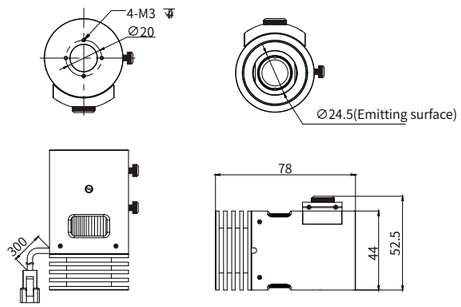
★1 Wavelength and CCT can be customized, wavelength and CCT for different batches maybe differed, please refer to spec, for more details

Model Code Description

SL	-	44	-	PT	-	3	W
Model		OD		Grille pattern		Power	Color

Series	Model	Color	Voltage (V)	Rated Power(W)★2	OD × H(mm)	Weight (g)
SL	SL-44-PT-3W	○	5	3	44×78	232

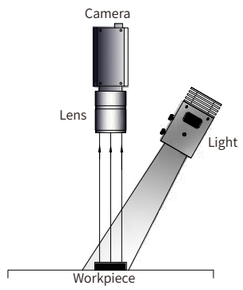
★2 The normal tolerance is +/-10% between the actual product power and power table content



Beam Spot

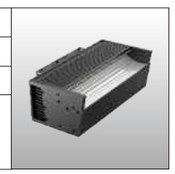
Spec: Stripe type
Line width: 0.05mm
Line spacing: 0.45mm

Note: 1.The accuracy of the grid can reach 2um
2.The content of the grid can be customized according to actual applications
Precise geometric parameters must be provided for customization



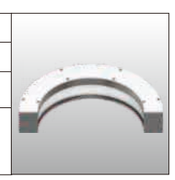
■ Custom Products

Name	Multi-angle line light
Model	C-LNMA2-125W-FN-X
Feature	Multiple emitting angle High brightness
Application	Irregular workpiece



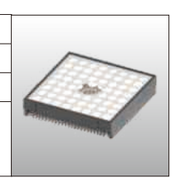
Name	High power ring light
Model	C-HR-50-90W-SF-X
Feature	High brightness
Application	High-brightness lighting for small and micro product

Name	Curved combined light
Model	C-FQCM-110X13W-X
Feature	Adaptive for curved object and achieved uniform lighting
Application	Curved edges of glass

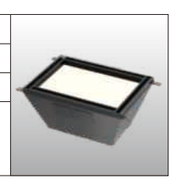


Name	RGB AOI light
Model	C-RMA-140RGB-SF-12V-X
Feature	Multi color and angle
Application	AOI inspection

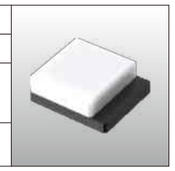
Name	Long distance bar light
Model	C-HL2-200X200W-X
Feature	Uniform long distance lighting
Application	Cement inspection



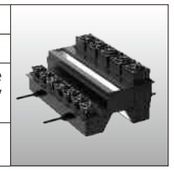
Name	Tunneled light
Model	C-TL-600X400W-48V-X
Feature	High brightness, high uniformity
Application	Tobacco packaging and printing inspection



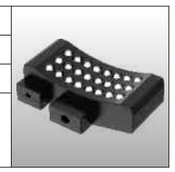
Name	COB backlight
Model	C-FQ-5X5-X
Feature	Slim backlight, small size
Application	Small size measuring



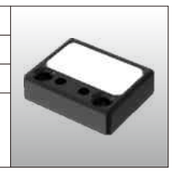
Name	Coaxial combined line light
Model	C-COHLM-372W-FN-KW
Feature	Combination of coaxial and multi-angle light. Can eliminate the shadow caused by the uneven of workpiece
Application	PCB AOI inspection



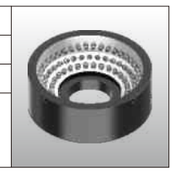
Name	Arc shaped light
Model	C-FQC-50X28-X
Feature	Imitation Lighting
Application	Curved phone frame appearance detection



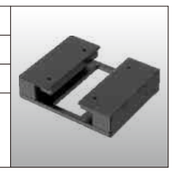
Name	COB backlight
Model	C-FQ-10X5-X
Feature	Slim backlight, small size
Application	Small size measuring



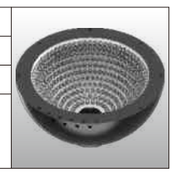
Name	Multi-angle ring light
Model	C-HDAR-70-X
Feature	Multi zone and angle illumination
Application	Camera lens glue inspection



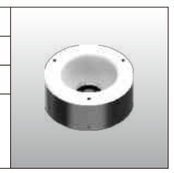
Name	Pin inspection light
Model	C-HDLM-80X17W-X
Feature	Collimate light can eliminate stray light
Application	Pin detection of electronic component



Name	Multi-angle ring light
Model	C-HDAR-108-4F-X
Feature	Multi zone and angle illumination
Application	Camera module inspection

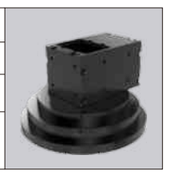


Name	Multi-angle ring light
Model	C-HDAR-95-X
Feature	Multi zone and angle illumination
Application	Camera module inspection

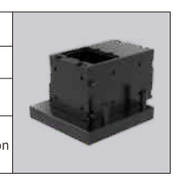


Name	Coaxial combined light
Model	C-COHBDM-70-132W-H-HY
Feature	Coaxial light reflection elimination, ring light brighten edge shadows & enhances 3D contour
Application	Metal housing scratches, mobile phone glass cracks, chip laser marking inspection

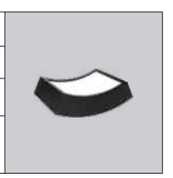
Name	Overdrive coaxial ring combined light
Model	C-COHDARM-50-150W-SF-HW-A
Feature	Wide-angle compatibility, high brightness
Application	PCB appearance inspection, solder joint inspection



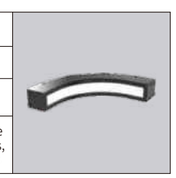
Name	Overdrive three-color combined light
Model	C-COHFQHM-50RGB-4F-SF2-HW-A
Feature	Wide-angle compatibility, multi-zone, high brightness
Application	PCB appearance inspection, solder joint inspection



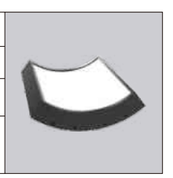
Name	Overdrive curved surface light
Model	C-FQC-63X52R-SF-YH
Feature	Curved luminous surface, red light illumination, 44V overdrive
Application	Uniform lighting and imaging for small-sized curved products



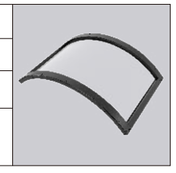
Name	Curved light
Model	C-FQC-80X10B-H-48V-HY
Feature	Curved luminous surface, blue light illumination, 48V constant voltage drive, compact design
Application	Designed for line-scan sequence-function; suitable for curved surface inspection of phone mid-frames, laptop side curved edges, and similar applications



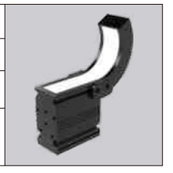
Name	Curved surface light
Model	C-FQC-140X101W-AQ
Feature	Fan-shaped
Application	Provides wider coverage for irregularly shaped and curved products



Name	Overdrive curved diffused light
Model	C-FQSC-320X180W-ND
Feature	Curved-plane diffused lighting
Application	Cylindrical battery inspection



Name	Linecombined light
Model	C-LNFQM-50W-HW
Feature	Combination of line light and backlight, compatible with both curved surface and flat surface inspections
Application	Phone mid-frame



Name	Dome light
Model	C-SD3-108W-3500K-5000K-6500K-AWS
Feature	Multi-color-temperature dome light. Three channels (3500K, 5000K, 6500K) can be illuminated independently or simultaneously for mixed-color lighting
Application	Multi-color plastic housing inspection (e.g., colored housings of mobile phones, pads, earphones)

Name	Parallel bar light
Model	C-HLP-250X4W-H-X
Feature	High directivity, high uniformity
Application	Screen dust removal; inspecting long PCBs for short/open circuit, copper foil scratches, and pad misalignment

Customizable specifications: Optical path; light intensity; spectrum; combination; strobe/overdrive; logic; zoning; integrated light control; computational imaging

Integrated LED Ring Light

Long lifetime, no flicker, cost effective, integrated design

WR63HW Specification

Model	WR63HW
LED Quantity	56 pcs (Φ5 DIP LED) with transparent shade
Input	AC100-240V 50-60HZ
Power	5.3W±5%
Drive Method	Constant current
Brightness Range	0~100%
Working Temperature / Humidity	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Color Temperature	7000±500K
Working Distance (mm)	40~120
Max Mounting OD (mm)	Max Φ63
Dimension(mm)	O.D.Φ97 × I.D.Φ63× H30 × L120
Weight (without packing)	182g
Illuminance (lx)	⩾80000(WD=100mm)

WR63HTW Specification

Model	WR63HTW
LED Quantity	77 pcs (SMD LED) with frost shade
Input	AC100-240V 50-60HZ
Power	5.1W±5%
Drive Method	Constant current
Brightness Range	0~100%
Working Temperature/ Humidity	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Color Temperature	5500±500k
Working Distance (mm)	40~120
Max mounting OD (mm)	Max Φ63
Dimension(mm)	O.D.Φ97 × I.D.Φ63× H30 × L120
Weight (without packing)	174g
Illuminance (lx)	⩾16800(WD=100mm)

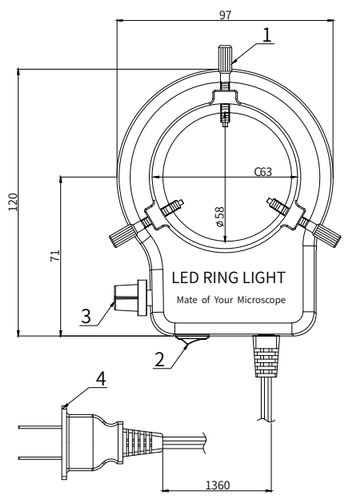
Product Lineup Table (DIP LED)

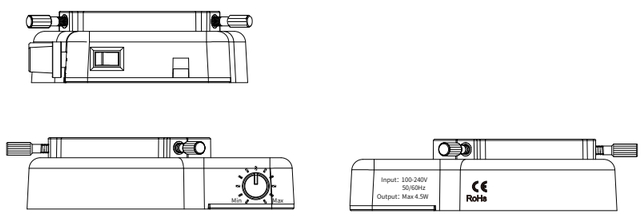
Model	Specification
WR63HW	DIP LED, white
WR63HWF	DIP LED, white, dust proof glass

Product Lineup Table (SMD LED)

Model	Specification
WR63HTW	SMD LED, white
WR63HTWF	SMD LED, white, dust proof glass

Dimensions



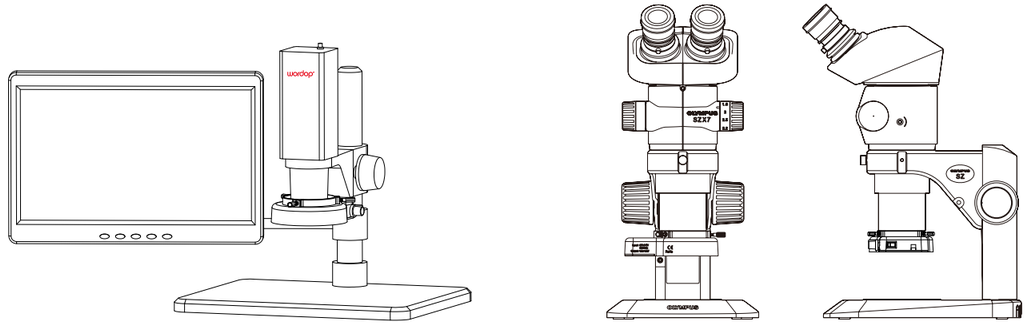


■Demonstration
1. M4X15mm fixing screws: Fix screws to the light on the microscope
2. Power switch: Press (—) to turn light on
3. Dimming knob: Control the brightness level of the light
4. Input voltage: AC100-240V
5. The input cable length of the light is 1500mm
6. The unit in the figure is mm

■Power plug: Japanese, American, European and British plugs are available

■Dustproof glass: Dustproof optical toughened glass is available to prevent harmful substances from entering the microscope

Product Mounting Schematic Diagram



4-Partition LED Ring Light

Four partition control, long lifetime, cost effective, integrated design

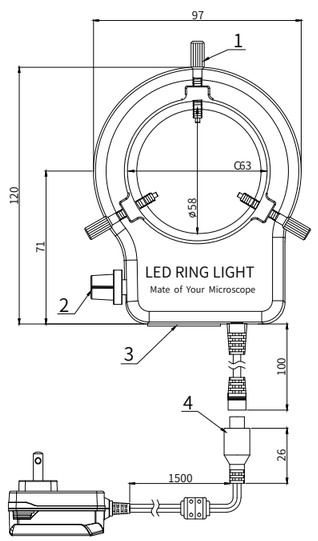
WR63HW-4F Specification

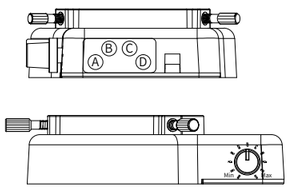
Model	WR63HW-4F
LED Quantity	48 pcs (Φ5 DIP LED)
Input	AC100-240V 50-60HZ
Power	5W±5%
Drive Method	Constant current
Brightness Range	0~100%
Light zone	Four zones
Working Temperature / Humidity	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Color Temperature	6000±500k
Working Distance (mm)	40~120
Max Mounting OD (mm)	Max Φ63
Dimension(mm)	O.D.Φ97 × I.D.Φ63× H30 × L120
Weight (g)	212
Illuminance (lx)	⩾80000(WD=100mm)

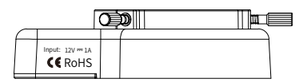
Product Ineup Table (DIP LED)

Model	Specification
WR63HW-4F	DIP LED, white
WR63HWF-4F	DIP LED, white, dust proof glass

Dimensions

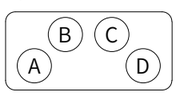






■ Demonstration

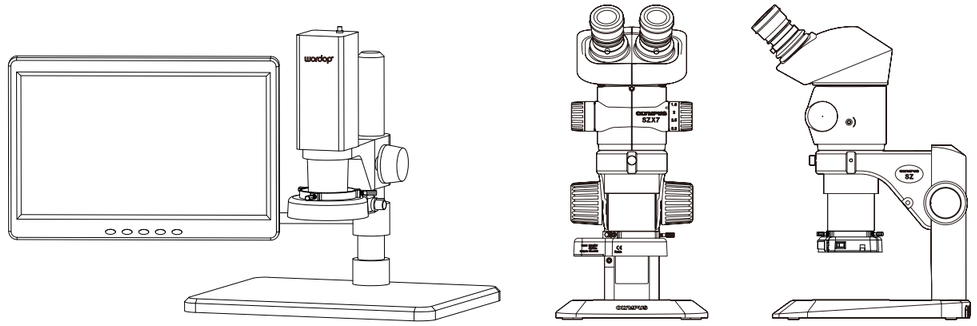
1. M4X15mm fixing screws
2. Dimming knob
3. The partition switch button is shown below



4. Input voltage DC12V 1A, connector: 5.5X2.1mm
5. The input cable length of the light is 1626mm
6. The unit of dimension marked in the figure is mm

■ Power plug: Japanese, American, European and British plugs are available
■ Dustproof glass: Dustproof optical toughened glass is available to prevent harmful substances from entering the microscope

Product Mounting Schematic Diagram



Polarized Ring Light

High brightness, clear imaging, long lifetime, integrated design

HDR2-70W-MP Specification

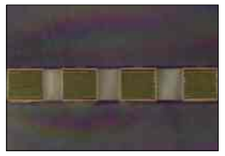
LED Quantity	16 pcs (SMD LED)
Input	DC24V/220mA
Drive Method	Constant voltage
Brightness Range	0~100%
Working Temperature / Humidity	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Color	White
Color Temperature	7500±500K
Working Distance (mm)	40~120
Max Mounting OD(mm)	Φ63
Weight (without packing)	234g
Illuminance (lx)	⩾44000 (WD: 100mm)

Inspection Example

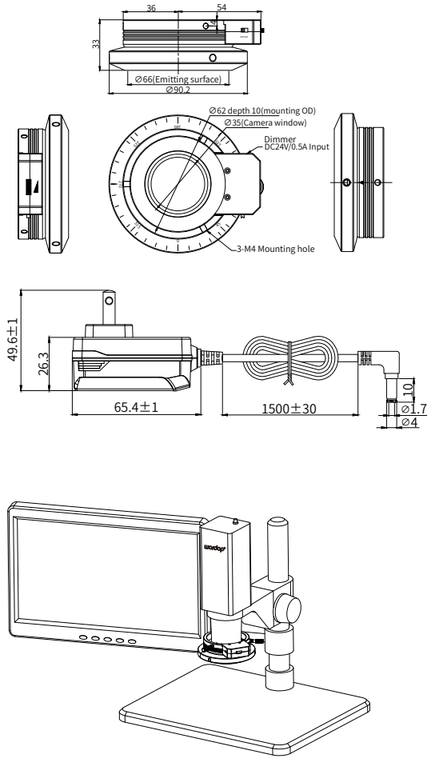
Image taken by WR63

Polarized ring light reduce reflection

Image taken by WR63



Polarized ring light reduce reflection

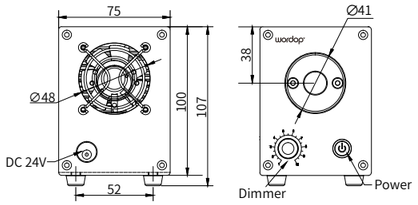


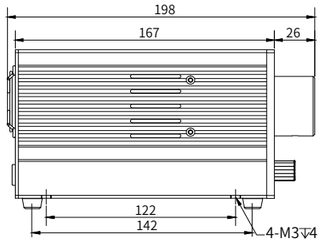
Fiber-Optic Cold Light

High brightness, long lifetime, compact design

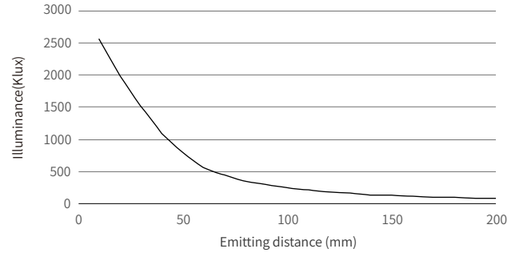
Specification

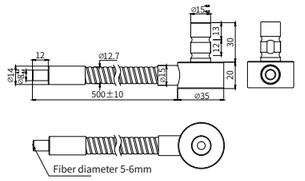
Model	PLF2-30W
Fiber Outlet Diameter	15mm
Color Temperature	7000±500K
Input	DC24V
Power	30W
Cooling Method	Fan
Operation	Temperature: 0~40°C, humidity: 20~85% (non-condensation)
Dimension Diagrams (mm)	L198×W75×H107
Weight(g)	1800



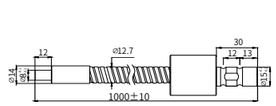


Working Distance & Illuminance Chart (Optical fiber excluded)

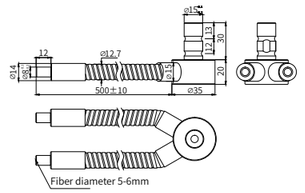




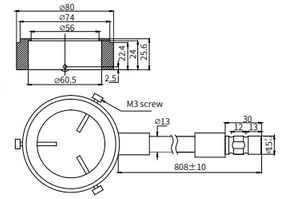
Single hard fiber (P-PLF-20W-020)



Single soft fiber (P-PLF-20W-028)



Double hard fiber (P-PLF-20W-021)



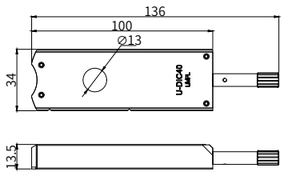
Ring fiber (P-PLF-20W-026)

Differential Interferometer

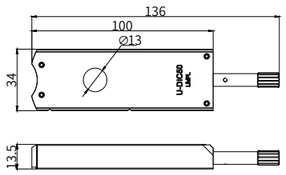
Clear image and cost effective

Product

Dimensional Drawings

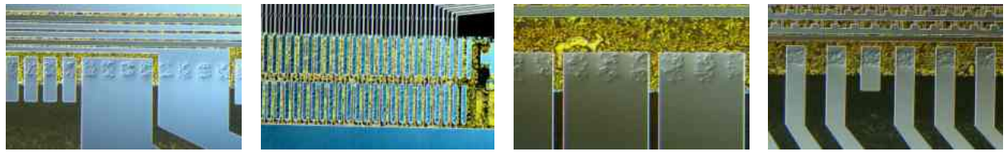


U-DIC40



U-DIC50

Inspection

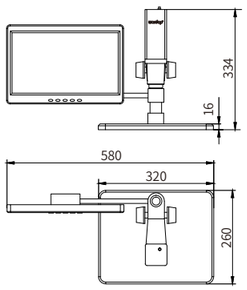


Video AIO

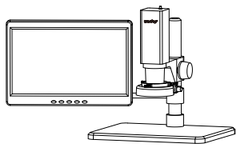
Cost-effective, clear image, integrated design

Technical Specification

Model	HF313A/HF313P		
Zoom Lens Group	0.7X-5X continual zooming		
Main Objective Lens	1X	0.5X	1.4X
Optical Magnification	0.28X-2X continual zooming	0.14X-1X continual zooming	0.392X-2.8X continual zooming
Video Magnification	15X-112X continual zooming	7X-56X continual zooming	22X-157X continual zooming
Maximum FOV Range	17mm×12mm	34mm×25mm	12mm×9.1mm
Minimum FOV Range	2.4mm×1.8mm	4.8mm×3.6mm	1.7mm×1.2mm
Working Distance	105mm	170mm	105mm
High-definition Camera	HDMI signal output, 2 million pixels, 1/3 chip, 12V power supply, frame rate 60, optional for taking/ not taking photos		
Display	13.3-inch true color LCD display/22-inch DELL LCD displayoptional, resolution 1920 * 1080		
Base	Black cast iron material, 320mm×260mm×16mm		
Horizontal Platform	With bracket, platform size: 280×370mm, travel distance: 75×50mm		
Optional Accessories	Integrated LED ring light, 4-partition LED ring light, polarized ring light		
Optional Functions	2K Camera, 4K Camera, HDMI 2.0, USB 3.0, USB 2.0, Gigabit Ethernet Signal Output, Measurement Function, Image Stitching, Depth of Field Fusion, High-Definition Image Capture, Video Recording, Preview and Retrieval, Static and Dynamic Image Comparison		



Inspection



Analog Controller PS1C/PS2C/PS3C

Stepless light intensity control
External trigger function is optional

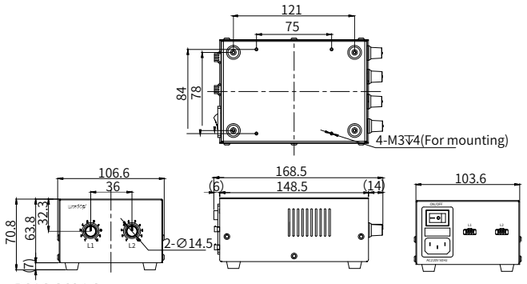
Technical Specification

Model	PS1C-3624-2	PS2C-3624-2	PS2C-3624-4	PS2C-6024-2	PS2C-6024-4	PS2C-15024-2H	PS2C-15024-4	PS3C-6024-6
Lighting Method	Continuous lighting	Continuous / trigger lighting	Continuous / trigger lighting	Continuous / trigger lighting	Continuous / trigger lighting	Continuous / trigger lighting	Continuous / trigger lighting	Continuous / trigger lighting
Drive Method	Constant-voltage system							
Dimming Method	Voltage control							
Input Voltage / Current	AC100V-240V(1A max) 50/60Hz					AC100V-240V (2A max) 50/60Hz		AC100-240V (0.6A max) 50/60Hz
Channel Number	2	2	4	2	4	2	4	6
Total Output Power ★1	36W	36W	36W	60W	60W	150W	150W	60W
Output Voltage	DC12-24V							
Single Channel Output ★2 Current / Power	1A(max)/24W	1.5A(max)/36W ★1		1.5A(max)/36W		3A(max)/72W	2A(max)/48W	1A(max)/24W
Trigger Method	/	External trigger						
Trigger Input	/	DC5-24V						DC12-24V
Trigger Delay	80us(max)							25us(max)
Brightness Level	Stepless control							
Protect & Display	When there is short circuit or over-current, the channel has no output, it can restore by powering it on again							
Weight (kg)	0.7	0.75		0.75		0.75		0.9
Dimension (mm)	168.5×106.6×70.8	107.2×104.8×126.4		107.2×104.8×126.4		107.2×104.8×126.4		176×87×120.3
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)							
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)							
Cooling Method	Natural cooling	Natural cooling		Natural cooling		Fan cooling		Natural cooling
Accessory	AC cord							

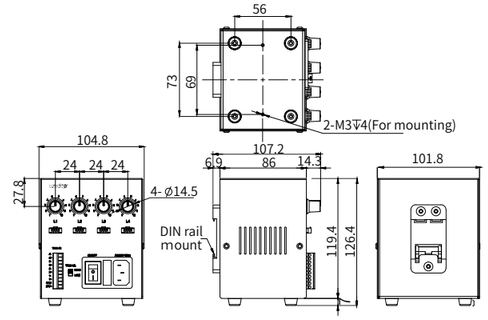
★1 When powered by AC100V-120V, the controller's power is derated to 70%
★2 Single max load cannot exceed single max output current

Model Code Description

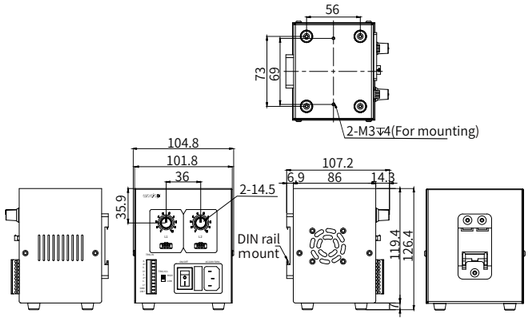
PS1C	-	36	24	-	4
Model		Power	Output voltage		Channel number



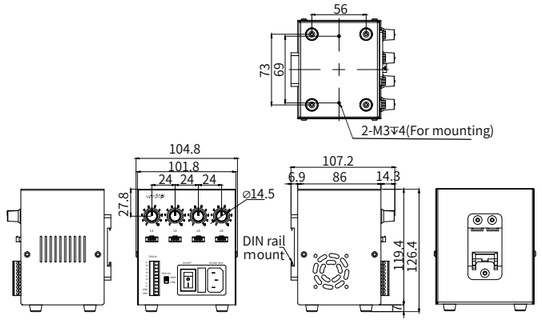
PS1C-3624-2



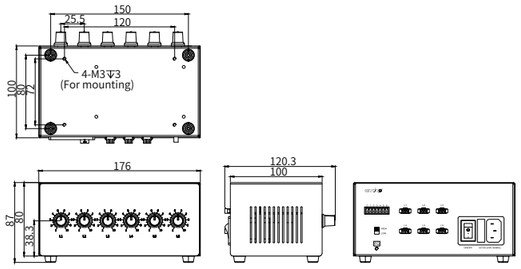
PS2C-3624-2 / PS2C-3624-4/PS2C-6024-2/PS2C-6024-4



PS2C-15024-2H



PS2C-15024-4



PS3C-6024-6

PS2C Series External Trigger Definition

NO	Signal	
24V+	Power output 350mA/24V	Output anode
GND		Output cathode
1+	Channel 1	Input anode
1-		Input cathode
2+	Channel 2	Input anode
2-		Input cathode
3+	Channel 3	Input anode
3-		Input cathode
4+	Channel 4	Input anode
4-		Input cathode

PS3C Series External Trigger Definition

Trigger port no.	Trigger-in definition	Input voltage
C	Trigger input common	DC5-24 V
1	L1 trigger input	
2	L2 trigger input	
3	L3 trigger input	
4	L4 trigger input	
5	L5 trigger input	
6	L6 trigger input	

Bidirectional input
No polarity

Analog Controller PSS

Compact size and light weight

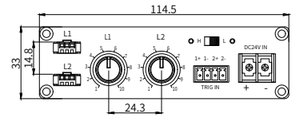
External trigger function is optional

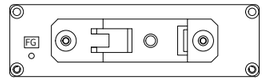
Technical Specification

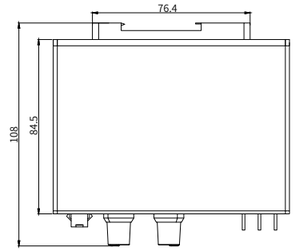
Model	PSS-7224-2
Lighting Method	Continuous lighting
Drive Method	Constant-voltage
Dimming Method	Voltage control
Input Voltage	DC24V
Channel Number	2
Total Output Power	72W
Output Voltage	DC12-24V
Single Channel Output Current/Power	1.5A(max)/36W
Trigger Method	External trigger
Trigger Input	DC5-24V
Trigger Response	35us(max)
Brightness Level	Stepless control
Protect & Display	When there is short circuit or over-current, the channel has no output, it can restore by powering it on again
Weight	0.27
Dimension (mm)	108×114.5×33
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Natural cooling
Material · Surface Treatment	SPCC painting

Model Code Description

PSS	-	72	24	-	2
Model		Power	Output voltage		Channel number

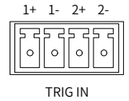






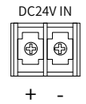
PSS Series External Trigger Definition

Trigger port pin no.	Channel no.	Terminal polarity
1+	chanel1	Input anode
1-		Input cathode
2+	chanel2	Input anode
2-		Input cathode

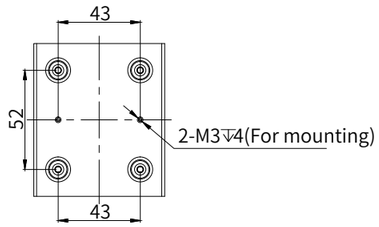


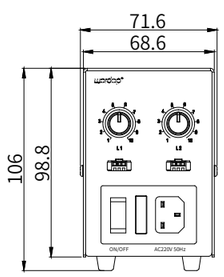
PSS Series Power Supply Terminal Definition

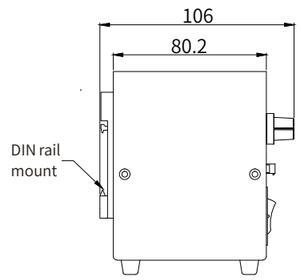
Terminal no.	Power	Terminal polarity
+	DC24V	Input anode
-		Input cathode



Analog Spot Light Controller PC







Compact size and light weight. 5V constant current control

Technical Specification

Model	PC-0605-2
Lighting Method	Continuous lighting
Drive Method	Constant-current
Dimming Method	Current control
Input Voltage / Current	AC100V-240V (1.25A max) 50/60Hz
Channel Number	2
Total Output Current/Power	1.4A (max) / 6W
Output Voltage (V)	DC5V
Single Channel Output Current/Power	0.7A (max) / 3W
Protect & Display	When there is short circuit or over-current, the channel has no output, restore by powering it on again
Weight (kg)	0.56
Dimension (mm)	106×71.6×106
Operation	Temperature 0~40℃ / humidity 20~85% RH (non-condensation)
Storage	Temperature -20~60℃ / humidity 20~85% RH (non-condensation)
Cooling Method	Natural cooling
Material · Surface Treatment	SPCC painting

Model Code Description

PC	-	06	05	-	2
Model		Power	Output voltage		Channel number

Digital Controller PD5/PD6

RS-232/ 100Mbps Ethernet (optional)

Four and eight channels for selection

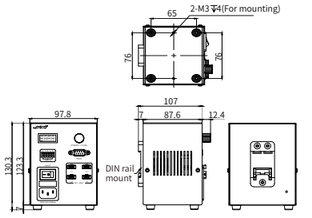
Technical Specification

Model	PD5-6024-4-LS	PD5-6024-8-LS	PD5-12024-4-LS	PD5-12024-8-LS	PD5-20024-4-LS	PD5-20024-8-LS	PD5-50024-8-LSE-A
Model	PD6-6024-4-LSE	PD6-6024-8-LSE	PD6-12024-4-LSE	PD6-12024-8-LSE	PD6-20024-4-LSE	PD6-20024-8-LSE	
Lighting Method	Continuous / trigger lighting						
Drive Mode	Constant voltage						
Intensity Control	PWM and light time control						
Input Voltage/Current	AC100-240V(1.5A max) 50/60Hz		AC100-240V(2.5A max) 50/60Hz		AC100-240V(3A max) 50/60Hz		AC100-240V(4A max) 50/60Hz
Channel Number	4	8	4	8	4	8	8
Total Output Power★1	60W Max		120W Max		200W Max		500W Max
Output Voltage	DC24V						
Single-Channe Output★1 Current/Power	2.5A(max)/ 60W		3A(max)/ 72W		3A(max)/ 72W		8.3A(max)/200W
Trigger Method	External trigger						External trigger/Internal trigger
Trigger Input Voltage	DC5～24V(20mA)						DC12～24V(10mA)
Trigger Response Time	Rising edge<30us(max)/Falling edge<75us(max)						2us(max)
Brightness Level	0～255						
Luminous Time	1～999ms						
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again						
Weight (kg)	0.66		0.80		0.85		3
Dimension (mm)	107×97.8×130.3	107×97.8×150.6	107×97.8×150.6		107×97.8×150.6		273.6×217×137
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)						
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)						
Cooling Method	Natural cooling		Fan cooling		Fan cooling		Fan cooling
Material · Surface Treatment	SPCC painting						
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet						

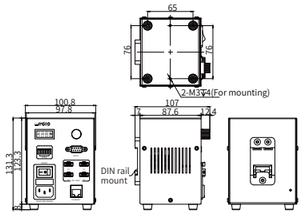
★1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

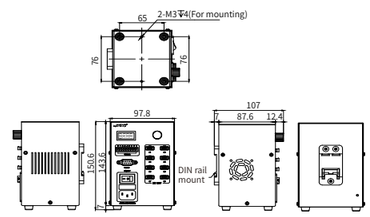
PD5	-	60	24	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



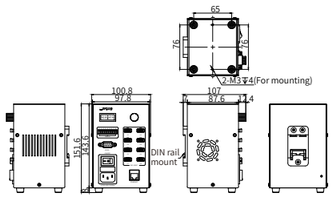
PD5-6024-4-LS



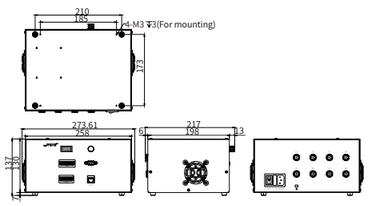
PD6-6024-4-LSE



PD5-6024-8-LS
PD5-12024-4/8-LS ★2
PD5-20024-4/8-LS



PD6-6024-8-LSE
PD6-12024-4/8-LSE ★2
PD6-20024-4/8-LSE



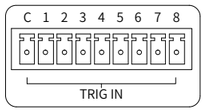
PD5-50024-8-LSE-A

★2 Channel no. subject to actual conditions

PD5/PD6-6024/12024/20024-8 Series

■ Controller External Trigger Definition

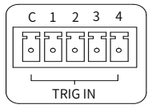
Trigger Port No.	Trigger Definition	
C	Trigger input common	No polarity Bidirectional input DC5-24V
1	1ch Trigger input	
2	2ch Trigger input	
3	3ch Trigger input	
4	4ch Trigger input	
5	5ch Trigger input	
6	6ch Trigger input	
7	7ch Trigger input	
8	8ch Trigger input	



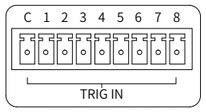
PD5/PD6-6024/12024/20024-4 Series

■ Controller External Trigger Definition

Trigger Port No.	Trigger Definition	
C	Trigger input common	No polarity Bidirectional input DC5-24V
1	1ch Trigger input	
2	2ch Trigger input	
3	3ch Trigger input	
4	4ch Trigger input	
5	NC	
6	NC	
7	NC	
8	NC	



PD5/PD6-6024-4 Series

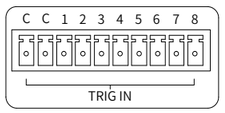


PD5/PD6-12024/20024-4 Series

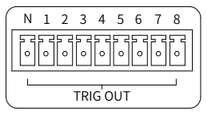
PD5-50024-8-LSE-A Series

■ Controller External Trigger Definition

Trigger Port No.	Trigger In Definition		Trigger Input Voltage
C	Trigger input common	No polarity Bidirectional input	DC12~24V
C	Trigger input common		
1	L1 Trigger input		
2	L2 Trigger input		
3	L3 Trigger input		
4	L4 Trigger input		
5	L5 Trigger input		
6	L6 Trigger input		
7	L7 Trigger input		
8	L8 Trigger input		



Trigger Port No.	Trigger Out Definition		Trigger Output Voltage
N	Trigger output common (-)	Common negative	DC12V
1	L1 Trigger output (+)		
2	L2 Trigger output (+)		
3	L3 Trigger output (+)		
4	L4 Trigger output (+)		
5	L5 Trigger output (+)		
6	L6 Trigger output (+)		
7	L7 Trigger output (+)		
8	L8 Trigger output (+)		



Digital Controller PDS5

Compact size and light weight

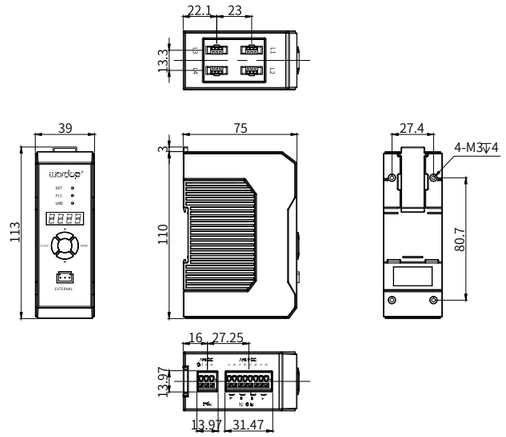
Technical Specification

Model	PDS5-6024-4-LS
Lighting Method	Continuous / Trigger lighting
Drive Mode	Constant voltage
Intensity Control	PWM and light time control
Input Voltage	DC12-24V
Channel Number	4
Total Output Power	60W
Output Voltage	DC12-24V
Single-Channel Output Current/ Power	2.5A (max) / 60W
Trigger Method	External trigger
Trigger Input	DC5-24V
Trigger Response Time	50us (max)
Brightness Level	0-255 adjustable
Light Time	1-999ms adjustable
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again
Weight (kg)	0.15
Dimension (mm)	75×39×113
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Natural cooling
Material · Surface Treatment	ABS engineering plastics
Communication *1	LS: RS232

***1 Can use cable from Wordop only**

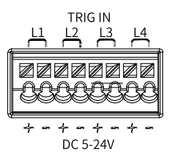
Model Code Description

PDS5	-	60	24	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



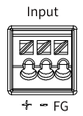
PDS5 Series External Trigger Definition

Trigger Port No.	Trigger In Definition		Input Voltage
1+	CH 1	Trigger input +	DC 5～24V
1-		Trigger input -	
2+	CH 2	Trigger input +	
2-		Trigger input -	
3+	CH 3	Trigger input +	
3-		Trigger input -	
4+	CH 4	Trigger input +	
4-		Trigger input -	



PDS5 Series Power Supply Terminal Definition

Port No.	Input Connection Definition		Input Voltage
+	Power input of controller	Input +	DC24V
-		Input -	
FG	Ground terminal of controller		



Multi-Channel Digital Controller PD5

PWM working frequency can be adjusted to avoid rippling

Can drive 27 channels individually

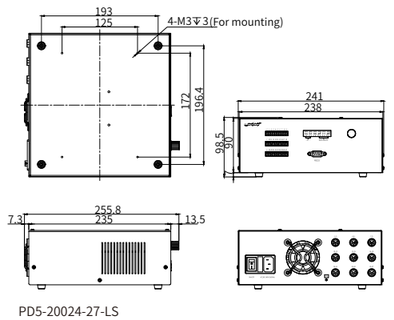
Technical Specification

Model	PD5-20024-27-LS	PD5-20024-27-LSE
Lighting Method	Continuous / trigger lighting	
Drive Mode	Constant voltage	
Intensity Control	PWM and light time control	
Input Voltage	AC100-240V(3A max) 50/60Hz	
Channel Number	27	
Total Output Power*1	200W Max	
Output Voltage	DC24V	
Single-Channel Output Current / Power	1.5A(max) / 36W	
Trigger Method	External trigger / Internal trigger	
Trigger Input	DC12-24V	
Trigger Response Time	6us(max)	
Brightness Level	0-255	
Luminous Time	0-999ms	
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again	
Weight (kg)	2.3	
Dimension (mm)	255.8×241×98.5	
Operation	Temperature 0~40℃ / humidity 20~85% RH (non-condensation)	
Storage	Temperature -20~60℃ / humidity 20~85% RH (non-condensation)	
Cooling Method	Fan cooling	
Material · Surface Treatment	SPCC painting	
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet	

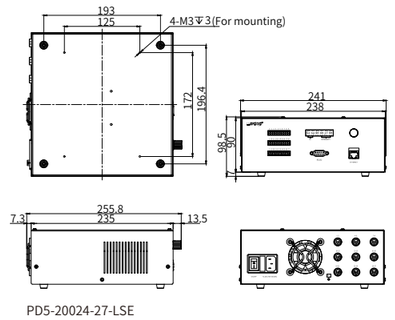
*1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

PD5	-	200	24	-	27	-	LS
Model		Power	Output voltage		Channel no.		Communication



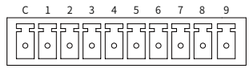
PD5-20024-27-LS

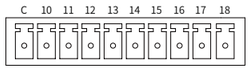


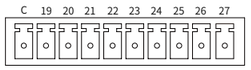
PD5-20024-27-LSE

PD5-20024-27 Series External Trigger Definition

Trigger Port No.	Trigger Definition		Trigger Port No.	Trigger Definition		Trigger Port No.	Trigger Definition	
C	Trigger input common		C	Trigger input common		C	Trigger input common	
1	1ch Trigger input		10	10ch Trigger input		19	19ch Trigger input	
2	2ch Trigger input		11	11ch Trigger input		20	20ch Trigger input	
3	3ch Trigger input		12	12ch Trigger input		21	21ch Trigger input	
4	4ch Trigger input	No polarity Bidirectional input	13	13ch Trigger input	No polarity Bidirectional input	22	22ch Trigger input	No polarity Bidirectional input
5	5ch Trigger input		14	14ch Trigger input		23	23ch Trigger input	
6	6ch Trigger input		15	15ch Trigger input		24	24ch Trigger input	
7	7ch Trigger input		16	16ch Trigger input		25	25ch Trigger input	
8	8ch Trigger input		17	17ch Trigger input		26	26ch Trigger input	
9	9ch Trigger input		18	18ch Trigger input		27	27ch Trigger input	







Combined Digital Controller PDM2

RS-232, 100MBIT/s Ethernet (optional)

Support four 24V channels and four 5V channels

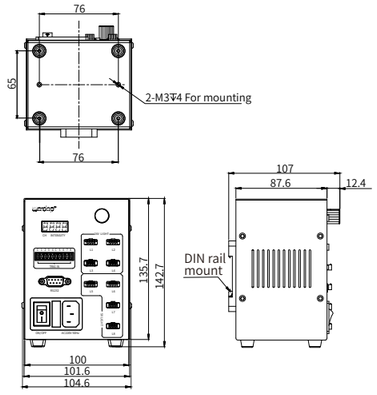
Technical Specification

Model	PDM2-60524-8-LS-A		PDM2-60524-8-LSE-A	
Lighting Method	Continuous / Trigger lighting			
Drive Mode	Constant voltage	Constant current	Constant voltage	Constant current
Intensity Control	PWM control	Current control	PWM control	Current control
Input Current / Voltage	AC100-240V (1.5A max) 50/60Hz		AC100-240V (1.5A max) 50/60Hz	
Output Group	24V	5V	24V	5V
Channel Number	8			
Total output Current/Power ★1	4 channels, 48W in total	4 channels, 12W in total	4 channels, 48W in total	4 channels, 12W in total
Output Voltage	DC24V	DC5V	DC24V	DC5V
Single-Channel Current	2A (max)	700mA (max)	2A (max)	700mA (max)
Trigger Method	External trigger			
Trigger Input	DC5-24V			
Trigger Response Time	35us (max)		High level<20us(Max)/Low level<55us(Max)	
Brightness Level	0-255			
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again			
Weight (kg)	0.81		0.85	
Dimension (mm)	107×104.6×142.7		107×97.8×150.6	
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)			
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)			
Cooling Method	Natural cooling		Fan cooling	
Material · Surface Treatment	SPCC painting			
Communication ★2	LS: RS232 / LSE: RS232 & 100Mbps Ethernet			

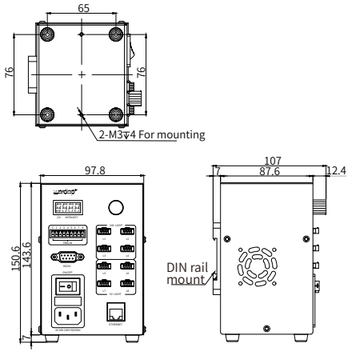
★1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

PDM2	-	60	5/24	-	8	-	LSE	-	A
Model		Power	Output voltage		Channel no.		Communication		Version



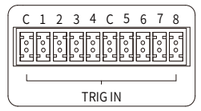
PDM2-60524-8-LS



PDM2-60524-8-LSE-A

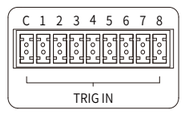
PDM2-LS Series External Trigger Definition

Output Group	Trigger Port No.	Trigger in Definition		Input Current
24V	C	Trigger input common	No polarity Bidirectional input	DC5~24V
	1	1ch Trigger input		
	2	2ch Trigger input		
	3	3ch Trigger input		
	4	4ch Trigger input		
5V	C	Trigger input common		
	5	5ch Trigger input		
	6	6ch Trigger input		
	7	7ch Trigger input		
	8	8ch Trigger input		



PDM2-LSE-A Series External Trigger Definition

Output Group	Trigger Port No.	Trigger in Definition		Input Current
24V 5V	C	Trigger input common	No polarity Bidirectional input	DC5~24V
	1	1ch Trigger input		
	2	2ch Trigger input		
	3	3ch Trigger input		
	4	4ch Trigger input		
	5	5ch Trigger input		
	6	6ch Trigger input		
	7	7ch Trigger input		
	8	8ch Trigger input		



Combined Digital Controller PDMS2

Compact size and light weight

Support two 24V channels and two 5V channels

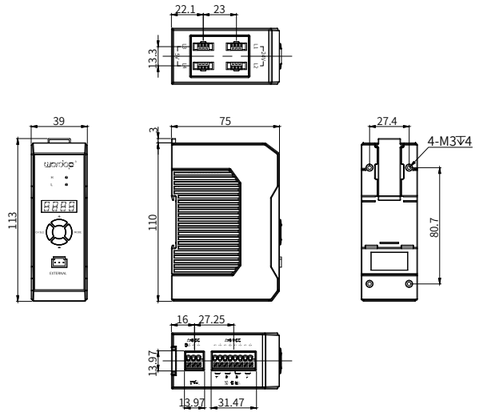
Technical Specification

Model	PDMS2-50524-4-LS	
Lighting Method	Continuous / Trigger lighting	
Drive Mode	Constant voltage	Constant current
Intensity Vontrol	PWM control	Current control
Input Voltage/ Current	DC24V (2.5A)	
Output Group	24V	5V
Channel Number	2	2
Total Output Power	2 channels, 44W in total	2 channels, 6W in total
Output Voltage	DC24V	DC5V
Single-Channel Output Current	1.5A(max)	700mA(max)
Trigger Method	External trigger	
Trigger Input	DC5-24V	
Trigger Response Time	50us(max)	
Brightness Level	0-255	
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again	
Communication	0.16	
Dimension (mm)	39×75×113	
Operation	Temperature 0~40℃ / humidity 20~85% RH (non-condensation)	
Storage	Temperature -20~60℃ / humidity 20~85% RH (non-condensation)	
Cooling Method	Fan cooling	
Material · Surface Treatment	ABS engineering plastics	
Communication *1	LS: RS232	

***1 Can use cable from Wordop only**

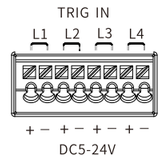
Model Code Description

PDMS2	-	50	5/24	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



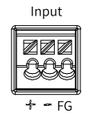
PDMS2 Series External Trigger Definition

Trigger Port No.	Trigger in definition		Input Voltage
1+	CH 1	Trigger input +	DC5-24V
1-		Trigger input -	
2+	CH 2	Trigger input +	
2-		Trigger input -	
3+	CH 3	Trigger input +	
3-		Trigger input -	
4+	CH 4	Trigger input +	
4-		Trigger input -	



PDMS2 Series Power Supply Terminal Definition

Port No.	Input Connection Definition		Input Voltage
+	Power input of controller	Input +	DC24V
-		Input -	
FG	Ground terminal of controller		



Overdrive Digital Controller PBD2

Precise control lighting time of light, short output response time
Integrated continuous and overdrive functions to meet the requirements of different applications
Trigger delay time and light delay time can be set to better synchronize with the camera

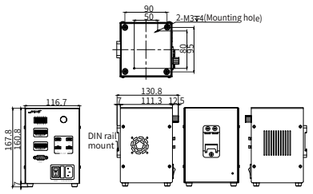
Technical Specification

Model	PBD2-12048-4-LS	PBD2-12048-6-LS	PBD2-24048-18-LSE-B
Model	PBD2-12048-4-LSE-A	PBD2-12048-6-LSE-A	
Lighting Method	Continuous / Overdrive lighting		Continuous / Overdrive lighting
Drive Method	Constant voltage		Constant voltage
Intensity Control	PWM / lighting time control		PWM / lighting time control
Input Voltage/Current	AC100-240V (3A max) 50/60Hz		AC100-240V (5A max) 50/60Hz
Channel Number	4	6	18
Total Output Current/Power *1	Continuously-on 60W		Continuously-on 120W
Output Voltage	Continuously-on: DC22V / Overdrive: DC48V		Continuously-on: DC22V / Overdrive: DC48V
Single-Channel Output*1 Current/Power	Continuously-on: 2.5A (max) / Overdrive: 25A (max)		Continuously-on: 2.5A (max) / Overdrive: 25A (max)
Trigger Method	Internal/External trigger		Internal/External trigger
Trigger Input	DC12-24V (7-12mA)		DC12-24V (2-5mA)
Trigger Output	DC12V (10mA max)		DC12V (10mA max)
Trigger Response Time	2us (max)		2us (max)
Brightness Level	0-255 adjustable		0-255 adjustable
Luminous Time	1-999us adjustable		0-999us adjustable
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again		
Weight (kg)	1.3	1.36	2.7
Dimension (mm)	130.8X116.7X167.8		168.5×222.6×180.5
Working Environment	Temperature 0~40°C / humidity 20~85% RH (non-condensation)		Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage Environment	Temperature -20~60°C / humidity 20~85% RH (non-condensation)		Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Fan cooling		Fan cooling
Material · Surface Treatment	SPCC painting		SPCC painting
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet		LSE: RS232 & 100Mbps Ethernet

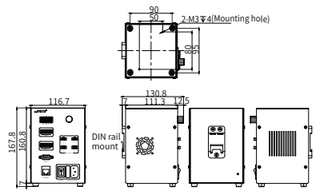
*1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

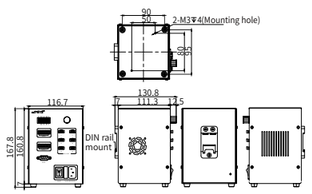
PBD2	-	120	48	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



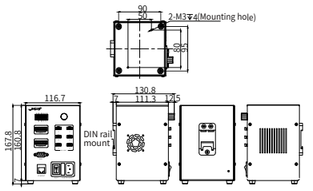
PBD2-12048-4-LS



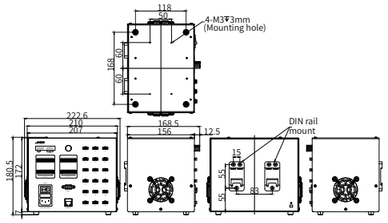
PBD2-12048-4-LSE-A



PBD2-12048-6-LS



PBD2-12048-6-LSE-A



PBD2-24048-18-LSE-B

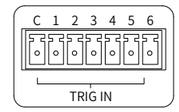
PBD2-12048-4 External Trigger Definition

Trigger Port No.	Trigger Input Definition		Input Voltage
C	Trigger input common		
1	Trigger input 1		
2	Trigger input 2	No polarity Bidirectional input	DC12~24V
3	Trigger input 3		
4	Trigger input 4		
5	NC		
6	NC		

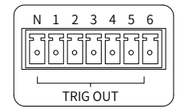
Trigger Port No.	Trigger Output Definition		Output Voltage
N	Trigger output common (-)		
1	Trigger input 1 (+)		
2	Trigger input 2 (+)		
3	Trigger input 3 (+)	Common negative	DC12V
4	Trigger input 4 (+)		
5	NC		
6	NC		

PBD2-12048-6 External Trigger Definition

Trigger Port No.	Trigger Input Definition		Input Voltage
C	Trigger input common		
1	Trigger input 1		
2	Trigger input 2	No polarity Bidirectional input	DC12~24V
3	Trigger input 3		
4	Trigger input 4		
5	Trigger input 5		
6	Trigger input 6		

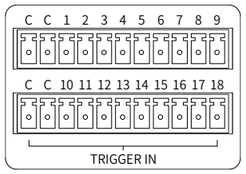


Trigger Port No.	Trigger Output Definition		Output Voltage
N	Trigger output common (-)		
1	Trigger input 1 (+)		
2	Trigger input 2 (+)		
3	Trigger input 3 (+)	Common negative	DC12V
4	Trigger input 4 (+)		
5	Trigger input 5 (+)		
6	Trigger input 6 (+)		

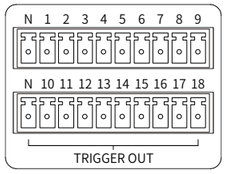


PBD2-24048 External Trigger Definition

Trigger Port No.	Trigger Input Definition		Input Voltage
C	Trigger input common		
1	Trigger input 1		
2	Trigger input 2	No polarity Bidirectional input	DC12～24V (2-5mA)
...	...		
18	Trigger input 18		



Trigger Port No.	Trigger Output Definition		Output Voltage
N	Trigger output common (-)		
1	Trigger input 1 (+)		
2	Trigger input 2 (+)	Common negative	DC12V (10mA Max)
...	...		
18	Trigger input 18 (+)		



Overdrive Digital Controller PUD

Precise control of lighting time, short output response time
Overdrive pulse power up to 2000W, which meets the needs of ultra-high brightness applications

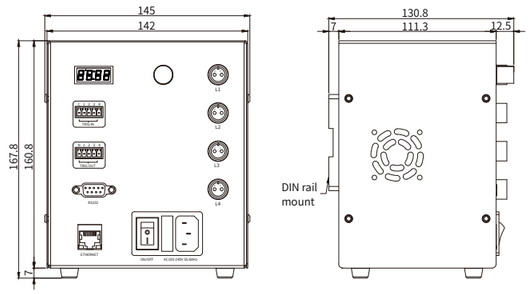
Technical Specification

Model	PUD-12048-4-LSE-A
Lighting Method	Continuous / Overdrive lighting
Drive Method	Constant voltage
Dimming Method	PWM / Lighting time control
Input Voltage/Current	AC100-240V (3A max) 50/60Hz
No. of Channels	4
Total Output Current/Power *1	60W on constantly-on mode
Output Voltage	Constantly-on mode: DC24V / Overdrive mode: DC48V
Single Channel Output Current/Power*1	Constantly-on mode: 2.5A (max) / Overdrive mode: 50A (max)
Trigger Method	Internal/external
Trigger Input	DC12-24V (3-10mA)
Trigger Output	DC12V (10mA max)
Trigger Response Time	2us (max)
Brightness Level	0-100
Light Time	0-100us adjustable
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again
Weight (kg)	1.5
Dimension (mm)	130.8×145×167.8
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Fan cooling
Material·Surface Treatment	SPCC painting
Communication	LSE: RS232 & 100Mbps Ethernet

*1 When powered by AC100V-120V, the controller's power is derated to 70%

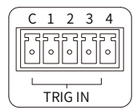
Model Code Description

PUD	-	120	48	-	4	-	LSE	-	A
Model		Power	Output voltage		Channel no.		Communication		Version

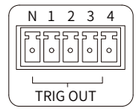


PUD Series External Trigger Definition

Trigger port no.	Trigger-in definition		Input voltage
C	Trigger input common	Bidirectional input No polarity	DC 12~24V
1	Trigger input channel 1		
2	Trigger input channel 2		
3	Trigger input channel 3		
4	Trigger input channel 4		



Trigger port no.	Trigger-out definition		Output voltage
N	Trigger output common(-)	Common negative	DC 12V
1	Trigger output channel 1(+)		
2	Trigger output channel 2(+)		
3	Trigger output channel 3(+)		
4	Trigger output channel 4(+)		



Logic Overdrive Controller PBDL2

1-6 channels can be configured separately
Switch 2 voltage modes freely(DC24V/DC48V), synchronously change luminous time unit
Set luminous time delay and trigger output time, directly trigger the camera to take pictures, thus to achieve better synchronization
With multiple mode combinations, each group takes image in sequence, light output and trigger output port can be freely matched or set

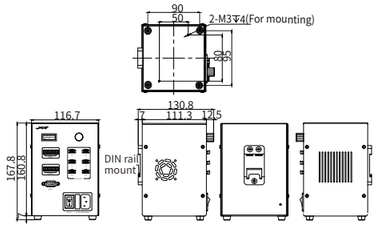
Technical Specification

Model	PBDL2-12048-6-LS
Model	PBDL2-12048-6-LSE-B
Lighting Method	Continuous / trigger lighting
Drive Method	Constant voltage
Intensity Control	PWM / lighting time control
Input Voltage/Current	AC100-240V(3A MAX) 50/60Hz
No. of Channels	6
Total Output Current/Power *1	Continuously-on 60W
Output Voltage	Continuously-on: DC22V / Overdrive: DC48V
Single-Channel Output *1 Current/Power	Continuously-on: 2.5A (max) / Overdrive: 25A (max)
Trigger Method	Internal/ External trigger
Trigger Input	DC12-24V(7-12mA)
Trigger Output	DC12V(10mA MAX)
Trigger Response Delay	2us(MAX)
Brightness Level	0-255
Light Time	DC22V: 0-999ms
	DC48V: 0-999us
Protect & Display	Digital tube displays OCP: short-circuit or over-current; restore by powering it on again
Weight (kg)	1.36
Dimension (mm)	130.8×116.7×167.8
Working Environment	Temperature 0~40℃ / humidity 20~85% RH (non-condensation)
Storage Environment	Temperature -20~60℃ / humidity 20~85% RH (non-condensation)
Cooling Method	Fan cooling
Material · Surface Treatment	SPCC painting
Communication	LSE: RS232 & 100Mbps Ethernet

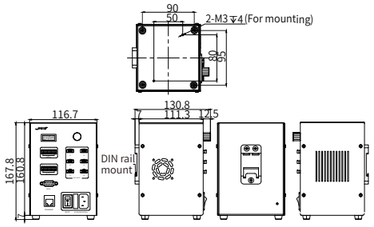
*1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

PBDL2	-	120	48	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



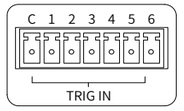
PBDL2-12048-6-LS



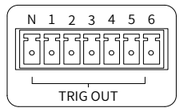
PBDL2-12048-6-LSE-B/C

PBDL Series External Trigger Definition

Trigger Port No.	Trigger In Definition		Input Voltage
C	Trigger input common	Bidirectional input,regardless of polarity	DC12~24V
1	Trigger input1		
2	Trigger input2		
3	Trigger input3		
4	Trigger input4		
5	Trigger input5		
6	Trigger input6		



Trigger Port No.	Trigger Out Definition	Output Voltage	
N	Trigger output common(-)	Common negative	DC12V
1	Trigger output 1(+)		
2	Trigger output 2(+)		
3	Trigger output 3(+)		
4	Trigger output 4(+)		
5	Trigger output 5(+)		
6	Trigger output 6(+)		



Constant-Current Controller PSC4

Intelligent identification of light power and output corresponding current

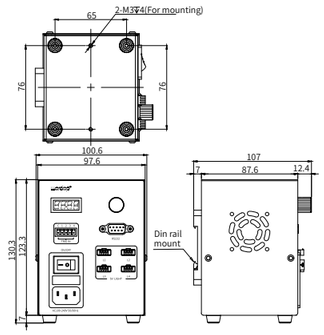
Can set max output current through communication

Technical Specification

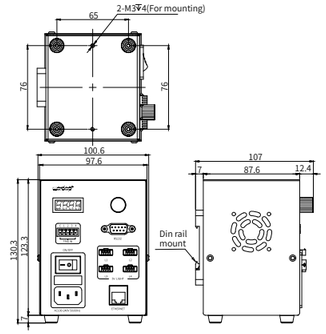
Model	PSC4-2005-4-LS
Model	PSC4-2005-4-LSE-A
Lighting Method	Continuous/trigger
Drive Method	Constant current
Dimming Method	Adjust current
Input Voltage/Current	AC100-240V (1A max) 50/60Hz
No. of Channels	4
Total Output Current/Power	20W
Output Voltage	DC5V
Single Channel Output Current	2A (max)
Trigger Method	External trigger
Trigger Input	DC5-24V
Trigger Response Time	50us (max)
Brightness	0-255
Protect & Display	Digital tube displays OCP: over-current; restore by powering it on again
Weight (kg)	0.8
Dimension (mm)	107×100.6×130.3
Operation	Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage	Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Fan cooling
Material·Surface Treatment	SPCC painting
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet

Model Code Description

PSC4	-	20	05	-	4	-	LS
Model		Power	Output Voltage		Output Channel		Communication



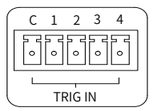
PSC4-2005-4-LS



PSC4-2005-4-LSE-A

PSC4 Series External Trigger Definition

Trigger Port No.	Trigger In Definition	Input Voltage
C	Trigger input common	Bidirectional input No polarity / DC5~24V
1	L1 trigger input	
2	L2 trigger input	
3	L3 trigger input	
4	L4 trigger input	



Constant-Current Controller PSCS

Output modes are optional – load ID identification mode and current mode

Compatible for 5V lighting

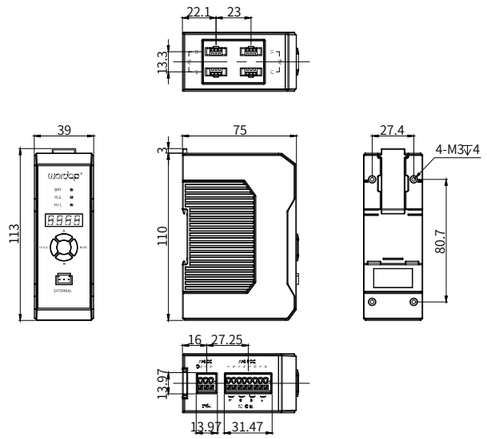
Technical Specification

Model	PSCS-2005-4-LS
Lighting Method	Continuous / Trigger lighting
Drive Mode	Constant current
Dimming Method	Current control
Input Voltage	DC 24V
No. of Channels	4
Total Output Power	20W
Output Voltage	DC 5V
Single-Channel Output Current	1A(max)
Trigger Method	External trigger
Trigger Input	DC5~24V
Trigger Response Time	50us Max
Light Brightness	0~999
Protect & Display	Digital tube displays OCP
Weight (kg)	0.2
Dimension (mm)	39×75×113
Working Environment	Temperature 0~40°C / humidity 20~85% RH (non-condensation)
Storage Environment	Temperature -20~60°C / humidity 20~85% RH (non-condensation)
Cooling Method	Fan cooling
Material · Surface Treatment	ABS engineering plastics
Communication*1	LS: RS232

***1 Can use cable from Wordop only**

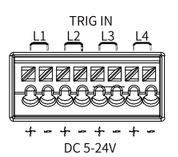
Model Code Description

PSCS	-	20	05	-	4	-	LS
Model		Power	Output voltage		Channel no.		Communication



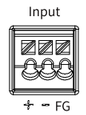
PSCS Series External Trigger Definition

Trigger Port No.	Trigger In Definition		Input Voltage
1+	CH 1	Trigger input +	DC5～24V
1-		Trigger input -	
2+	CH 2	Trigger input +	
2-		Trigger input -	
3+	CH 3	Trigger input +	
3-		Trigger input -	
4+	CH 4	Trigger input +	
4-		Trigger input -	



PSCS Series Power Supply Terminal Definition

Port No.	Input Connection Definition		Input Voltage
+	Power input of controller	Input +	DC24V
-		Input -	
FG	Ground terminal of controller		



Constant Current Controller PSC5

Light up LED light with constant current driving method
Can control on/off of light through external trigger signals
Auto-identify power of line light, and output corresponding current value

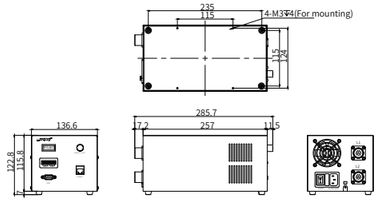
Technical Specification

Model	PSC5-15048-2-LS	PSC5-35048-2-LS	PSC5-60048-2-LS	PSC5-60048-1-LS
Model	PSC5-15048-2-LSE-A	PSC5-35048-2-LSE-A	PSC5-60048-2-LSE-A	PSC5-60048-1-LSE-A
Lighting Method	Continuous / Trigger lighting			
Drive Mode	Constant current			
Intensity Control	Current control			
Input Voltage / Current	AC100-240V(3A max) 50/60Hz	AC100-240V(3.4A max) 50/60Hz or AC200V-240V(4.5A max)50/60Hz	AC100-240V(8A max) 50/60Hz or AC200V-240V(8A max) 50/60Hz	AC100-240V(8A max) 50/60Hz or AC200V-240V(8A max)50/60Hz
No. of Channels	2	2	2	1
Total Output ★1 Current/Power	3A(max)/144W	7A(max)/335W	AC100V-120V: 9.5A(max)/456W AC200V-240V: 12A(max)/576W	AC100V-120V: 9.5A(max)/456W AC200V-240V: 12A(max)/576W
Output Voltage	DC48V			
Single-Channel Output★1 Current Power	3A(max)/144W	6A(max)/288W	6A(max)/288W	9.5A(max)/456W/ 12A(max)/576W
Light Fan Drive	Yes			
Fan Input Parameter	Fan voltage DC12V, current 4A (max)(about 37 fans)			
Trigger Method	External trigger			
Trigger Input	DC5-24V			
Trigger Response Time	50us (max)			
Brightness Level	0-255			
Protect & Display	Controller OTP: Displays E01 Light OCP: Displays E02 Light OTP: Displays E03 Light temperature protection failure: Displays E04 Controller temperature protection failure: Displays E05 Fan drive circuit OTP: Displays E06 Fan drive circuit temperature protection failure: Displays E07			
Weight (kg)	2.2	2.5	2.9	2.9
Dimension (mm)	285.7×136.6×122.8	320.7×136.6×122.8	320.7×136.6×122.8	320.7×136.6×122.8
Working Environment	Temperature 0~40°C / humidity 20~85% RH (non-condensation)			
Storage Environment	Temperature -20~60°C / humidity 20~85% RH (non-condensation)			
Cooling Method	Fan cooling			
Material·Surface Treatment	SPCC painting			
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet			

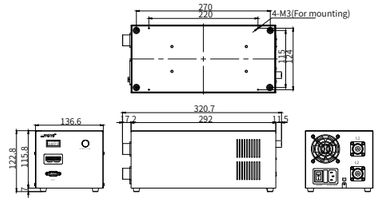
★1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

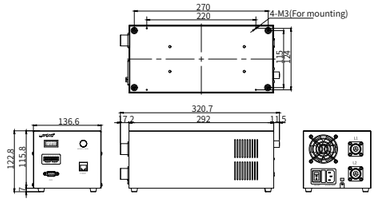
PSC5	-	150	48	-	2	-	LS
Model		Power	Output voltage		Channel no.		Communication



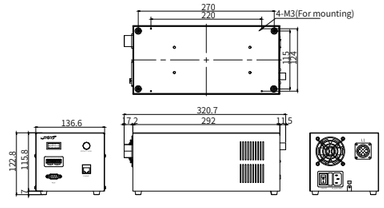
PSC5-15048-2-LS
PSC5-15048-2-LSE-A



PSC5-35048-2-LS
PSC5-35048-2-LSE-A



PSC5-60048-2-LS
PSC5-60048-2-LSE-A



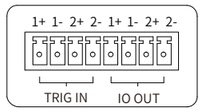
PSC5-60048-1-LS
PSC5-60048-1-LSE-A

PSC5 Series External Trigger Definition

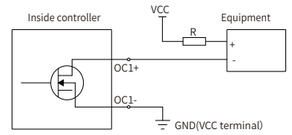
Trigger Port No.	Trigger Definition		Input Voltage
1+	CH 1	Trigger input +	DC5～24V
1-		Trigger input -	
2+	CH 2	Trigger input +	
2-		Trigger input -	

Trigger Port No.		IO OUT Definition	Output Voltage
1+	OC 1	Trigger output +	Voltage: DC5V-36V Current: 200mA (Max)
1-		Trigger output -	
2+	OC 2	Trigger output +	
2-		Trigger output -	

OC1: When the controller detect over-temperature, OCP of the controller and fan drive circuit, OC1 conducts
OC2: Reserved function



IO OUT Power Supply Mode (Take OC1 channel as an example)



* When the controller detects anomaly in light, the IO gets ON; IO needs external power supply, voltage ranging from DC5V to 36V, a current-limiting resistors shall be connected in series, current should below 200 mA

High-Speed Constant-Voltage Logic Controller PHDL

Free combination of logic strobing modes according to real needs
One X2 series controller can control up to 4 cameras for synchronous scanning, which can be used for sequence-function imaging of complex applications of high precision and large FOV
One X3 series controller supports up to 4 cameras for independent imaging, which can be used for independent sequence-function imaging from multiple positions
X4 series controllers support fast response speed of 1us, and each trigger port supports a set of lighting combinations

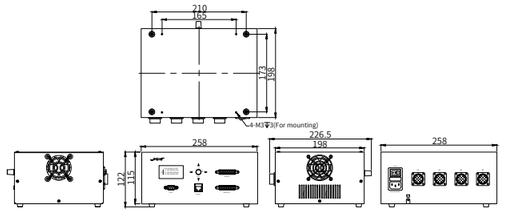
Technical Specification

Model	PHDL-60048-4-X2-LSE-A	PHDL-80048-4-X2-LSE-A	PHDL-150048-8-X2-LSE-A
	PHDL-60048-4-X3-LSE	PHDL-80048-4-X3-LSE	PHDL-150048-8-X3-LSE
	PHDL-60048-4-X4-LSE	PHDL-80048-4-X4-LSE	PHDL-150048-8-X4-LSE
Lighting Method	Continuous / trigger lighting		
Drive Mode	Constant voltage		
Intensity Control	PWM / lighting time control		
Input Voltage/Current	AC100-240V(6A max) 50/60Hz	AC100-240V (12A max) 50/60Hz	AC100-240V(12A max) 50/60Hz
No. of Channels	4	4	8
Total Output Power★1	600W	800W	1500W
Output Voltage	DC48V		
Single Channel Output Current/Power	Continuously-on: 3A(max)		
	Strobing: 12.5A(max)	Strobing: 16A(max)	Strobing: 25A(max)
Light Fan Drive	Equipped		
Fan Input Parameter	Voltage DC12V, Current 3.5A, 30 fans	Voltage DC12V, Current 3.5A, 30 fans	Voltage DC12V, Current 6.5A, 60 fans
Trigger Method	Internal / External trigger		
Trigger Input	Single-ended signal: DC5-24V/Differential signal: 5V		
Trigger Output	Single-ended signal: DC12V/Differential signal: 5V		
Trigger Response Time	1us(max)		
Brightness Level	0-100 adjustable		
Luminous Time	0-1000 adjustable, unit: 0.1us		
Protect & Display	Display error: Short circuit or over current. Restore after power-on		
Weight (kg)	3.8	3.8	4.3
Overall Dimensions (mm)	258×226.5×122		
Working Environment	Temperature 0~40°C / humidity 20~85% RH (non-condensation)		
Storage Environment	Temperature -20~60°C / humidity 20~85% RH (non-condensation)		
Cooling Method	Fan cooling		
Material · Surface Treatment	SPCC painting		
Communication	LS: RS232 / LSE: RS232 & 100Mbps Ethernet		

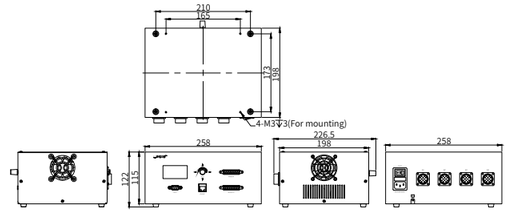
★1 When powered by AC100V-120V, the controller's power is derated to 70%

Model Code Description

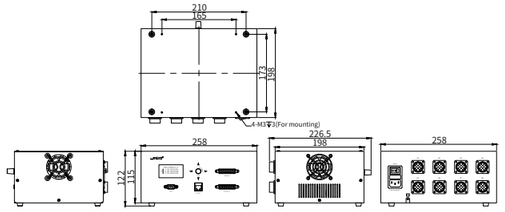
PHDL	-	600	48	-	4	-	X2	-	LSE
Model		Power	Output voltage		Channel no.		Application		Communication



PHDL-60048-4



PHDL-80048-4

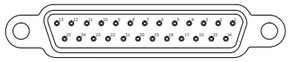


PHDL-150048-8

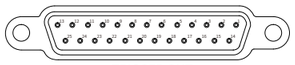
Controller External Trigger Definition

Trigger wire identifier	Trigger in definition	Input voltage
INA1+	Trigger-input differential signal A1+	Differential 5V
INA1-	Trigger-input differential signal A1-	
INA2+	Trigger-input differential signal A2+	
INA2-	Trigger-input differential signal A2-	
INA3+	Trigger-input differential signal A3+	
INA3-	Trigger-input differential signal A3-	
INA4+	Trigger-input differential signal A4+	
INA4-	Trigger-input differential signal A4-	
COM	Trigger-input common (COM)	DC5~24V (bilateral input)
TRIG_1	Trigger-input single-ended signal 1	
TRIG_2	Trigger-input single-ended signal 2	
TRIG_3	Trigger-input single-ended signal 3	
TRIG_4	Trigger-input single-ended signal 4	

Trigger wire identifier	Trigger out definition	Output voltage
OUT_A1+	Trigger-output differential signal A1+	Differential 5V
OUT_A1-	Trigger-output differential signal A1-	
OUT_A2+	Trigger-output differential signal A2+	
OUT_A2-	Trigger-output differential signal A2-	
OUT_A3+	Trigger-output differential signal A3+	
OUT_A3-	Trigger-output differential signal A3-	
OUT_A4+	Trigger-output differential signal A4+	
OUT_A4-	Trigger-output differential signal A4-	
GND	Trigger-output negative(GND)	DC12V
OUT_1	Trigger-output single-ended signal 1+	
OUT_2	Trigger-output single-ended signal 2+	
OUT_3	Trigger-output single-ended signal 3+	
OUT_4	Trigger-output single-ended signal 4+	

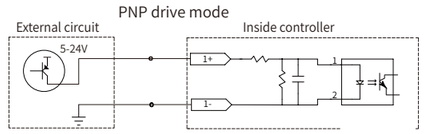


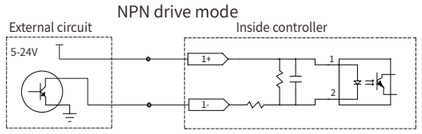
TRIGGER IN



TRIGGER OUT

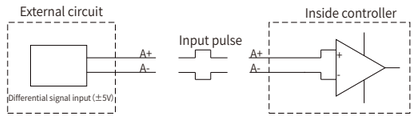
Single-ended Signal Input Mode





*It is not recommended to use switches with strong mechanical characteristics, such as relays, as the trigger driving mode for external triggering of the controller, which is easy to cause false trigger

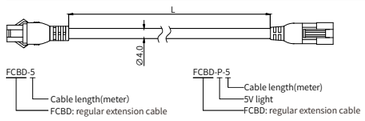
Differential Signal Drive Mode



■ Light and Controller Accessories

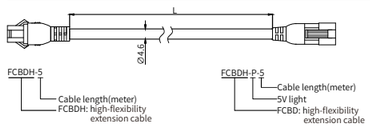
■ Regular Extension Cable (FCBD/FCBD-P series)

Product	Model	Cable Length	Cable OD	Remark
Regular extension cable	FCBD-1	L=1m	4.0mm	For 24V input LED light and 24V output controller
	FCBD-2	L=2m		
	FCBD-3	L=3m		
	FCBD-4	L=4m		
	FCBD-5	L=5m		
	FCBD-6	L=6m		
	FCBD-P-1	L=1m	4.0mm	For 5V input LED light and 5V output controller
	FCBD-P-2	L=2m		
	FCBD-P-3	L=3m		
	FCBD-P-4	L=4m		
	FCBD-P-5	L=5m		
	FCBD-P-6	L=6m		



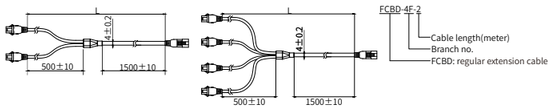
■ Highly-Flexibility Extension Cable (FCBDH/FCBDH-P series)

Product	Model	Cable Length	Cable OD	Remark
High-flexibility extension cable	FCBDH-1	L=1m	4.6mm	For 24V input LED light and 24V output controller
	FCBDH-2	L=2m		
	FCBDH-3	L=3m		
	FCBDH-4	L=4m		
	FCBDH-5	L=5m		
	FCBDH-6	L=6m		
	FCBDH-P-1	L=1m	5.3mm	For 5V input LED light and 5V output controller
	FCBDH-P-2	L=2m		
	FCBDH-P-3	L=3m		
	FCBDH-P-4	L=4m		
	FCBDH-P-5	L=5m		
	FCBDH-P-6	L=6m		



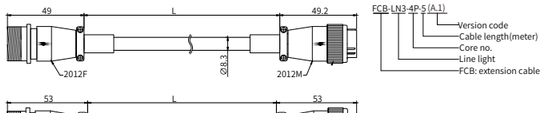
■ Regular Extension Cable With Branches (FCBD series)

Product	Branch	Model	Cable Length	Cable OD	Remark
Regular extension cable with branch	2 ends	FCBD-2F-1	L=1m	4.0mm	For 24V input LED light and 24V output controller
		FCBD-2F-2	L=2m		
		FCBD-2F-3	L=3m		
	4 ends	FCBD-4F-1	L=1m		
		FCBD-4F-2	L=2m		
		FCBD-4F-3	L=3m		



■ Line Light Extension Cable (FCB series)

Product	Model	Cable Length	Cable OD	Remark
Line light extension cable	FCB-LN3-4P-1(A.1)	L=1m	8.3mm	For 48V input LED light and 48V output controller
	FCB-LN3-4P-3(A.1)	L=3m		
	FCB-LN3-4P-5(A.1)	L=5m		
	FCB-LN3-6P-1(A.1)	L=1m	9.6mm	For 48V input LED light and 48V output controller
	FCB-LN3-6P-3(A.1)	L=3m		
	FCB-LN3-6P-5(A.1)	L=5m		



FCB-LN3-4P-1/3/5 (A.1) Wire Connection Definition

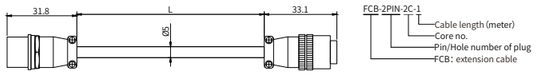
2012M	7	8	3	5	6	9	10	12
2012F	7	8	3	5	6	9	10	12
Wire Color	Red	Green	Grey	Blue	Yellow	Black	White	Brown
Definition	FAN-	FAN+	LED2-	LED2+	LED1-	LED1+	ID	GND

FCB-LN3-6P-1/3/5 (A.1) Wire Connection Definition

2412M	1	2	3	4	5	6	7	8	9	10	11	12
2412F	1	2	3	4	5	6	7	8	9	10	11	12
Wire Color	Red	Green	Light green	Black	Brown	White	Purple	Grey	Yellow	Blue	Orange	Pink
Definition	FAN+	LED1-	FAN-	LED2-	LED1+	LED3-	LED2+	LED4-	LED3+	ID	LED4+	GND

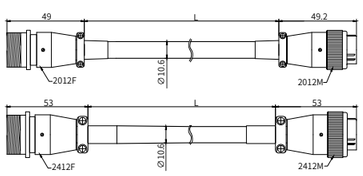
■ 2-Core Extension Cable Drawing (FCB series)

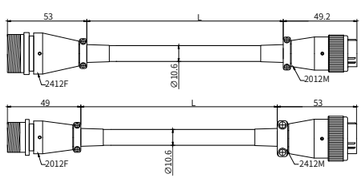
Product	Plug	Model	Cable Length	Cable OD	Remark
2-core flexible extension	XS12 Aviation plug	FCB-2PIN-2C-1 (A.1)	L=1m	5.0mm	For 48V input high-brightness overdrive light
		FCB-2PIN-2C-3 (A.1)	L=3m		
		FCB-2PIN-2C-5	L=5m		



■ Sequence-Function Extension Cable (FCB series) / Sequence-Function Adapter Extension Cable (FCT series)

Product	Model	Cable Length	Cable OD	Remark
Sequence-function extension cable	FCB-12PIN-6C-P-3-6008A(A.1)	L=3m	10.6mm	For light lower than 290W and PHDL series
	FCB-12PIN-6C-P-5-6008A(A.1)	L=5m		
	FCB-12PIN-6C-P-3-150016A(A.1)	L=3m		For light higher than 290W, 12-pin aviation connector
	FCB-12PIN-6C-P-5-150016A(A.1)	L=5m		
Sequence-function adapter extension cable	FCT-12PIN-6C-P-3-6008A(A.1)	L=3m		For light higher than 290W, matching PHDL series
	FCT-12PIN-6C-P-5-6008A(A.1)	L=5m		
	FCT-12PIN-6C-P-3-150016A(A.1)	L=3m		For light lower than 290W
	FCT-12PIN-6C-P-5-150016A(A.1)	L=5m		





FCB-12PIN-6C-P-3/5-6008A(A.1) Wire Connection Definition

2012-M	7	8	3	5	6	9
2012-F	7	8	3	5	6	9
Wire Color	Yellow-green	Green	Black	Red	White	Brown
Definition	FAN-	FAN+	LED2-	LED2+	LED1-	LED1+

FCB-12PIN-6C-P-3/5-150016A(A.1) Wire Connection Definition

2412-M	3	1	4.6	7.9	2.8	5.11
2412-F	3	1	4.6	7.9	2.8	5.11
Wire Color	Yellow-green	Green	Black	Red	White	Brown
Definition	FAN-	FAN+	LED2-	LED2+	LED1-	LED1+

FCT-12PIN-6C-P-3/5-6008A(A.1) Wire Connection Definition

2012-M	7	8	3	5	6	9
2412-F	3	1	4.6	7.9	2.8	5.11
Wire Color	Yellow-green	Green	Black	Red	White	Brown
Definition	FAN-	FAN+	LED2-	LED2+	LED1-	LED1+

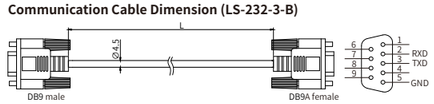
FCT-12PIN-6C-P-3/5-150016A(A.1) Wire Connection Definition

2012-F	7	8	3	5	6	9
2412-M	3	1	4.6	7.9	2.8	5.11
Wire Color	Yellow-green	green	Black	Red	White	Brown
Definition	FAN-	FAN+	LED2-	LED2+	LED1-	LED1+

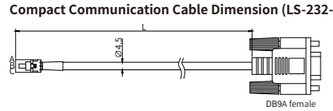
■ Other Cables

Product	Model	Plug	Cable Length	Cable OD
Communication cable	LS-232-3-B	DB9	L=3m	4.5mm
Compact communication cable	LS-232-S-3	DB9+MX2.54	L=3m	4.5mm
AC cord	AC-3PIN-1.5-GB	Standard domestic plug	L=1.5m	6.8mm
	HSC-102	品 shape plug	L=1.6m	6.8mm
Network communication cable	LSE-10/1000M-3	RJ45	L=3m	6.5mm

Communication Cable Dimension (LS-232-3-B)



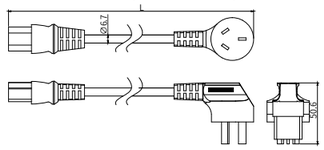
Compact Communication Cable Dimension (LS-232-S-3)



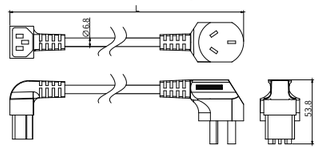
*Selection notice

1.RS-232 communication cable (through) has a standard length for selection, and the communication cable has a shielding layer
2.RS-232 uses only 2, 3 and 5 pins for communication, whichare receiving line RXD, sending line TXD and signal ground line GND
3.Can use cable from Wordop only

AC Cord Dimension (AC-3PIN-1.5-GB)



AC Cord Dimension (HSC-102)



■ Filter and Polarizer

Item	Model	Screw Type	
Filter	Model number demonstration R 63-30 ① ② ③	Remark:① R- Red, B- Blue, Y- Yellow, G-Green, UV- Ultra-violet, IR- infrared ② Cutoff wavelength or wavelength range ③ Screw type	
Infrared filter Cutoff wavelength 940nm Bandwidth within 40nm	IR94-27	M27.5	P0.5
	IR94-30	M30.5	P0.5
	IR94-40	M40.0	P0.5
Infrared filter Cutoff wavelength 850nm Bandwidth within 40nm	IR85-27	M27.5	P0.5
	IR85-30	M30.5	P0.5
	IR85-40	M40.0	P0.5
Ultraviolet filter Cutoff wavelength 365nm Bandwidth within 40nm	UV36-27	M27.5	P0.5
	UV36-30	M30.5	P0.5
	UV36-40	M40.0	P0.5
Red filter Cutoff wavelength 630nm Bandwidth within 40nm	R63-27	M27.5	P0.5
	R63-30	M30.5	P0.5
	R63-40	M40.0	P0.5
Yellow filter Cutoff wavelength 590nm Bandwidth within 40nm	Y59-27	M27.5	P0.5
	Y59-30	M30.5	P0.5
	Y59-40	M40.0	P0.5
Green filter Cutoff wavelength 530nm Bandwidth within 40nm	G53-27	M27.5	P0.5
	G53-30	M30.5	P0.5
	G53-40	M40.0	P0.5
Blue filter Cutoff wavelength 470nm Bandwidth within 40nm	B47-27	M27.5	P0.5
	B47-30	M30.5	P0.5
	B47-40	M40.0	P0.5
Polarizer	Model	Spec	Screw Type
Eliminate reflections and glare from surface with a polarizer installed on light	PL-25	M25.5	P0.5
	PL-27	M27.0	P0.5
	PL-30	M30.5	P0.5
	PL-40	M40.5	P0.5
	PL-46	M46.0	P0.75
Prism	P-C-COP-40-007	40X40X40(mm)	Spectroscopic prism
Tips: FQ2, FQG2, HDL3 and some models of HDR3 can add polarizer and filter to reduce stray and dazzle light			

■ Controller Selection Table

Series	Model	Output Voltage	Single Channel Power and Current	Total Power	Channel Numbers	Trigger Function	Communication Method	Compatible Controller	Corresponding Page
Analog controller	PS1C-3624-2	DC12-24V	1A(MAX)/24W	36W	2	No	/	24V	167-168
	PS2C-3624-2	DC12-24V	1.5A(MAX)/36W	36W	2	Yes	/	24V	
	PS2C-3624-4	DC12-24V	1.5A(MAX)/36W	36W	4	Yes	/	24V	
	PS2C-6024-2	DC12-24V	1.5A(MAX)/36W	60W	2	Yes	/	24V	
	PS2C-6024-4	DC12-24V	1.5A(MAX)/36W	60W	4	Yes	/	24V	
	PS2C-15024-2H	DC12-24V	3A(MAX)/72W	150W	2	Yes	/	24V	
	PS2C-15024-4	DC12-24V	2A(MAX)/48W	150W	4	Yes	/	24V	
	PS3C-6024-6	DC12-24V	1A(MAX)/24W	60W	6	Yes	/	24V	
	PSS-7224-2	DC12-24V	1.5A(MAX)/36W	72W	2	Yes	/	24V	169-170
	PC-0605-2	DC5V	0.7A(MAX)/3W	6W	2	No	/	5V	171-172
Digital controller	PD5-6024-4-LS	DC24V	2.5A(MAX)/60W	60W	4	Yes	RS232	24V	173-174
	PD6-6024-4-LSE	DC24V	2.5A(MAX)/60W	60W	4	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-6024-8-LS	DC24V	2.5A(MAX)/60W	60W	8	Yes	RS232	24V	
	PD6-6024-8-LSE	DC24V	2.5A(MAX)/60W	60W	8	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-12024-4-LS	DC24V	3A(MAX)/72W	120W	4	Yes	RS232	24V	
	PD6-12024-4-LSE	DC24V	3A(MAX)/72W	120W	4	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-12024-8-LS	DC24V	3A(MAX)/72W	120W	8	Yes	RS232	24V	
	PD6-12024-8-LSE	DC24V	3A(MAX)/72W	120W	8	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-20024-4-LS	DC24V	3A(MAX)/72W	200W	4	Yes	RS232	24V	
	PD6-20024-4-LSE	DC24V	3A(MAX)/72W	200W	4	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-20024-8-LS	DC24V	3A(MAX)/72W	200W	8	Yes	RS232	24V	
	PD6-20024-8-LSE	DC24V	3A(MAX)/72W	200W	8	Yes	RS232/ 100Mbps Ethernet	24V	
	PD5-50024-8-LSE-A	DC24V	8.3A(MAX)/200W	500W	8	Yes	RS232/ 100Mbps Ethernet	24V	
Digital controller (exclude power supply)	PDS5-6024-4-LS	DC24V	2.5A(MAX)/60W	60W	4	Yes	RS232	24V	175-176
Multi-channel digital controller	PD5-20024-27-LS	DC24V	1.5A (MAX)/36W	200W	27	Yes	RS232	24V	177-178
	PD5-20024-27-LSE	DC24V	1.5A (MAX)/36W	200W	27	Yes	RS232/ 100Mbps Ethernet	24V	
Combined digital controller	PDM2-60524-8-LS	DC24V/DC5V	48W/3W	48W/12W	4/4	Yes	RS232	24V/5V	179-180
	PDM2-60524-8-LSE-A	DC24V/DC5V	48W/3W	48W/12W	4/4	Yes	RS232/ 100Mbps Ethernet	24V/5V	
	PDMS2-50524-4-LS	DC24V/DC5V	36W/3W	44W/6W	2/2	Yes	RS232	24V/5V	181-182
Overdrive digital controller	PBD2-12048-4-LS	DC22V/DC48V	Continuously-on 60W/ Overdrive peak current 25A	Continuously-on 60W	4	Yes	RS232	24V	183-184
	PBD2-12048-4-LSE-A	DC22V/DC48V	Continuously-on 60W/ Overdrive peak current 25A	Continuously-on 60W	4	Yes	RS232/ 100Mbps Ethernet	24V	
	PBD2-12048-6-LS	DC22V/DC48V	Continuously-on 60W/ Overdrive peak current 25A	Continuously-on 60W	6	Yes	RS232	24V	
	PBD2-12048-6-LSE-A	DC22V/DC48V	Continuously-on 60W/ Overdrive peak current 25A	Continuously-on 60W	6	Yes	RS232/ 100Mbps Ethernet	24V	
	PBD2-24048-18-LSE-B	DC22V/DC48V	Continuously-on 120W/ Overdrive peak current 25A	Continuously-on 120W	18	Yes	RS232/ 100Mbps Ethernet	48V	
	PUD-12048-4-LSE-A	DC24V/DC48V	Continuously-on 60W/ Overdrive peak current 50A	Continuously-on 60W	4	Yes	RS232/ 100Mbps Ethernet	24V	185-186
Logic controller	PBDL2-12048-6-LS	DC22V/DC48V	Overdrive peak current DC22V,2.5A/DC48V,25A	/	6	Yes	RS232	24V	187-188
	PBDL2-12048-6-LSE-B	DC22V/DC48V	Overdrive peak current DC22V,2.5A/DC48V,25A	/	6	Yes	RS232/ 100Mbps Ethernet	24V	
Constant current controller	PSC4-2005-4-LS	DC5V	10W/2A	20W	4	Yes	RS232	5V	189-190
	PSC4-2005-4-LSE-A	DC5V	10W/2A	20W	4	Yes	RS232/ 100Mbps Ethernet	5V	
	PSCS-2005-4-LS	DC5V	10W/1A	20W	4	Yes	Rs232	5V	191-192

Series	Model	Output Voltage	Single Channel Power and Current	Total Power	Channel Numbers	Trigger Function	Communication Method	Compatible Controller	Corresponding Page
Constant-current controller	PSC5-15048-2-LS	DC48V	3A(MAX)/144W	144W	2	Yes	RS232	48V	193-194
	PSC5-15048-2-LSE-A	DC48V	3A(MAX)/144W	144W	2	Yes	RS232/ 100Mbps Ethernet	48V	
	PSC5-35048-2-LS	DC48V	6A(MAX)/288W	335W	2	Yes	RS232	48V	
	PSC5-35048-2-LSE-A	DC48V	6A(MAX)/288W	335W	2	Yes	RS232/ 100Mbps Ethernet	48V	
	PSC5-60048-2-LS	DC48V	6A(MAX)/288W	AC100V-120V:456W AC200V-240V:576W	2	Yes	RS232	48V	
	PSC5-60048-2-LSE-A	DC48V	6A(MAX)/288W	AC100V-120V:456W AC200V-240V:576W	2	Yes	RS232/ 100Mbps Ethernet	48V	
	PSC5-60048-1-LS	DC48V	9.5A(MAX)/456W/ 12A(MAX)/576W	AC100V-120V:456W AC200V-240V:576W	1	Yes	RS232	48V	
	PSC5-60048-1-LSE-A	DC48V	9.5A(MAX)/456W/ 12A(MAX)/576W	AC100V-120V:456W AC200V-240V:576W	1	Yes	RS232/ 100Mbps Ethernet	48V	
High-speed constant-voltage logic controller PHDL	PHDL-60048-4-X2-LSE-A	DC48V	Continuously-on 3A/ Overdrive peak current 12.5A	600W	4	Yes	RS232/ 100Mbps Ethernet	48V	195-196
	PHDL-80048-4-X2-LSE-A	DC48V	Continuously-on 3A/ Overdrive peak current 16A	800W	4	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-150048-8-X2-LSE-A	DC48V	Continuously-on 3A/ Overdrive peak current 25A	1500W	8	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-60048-4-X3-LSE	DC48V	Overdrive peak current 12.5A	600W	4	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-80048-4-X3-LSE	DC48V	Overdrive peak current 16A	800W	4	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-150048-8-X3-LSE	DC48V	Overdrive peak current 25A	1500W	8	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-60048-4-X4-LSE	DC48V	Continuously-on 3A/ Overdrive peak current 12.5A	600W	4	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-80048-4-X4-LSE	DC48V	Continuously-on 3A/ Overdrive peak current 16A	800W	4	Yes	RS232/ 100Mbps Ethernet	48V	
	PHDL-150048-8-X4-LSE	DC48V	Continuously-on 3A/ Overdrive peak current 25A	1500W	8	Yes	RS232/ 100Mbps Ethernet	48V	
Cold light	PLF3-80W-1-E	/	80W	/	1	Yes	100Mbps Ethernet	/	119-120
	PLF3-40R-1-E	/	40W	/	1	Yes	100Mbps Ethernet	/	
	PLF3-80B-1-E	/	80W	/	1	Yes	100Mbps Ethernet	/	
	PLF3-80G-1-E	/	80W	/	1	Yes	100Mbps Ethernet	/	
	PLF3-80W-2-LSE	/	80W	/	2	Yes	RS232/ 100Mbps Ethernet	/	121-122
	PLF3-40R-2-LSE	/	40W	/	2	Yes	RS232/ 100Mbps Ethernet	/	
	PLF3-80B-2-LSE	/	80W	/	2	Yes	RS232/ 100Mbps Ethernet	/	
	PLF3-80G-2-LSE	/	80W	/	2	Yes	RS232/ 100Mbps Ethernet	/	
	PLE-1000FC-LSE	/	200W	200W	1	Yes	RS232/ 100Mbps Ethernet	/	123-124
	PLE-2000FC-LSE	/	270W	270W	1	Yes	RS232/ 100Mbps Ethernet	/	
	PLD-3000FC-LSE	/	250W	250W	1	Yes	RS232/ 100Mbps Ethernet	/	

■ ASCII Code Communication Command List

1. Commands start with the start character $ and end with the end character #, between $ and # are commands and parameters.
2. Only the last one is executed when multiple commands are given , such as: $F0=0,F1=0,F2=0# $L0=0,L1=99,L2=128,L3=9#, only $L0=0, L1=99, L2=128, L3=9#is executed.
3. For all commands and data, there should be no spaces between them, all letters are uppercase letters, and all characters are English characters.

NO	Command & Function Description	Command Code	Specification
1	Set ID	$ID=0, IW=99 #	Set ID from 0 to 99, the range is 0-99
2	Set the channel ON/OFF	$F0=0#	F0: Set channel 1 ON/OFF function, range: F0-F5 0: OFF; 1: ON
3	Set trigger method	$TR=0#	0: Triggered by external-follow low level 1: Triggered by external-follow high level 2: Triggered by external falling edge 3: Triggered by external rising edge 5: Triggered by internal-follow high level 7: Triggered by internal rising edge 15: Constantly-on mode
4	Set brightness of the channel	$L0=100#	L0: Set the brightness level of channel 1, range: L0-L5 100: The set brightness of channel 1, range: 0~255
5	Set lighting time of the channel	$T0=100#	T0：Set the lighting time of channel 1, range: T0-T5 100:The set lighting time of channel 1, range: 1~999us
6	Set lighting time delay of the channel	$D0=100#	D0: Set the lighting time delay of channel 1, range: D0-D5 100: The set lighting time delay of channel 1, range: 0~999us
7	Set trigger output time of the channel	$P0=100#	P0: Set the trigger output time of channel 1, range: P0-P5 100: The set trigger output time of channel 1, range: 1~999us
8	Set trigger output time delay of the channel	$S0=100#	S0: Set the trigger output time delay of channel 1, range: S0-S5 100: The set trigger output time delay of channel 1, range: 0 ~500us
9	Set internal trigger frequency	$FQ=2#	Internal trigger frequency range: 1~20Hz
10	Set PWM frequency	$PW=0#	PWM frequency range: 0~3 (0: 62.5KHz, 1: 125KHz, 2: 250KHz, 3: 500KHz)
11	Set trigger-output level method	$GR=0#	Trigger output mode: 0: Falling edge pulse 1: Rising edge pulse
12	Set trigger filter detection time	$FI=5#	Trigger filter detection time (range 0~19): 0: 0.5 us, 1: 1.0 us, 2: 1.5 us, 3: 2.0 us 4: 2.5 us, 5: 3.0 us, 6: 3.5 us, 7: 4.0 us 8: 4.5 us, 9: 5.0 us, 10: 5.5 us, 11: 6.0 us 12: 6.5 us, 13: 7.0 us, 14: 7.5 us, 15: 8.0 us 16: 8.5 us, 17: 9.0 us, 18: 9.5 us, 19: 10.0 us
14	Combined the same function	$L0=0, L1=10#	To set the same function of multiple channels at the same time, one can use ',' to separate and input commands of different channels
15	Combined commands for multiple functions	$L1=10, T0=999, TR=1, LC=1#	To set different functions at the same time, one can use ',' to separate and input different channel commands
16	Combined commands with read command	$L0=10, TR=1, RD=0#	For combined commands with a read command, use ',' to separate and input commands of different channels. There can only be one read command, and the read command must be the last command of the combined commands; Example 1: $L0=10, RD=0, TR=1#, description: RD=0 does not execute Example 2: $L0=10, RD=1, RD=2, RD=0#, description: RD=1 and RD=2 do not execute
17	Read all parameters of the channel	$RD=9999#	RD=0: read the parameters of channel 1, channel range: RD=0~5 RD=9999: read all parameters of the controller Explanation: The current parameter setting value of the controller equals to the return value of each command code if: ID=0, the current value of controller ID is 0 L0=20: the current brightness of channel 1 is 20 T0=100: the current lighting time of channel 1 is 100us
18	Set interface lock/unlock	$LC=0#	0: Unlocked; 1: Locked
19	Data storage	$SA=1#	1: Save data
20	Reset	$RS=1#	Restore all parameters to defaults
21	The controller responds to the command	Return to read information	
		+OK: Reply code of correct communication	
		E1: Reply code of wrong command format	
		E2: Reply code of wrong data format	
		E3: Reply code of wrong command name format	
		E4: Reply code of wrong channel name format	
		E5: Reply code of wrong command name length format	
		E6：Reply code of wrong data length format	
		E7: Reply code of wrong channel length format	
		Er: Other reply codes of wrong command	

Explanation:
① All controllers (except logical controllers) use same command code, and the channel number is based on the actual object, with a range of 0- (n-1), n is the actual number of channels. For example, L1 channel is 0 channel
② The triggering method, PWM frequency, and other commands are based on the actual mode of each controller, with the same code but different ranges
③ The range of commands such as brightness level, lighting time, lighting time delay , trigger filter detection time, etc. shall be subject to the instruction manual

■ Controller-Related Noun & Function Description

Communication Method Explain

Model	Communication method
LS	RS232
E	100Mbps Ethernet
LSE	RS232+100Mbps Ethernet

Controller 232 and 485 Communication Baud Rate

Controller series	Baud rate
Logic controller PBDL2/PHDL	38400
Other controllers	19200

Controller Network Port Communication Mode Description

NE	Explain
0	TCP Server mode
1	TCP Client mode
2	UDP Broadcast mode

Network Port Default Setting

Communication mode	Settings
NE=0	TCP Server
IP address	192.168.1.2
Subnet mask IU	255.255.255.0
Gateway address IS	192.168.1.1
Port number IL	1200
Destination (PC) IP address DP	192.168.1.3
Destination (PC) IP address DL	1200

Communication Parameter

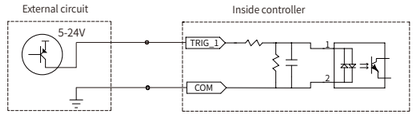
Protocol	Working mode	Communication speed	Transmission format			
			Start bit	Data bit	Check bit	Stop bit
RS-232	Half-duplex mode	19200bps	1	8	0	1

Trigger Interface

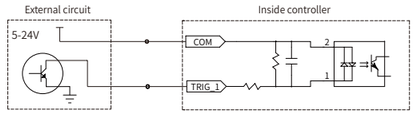
Port	Description
U+	The test power interface provided by the controller can provide a current of 200mA externally, and the output voltage is subject to the instructions of each model
U-	
Common C	Trigger input common terminal com, which can share both positive and negative poles
Common N	Trigger output common terminal, common negative
Port 1-4/6/8/18/27	Trigger interfaces correspond to each channel of light

Trigger Input Method (CH 1 for example)

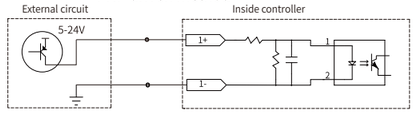
PNP driven method



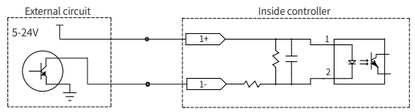
NPN driven method



PNP driven method



NPN driven method



*It is not recommended to use switches with strong mechanical characteristics, such as relays, to trigger the external controller

Network cable selection guide

It is recommended to use high-speed super class 6 double shielded network cable SF/UTP-6A, length within should 50m