Vision Intelligent

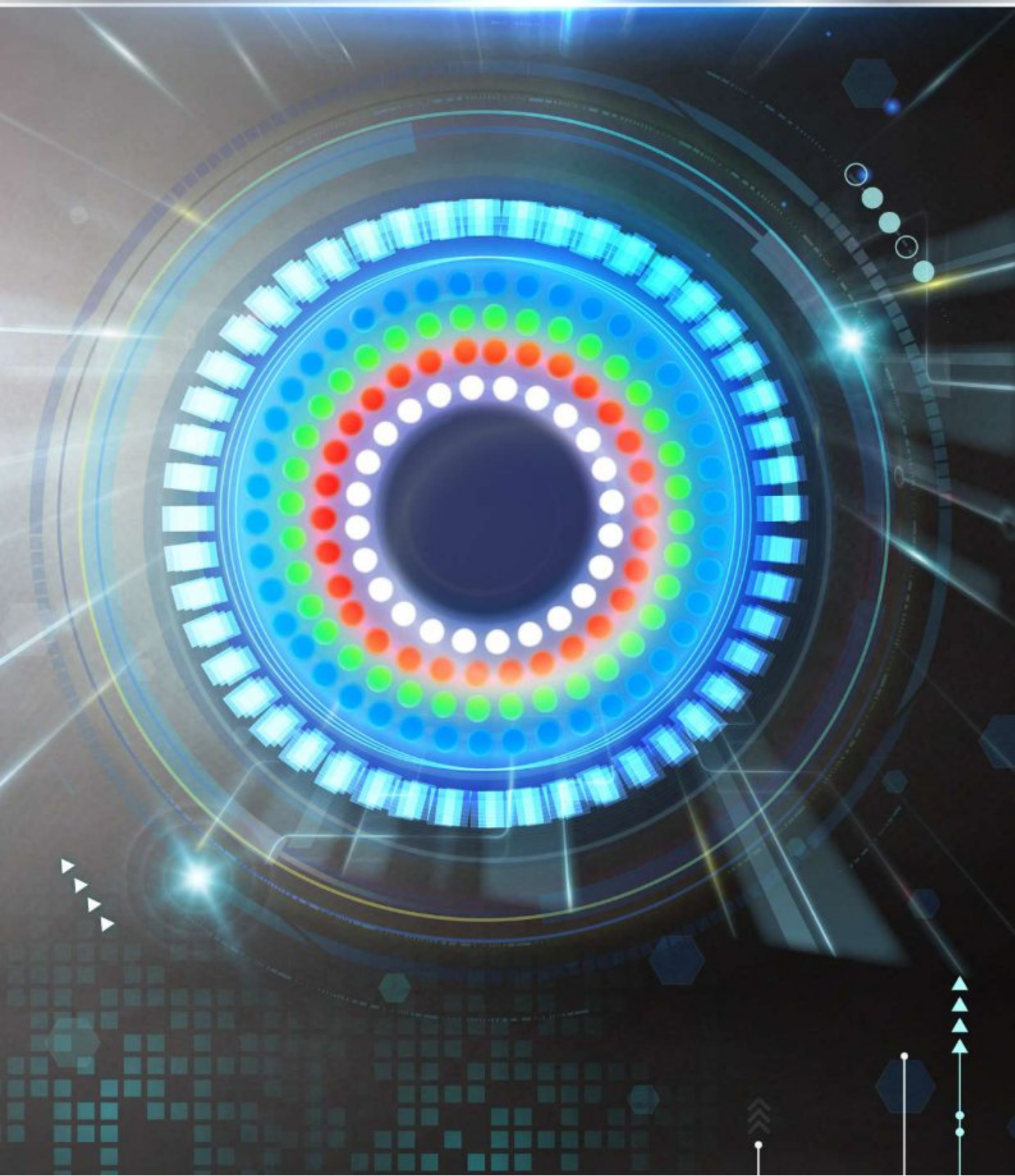
Viswell

宇創視覺科技股份有限公司

LED LIGHTING SOLUTION

For Machine Vision

Comprehensive catalogue of LED light source products



Viswell Quality

Various types of light sources have been developed to ensure stability and uniformity. A light source that achieves the industry' stop lighting effects, plus The only unique heat dissipation design in the industry allows LEDs to optimal condition and minimize light attenuation, delaying Long light source life. In addition, the line of dimmer series Accurate performance, allowing customers to adjust to their expectations immediately brightness. Viswell' s professional team background not only provides customers In order to meet the needs of household light sources, each product is regarded as a refined product. The product has become a new highlight of MIT in the world.

Viswell Team

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Preface

With the vigorous development of automation, the requirements for product accuracy and yield in various industries are also increasing:
In addition to the application of robotic arms, AOI (Auto Optical Inspectino) visual inspection is also increasing It has gradually been highly valued by various industries. Viswell's years of experience in manufacturing IR microscopes, PL detection, The experience of EL inspection and Hotspot inspection professional machines is an important part of AOI visual inspection "Light source technology" has accumulated a solid foundation and developed LED industrial light sources with high CP value.

In order to meet the different needs of inspection in all directions, Viswell strives for excellence and allows customers to find to the most suitable testing equipment or LED industrial light source to improve the image quality, actively and sustainably Contribute to various industries in Taiwan.

Business philosophy

SPEED Provide customer service and resolve issues quickly

S (Sincere): Based on sincerity and trust to offer service.

P (Pioneering): Put emphasis on creativity and develop state-of-the-art products.

D (Elastic): Meet the customized needs of customers.

E (Expert): Take expertise as the foundation and pass it to the new generation.

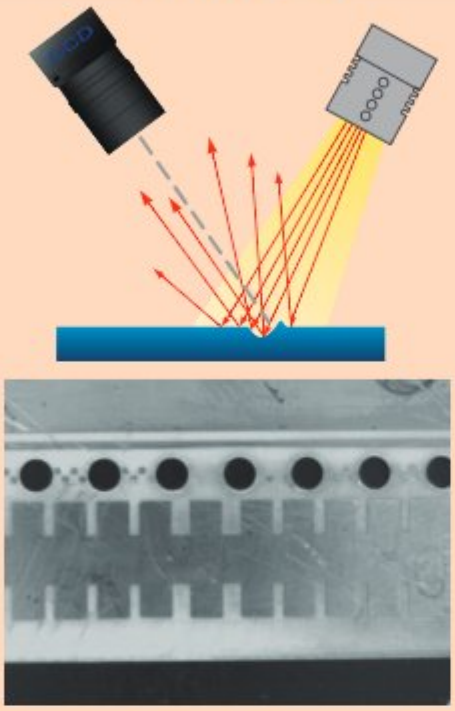
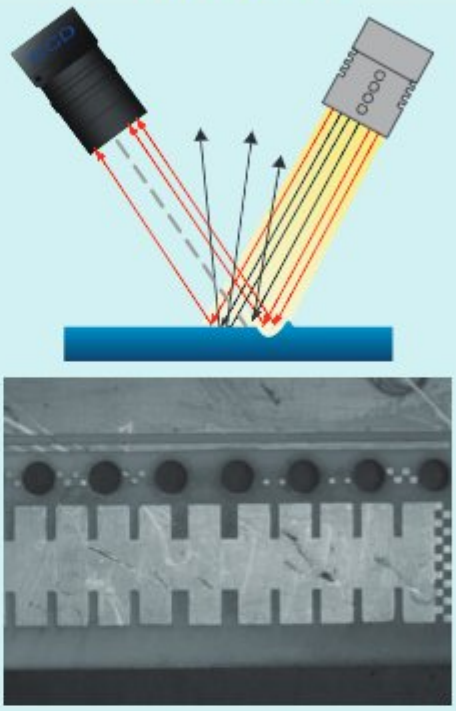
D (Dutiful): Be dutiful to customers, employees, shareholders and the society.

Core technology

Contents

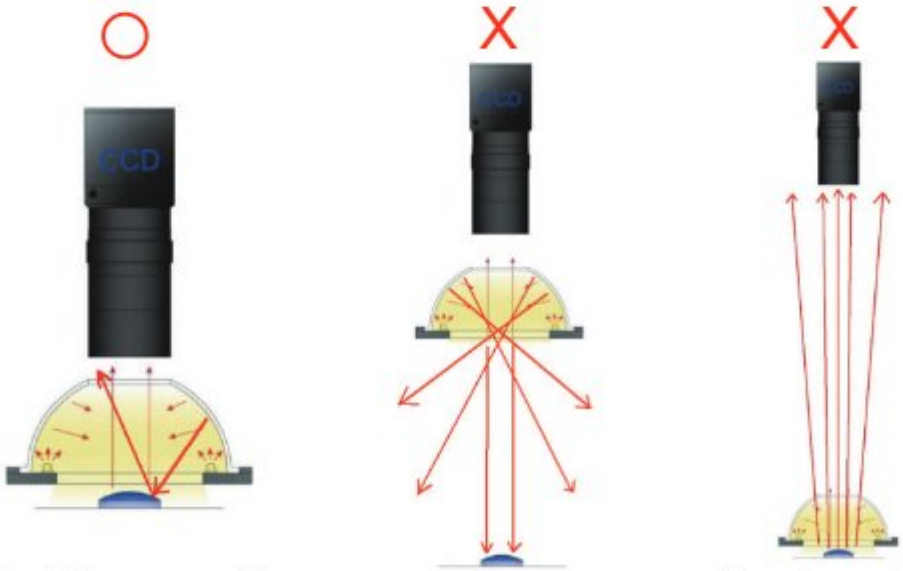
Light source form selection

After confirming the working distance of the lens, the working distance of the light source and the field of view (FOV), select the appropriate light source.

Diffuse Lighting	Direct Lighting
	
Its luminous form is diffused in all directions without any direction sex. Can get good diffuse lighting effect and effectively wipe In addition to rough surfaces, scratches and other effects.	Directional light source has a small beam divergence angle and is suitable for long distances Polish and highlight features such as roughness and scratches.

Good diffused indirect light, suitable for lighting spherical and highly reflective objects that are prone to total reflection.

Note: The closer the diffuse light source is to the object to be tested, the better the diffuse effect! (With a wide-angle lens for the best diffuse light angle)



Good light source and lens working distance

Wrong light source working distance

Wrong lens working distance

Luminous Forms And Angles Of Light Sources

Products \ Angles \ Luminous forms	Direct Lighting			Diffused Lighting			Additional remarks
	High(Vertical)	Middle	Low(Parallel)	High(Vertical)	Middle	Low(Parallel)	
Ring Lights 	●	●	●	* ●	* ●	* ●	* Can add uniform light film 
Line Lights 	* Install by angle			Install by angle			* Plus parallel light film
Dome Lights 				●	●		
Back Lights 				●			
Light Guide Back Lights 				●			
Collimated Back Lights 	●						
Spot Lights 				Install by angle			
Collimated Spot Lights 	* Install by angle						* Can be put into high brightness adjustable ring light source 
Filament Lights 	Install by angle						
Collimated Filament Lights 	Install by angle						
Tunnel Dome Lights 				●	●		
Adjustable Square Lights 				Install by angle			
Coaxial Lights 	● W.D ≥ 30mm			* ● W.D<30mm			* The closer the external coaxial light is the better the diffusion effect is
Square Diffused Lights 					●	●	

Ring Lights

Features

- Depending on the type of light source, irradiation angle characteristics, the effective working distance from 10 ~ 150mm
- A ring light composed of one or more circles of LEDs can be selected according to brightness requirements.
- With the addition of a diffuser, it is suitable for inspection of highly r eflective workpieces
- Can be used with Viswell dimmer for continuous or strobe lighting
- Using flexible circuit board assembly, any angle,
  The size of the ring-shaped light source increases the brightness and eliminates lighting dead spots.
- Various sizes or customized light sources are available

Applications

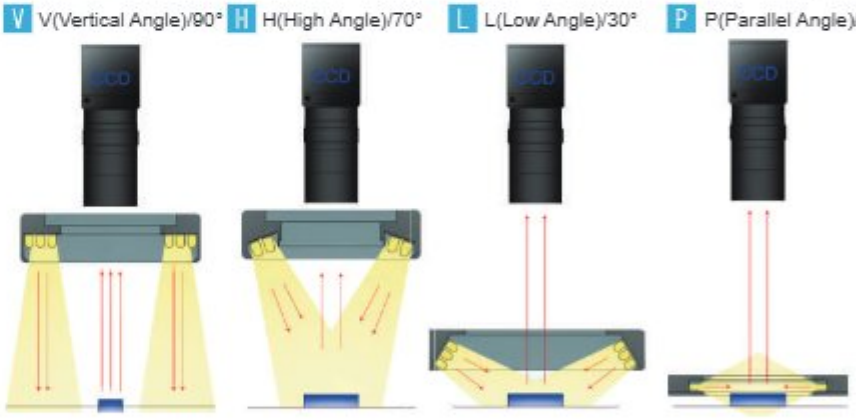
- Detection and identification of various object surfaces
- 2D, 3D precision measurement equipment light source
- AOI automatic detection system light source
- Label or barcode (Bar code) interpretation
- Edge inspection, surface scratch inspection
- As a light source on a solid microscope
- PCB optical point (Fiducialmark) interpretation
- Detection of various defects or printing problems, etc.

檢測實例 Inspect Examples

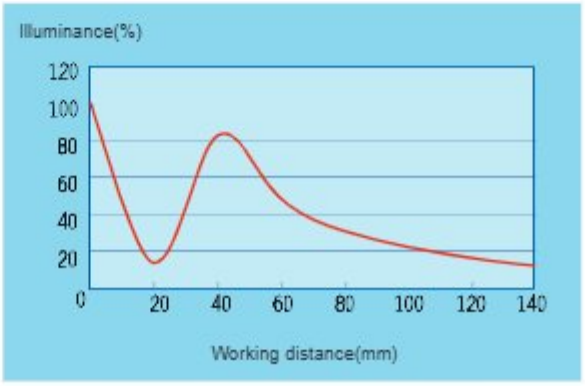
Use a red ring light source to measure the connecting ring Rupture, obvious characteristics

Detecting metal with low-angle ring light source
Parts with clear embossed characters on the surface

Lighting Method



Luminous Intensity



Note : The experimental products for the RL-3667WH24V0.28AC; 100% illumination value of 74,420 (LUX)

Model Description

Specification

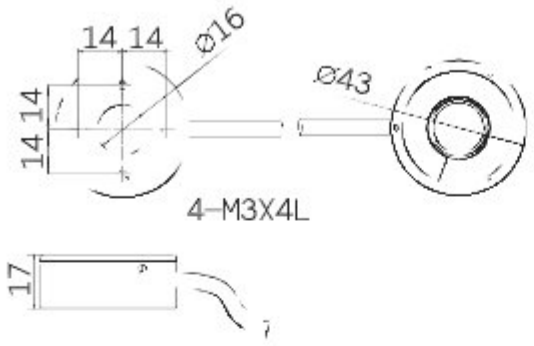
(Model)	(Color)	(Lighting Angle)	(ID/OD)	(Working Distance)	(Power Consumption)	(Dimension)
RL-1643	○ ● ● ● ● ● ●	V (Vertical Angle) / 90°	16/43	15-45	○ ● ● ● ● 24V/2.9W ● ● 24V/2.9W	A
		H (High Angle) / 70°	16/43	6-35		
		L (Low Angle) / 30°	16/43	6-35		
RL-2850	○ ● ● ● ● ● ●	V (Vertical Angle) / 90°	28/50	25-45	○ ● ● ● ● 24V/3.7W ● ● 24V/3.8W	B
		H (High Angle) / 70°	28/50	10-35		
		L (Low Angle) / 30°	28/50	6-35		
RL-3667	○ ● ● ● ● ● ●	V (Vertical Angle) / 90°	36/67	30-100	○ ● ● ● ● 24V/6.9W ● ● 24V/17.3W	C
		H (High Angle) / 70°	36/67	25-80		
		L (Low Angle) / 30°	36/67	10-30		
RL-5090	○ ● ● ● ● ● ●	V (Vertical Angle) / 90°	50/90	60-100	○ ● ● ● ● 24V/10.1W ● ● 24V/14.4W	D
		H (High Angle) / 70°	50/90	40-60		
		L (Low Angle) / 30°	50/90	20-40		E
RL-2348	○ ● ● ● ● ● ●	P (Parallel Angle) / 0°	23/48	0-10	○ ● ● ● ● 24V/3.9W ● ● 24V/2.5W	F
RL-4070	○ ● ● ● ● ● ●	P (Parallel Angle) / 0°	40/70	0-10	○ ● ● ● ● 24V/11.8W ● ● 24V/7.6W	G
RL-5790	○ ● ● ● ● ● ●	P (Parallel Angle) / 0°	57/90	0-10	○ ● ● ● ● 24V/7.9W ● ● 24V/5.0W	H
RL-70100	○ ● ● ● ● ● ●	P (Parallel Angle) / 0°	70/100	0-10	○ ● ● ● ● 24V/8.4W ● ● 24V/5.76W	I
RL-92122	○ ● ● ● ● ● ●	P (Parallel Angle) / 0°	92/122	0-10	○ ● ● ● ● 24V/8.6W ● ● 24V/5.76W	J
HRL-3080H	○ ● ● ●	H (High Angle) / 60°	30/80	60	○ ● ● ● 24V/24W	K
AL-50132	○ ● ● ●	From top to bottom (5 Angles) : Coaxial Light 5050 (Vertical Angle) First layer of ring light 7096 (High Angle) Second layer of ring light 85108 (Middle Angle) Third layer of ring light 97120 (Low Angle) Fourth layer of ring light 100125 (Parallel Angle)			Coaxial Light 5050 ○ ● ● ● 24V/14.4W Ring light 7096 ○ ● ● ● 24V/3.36W Ring light 85108 ○ ● ● ● 24V/4.8W Ring light 97120 ○ ● ● ● 24V/4.8W Ring light 100125 ○ ● ● ● 24V/4.8W	L
AL-75170	○ ● ● ●	From top to bottom (8 Angles) : Coaxial Light 8080 (Vertical Angle) First layer of ring light Second layer of ring light Third layer of ring light Fourth layer of ring light Fifth layer of ring light Sixth layer of ring light Seventh layer of ring light			○ ● ● ● 24V/21.6W ○ ● ● ● 24V/10.5W ○ ● ● ● 24V/3.3W ○ ● ● ● 24V/27.8W ○ ● ● ● 24V/11W ○ ● ● ● 24V/18.2W ○ ● ● ● 24V/9.6W ○ ● ● ● 24V/10W	M

Note : 1. ○White ● Blue ● Green ● Red ● UV400nm ● 850nm (Infrared ray) ● 940nm (Infrared ray) 2. Unit : mm

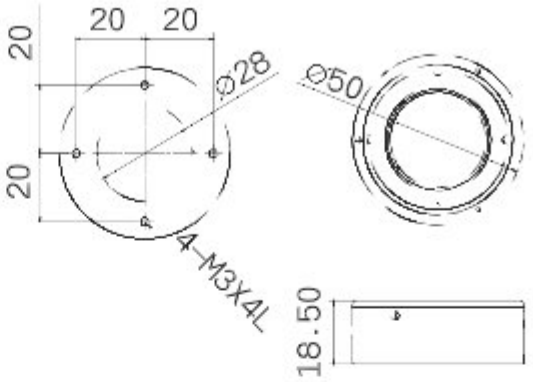
3. When size above an RL-5090 ring light, it is recommended to use"Square Lights"to create a brighter and more uniform light source.

Dimensional drawings

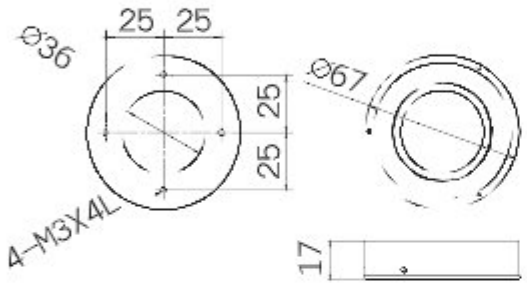
A



B



C



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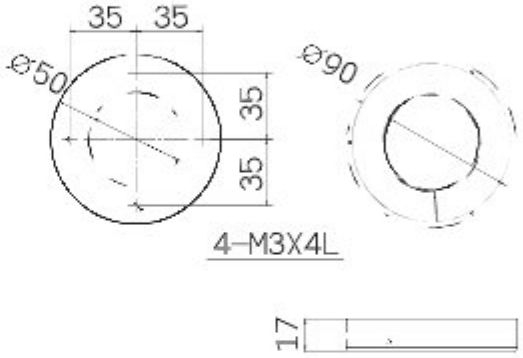
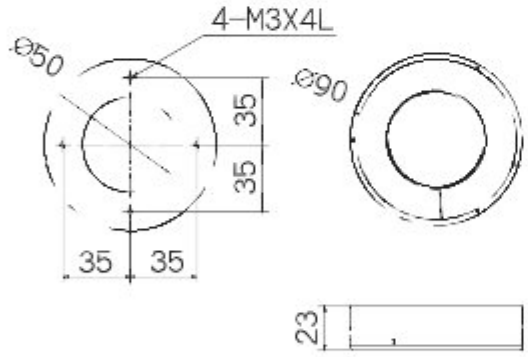


E



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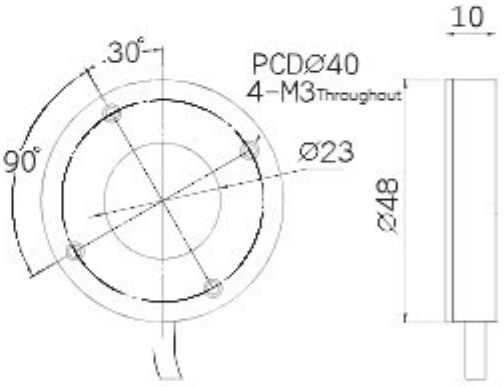
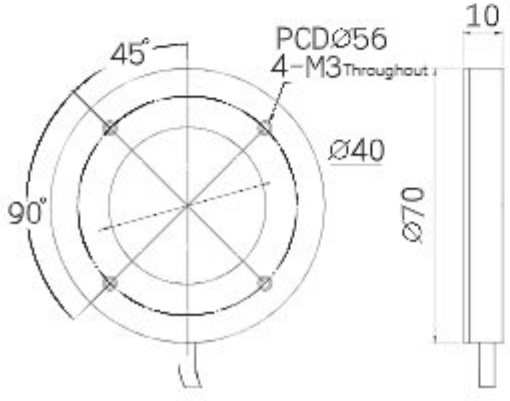
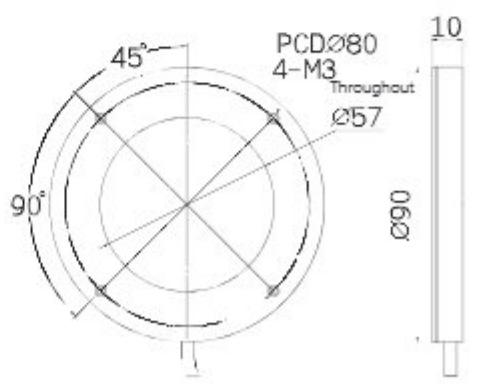


G



H



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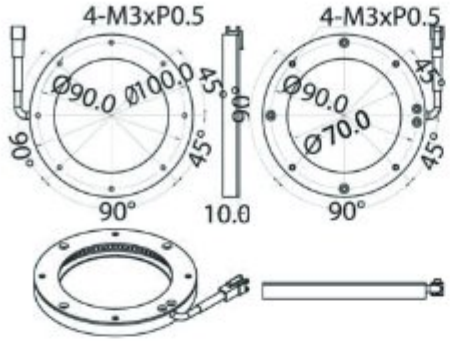
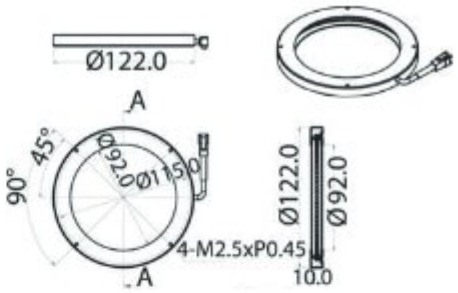
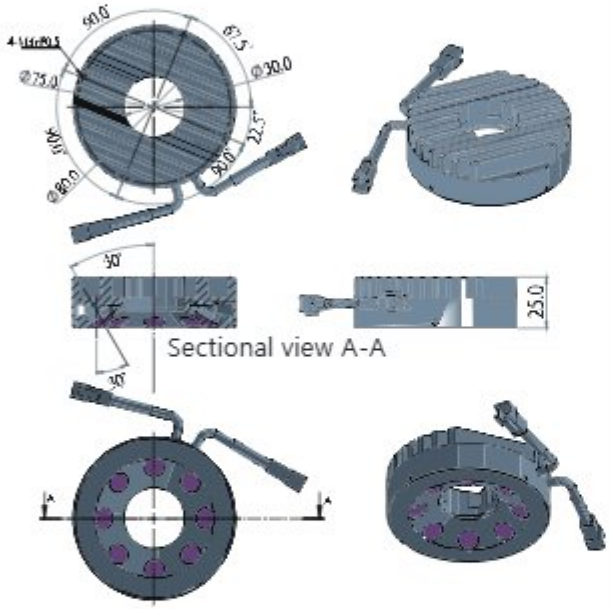


J



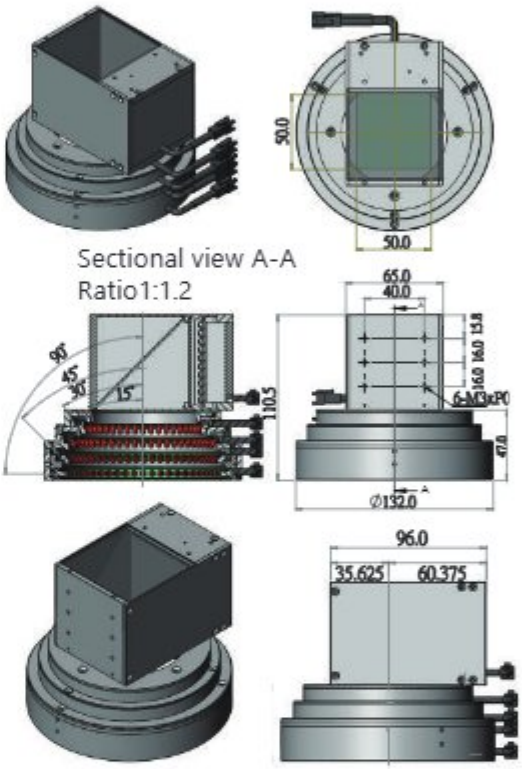
Sectional view A-A
Ratio1:1

K



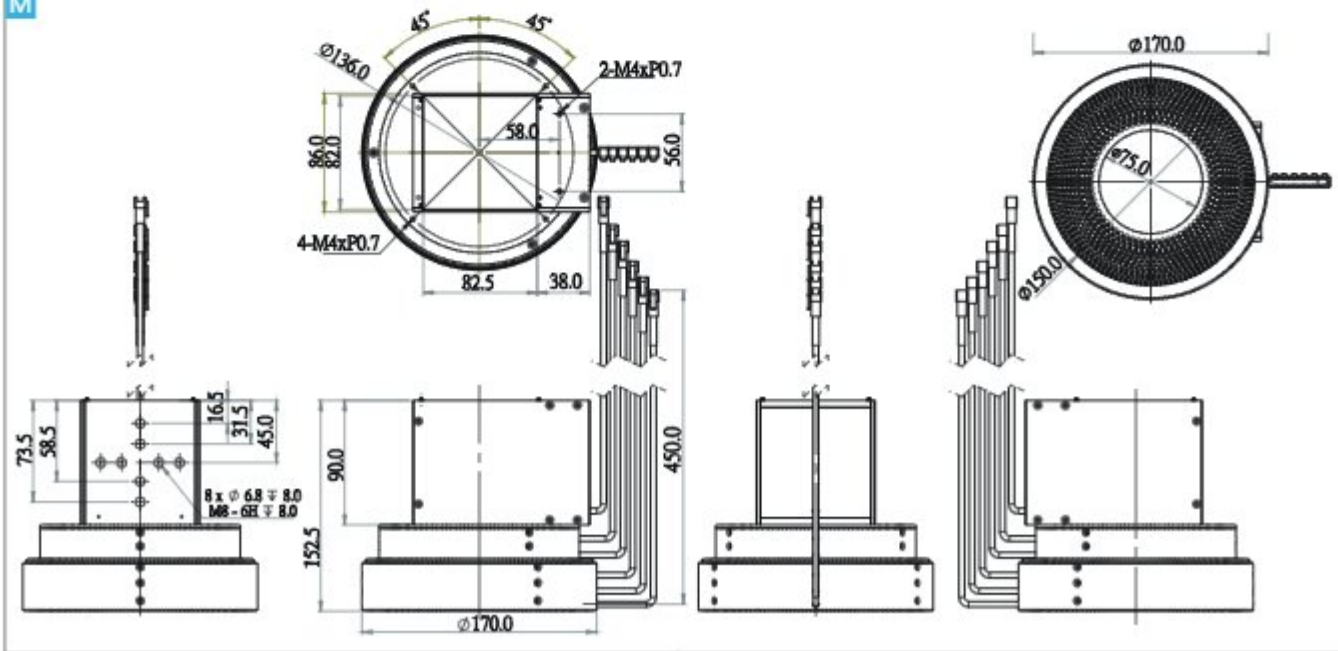
Sectional view A-A

L

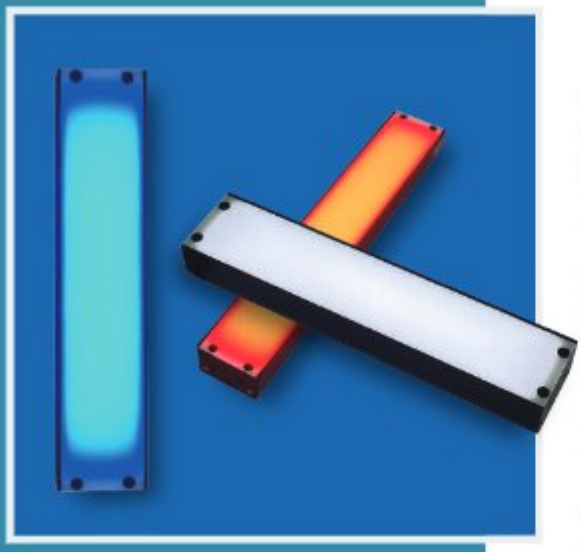


Sectional view A-A
Ratio1:1.2

M



Line Lights



Features

- Can be lit according to different installation methods, such as side lighting, oblique lighting, and direct lighting effects
- High-brightness LEDs are densely arranged to provide a narrow lighting range.
- The light source can be paired with a diffuser to produce uniform light and can be used as a long backlight.
- This series has a variety of lighting sizes to choose from and can be customized according to your needs.
- Heat sinks can be added to double the brightness.
- Aluminum extruded strip light, length 600mm, affordable price.

Fit for purpose

- Used for general lighting, label inspection, printing inspection and barcode interpretation
- Edge inspection, surface scratch inspection on glass or shiny materials.
- Spot and dust particle detection
- AOI automatic detection system light source

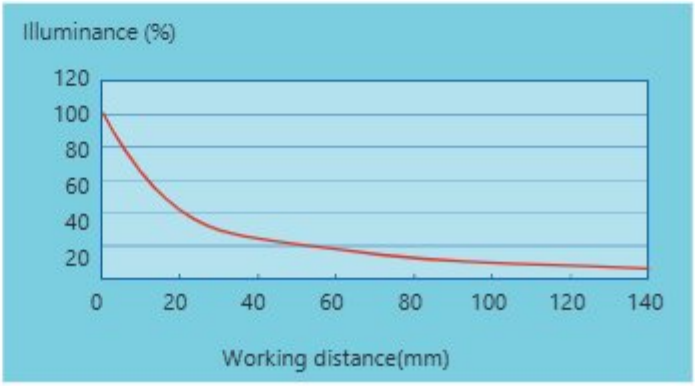
Inspect Examples

Use strip light to detect packaging surface and words can be easily distinguished

Detect terminal connectors with strip light, seam gap clearly visible

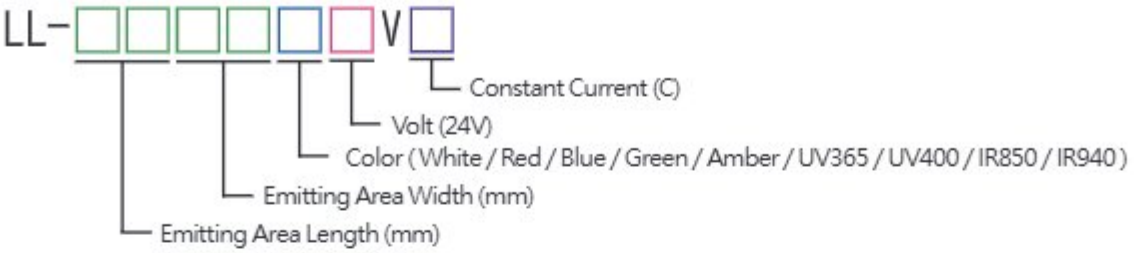
Lighting method

Luminous Intensity



Note : The experimental product is LL-20030W24V0.7AC ; the 100% illumination value is 190,000 (LUX)

Model Description

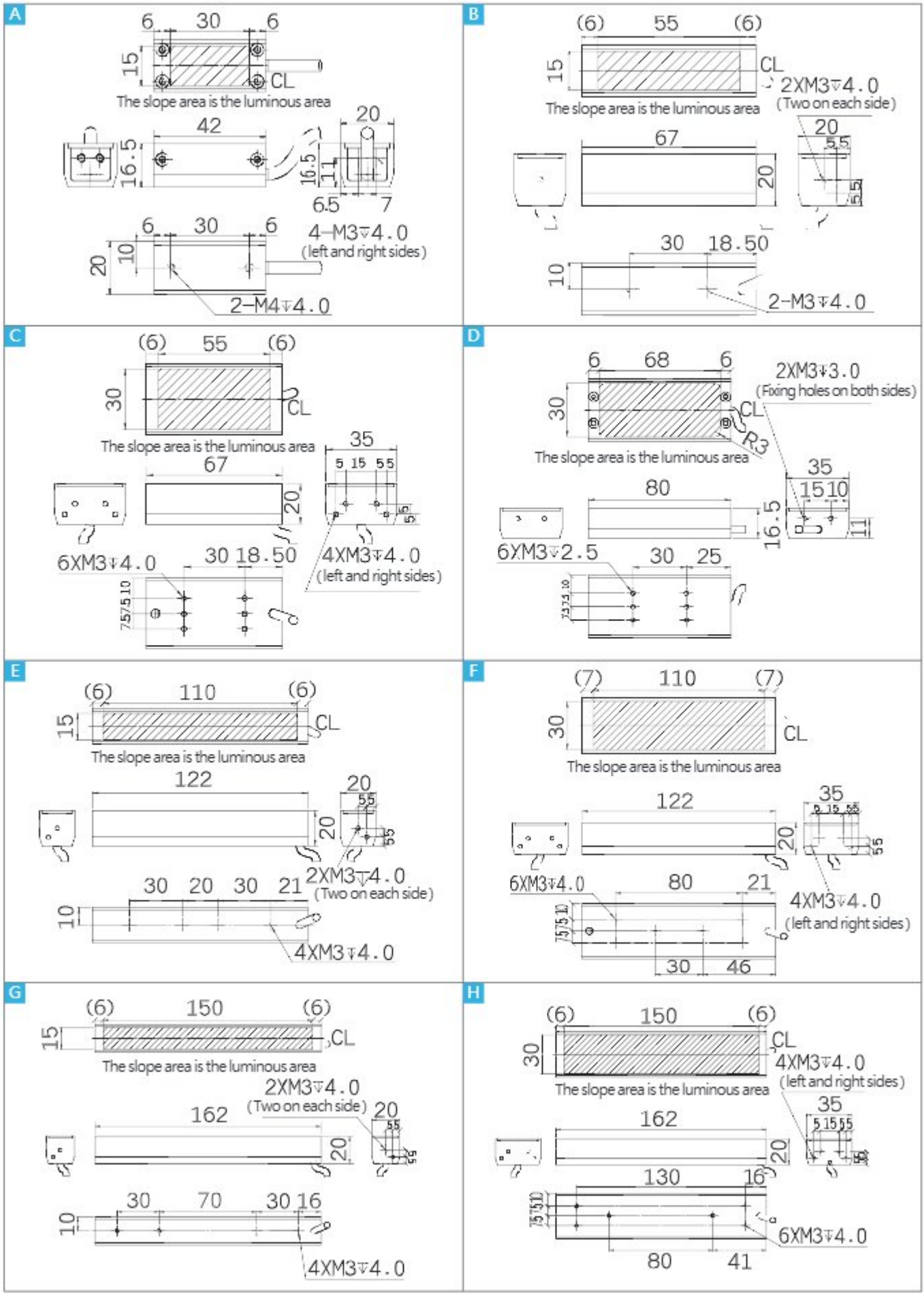


Specification

(Model)	(Color / Power Consumption)	(Emitting Area)	(Dimension)
LL-3015	24V/6W 24V/3.6W	30X15	A
LL-5015	24V/4.8W 24V/3.6W	55X15	B
LL-5030	24V/7.2W 24V/5.8W	55X30	C
LL-6530	24V/7.2W 24V/5.8W	68X30	D
LL-10015	24V/12W 24V/11.5W	110X15	E
LL-10030	24V/14.4W 24V/8.6W	110X30	F
LL-15015	24V/15W 24V/14.4W	150X15	G
LL-15030	24V/15W 24V/9W	150X30	H
LL-20015	24V/16.8W 24V/15.1W	200X15	I
LL-20030	24V/16.8W 24V/10.1W	200X30	J
LL-27015	24V/16.8W 24V/9.6W	270X15	K
LL-27030	24V/33.6W 24V/16.9W	270X30	L
LL-30015	24V/24W 24V/24W	300X15	M
LL-30030	24V/33.6W 24V/33.6W	300X30	N
LL-40030	24V/33.6W 24V/33.6W	400X30	O
LL-43515	24V/24W 24V/24W	435X15	P
LL-46030	24V/33.6W 24V/33.6W	460X30	Q
LL-50030	24V/33.6W 24V/33.6W	500X30	R
LL-60030	24V/33.6W 24V/33.6W	600X30	S
LL-65030	24V/33.6W 24V/33.6W	650X30	T
LL-70030	24V/33.6W 24V/33.6W	700X30	U
LL-80015	24V/33.6W 24V/33.6W	800X15	V
LL-100015	24V/33.6W 24V/33.6W	1000X15	W
LL-125015	24V/65W 24V/65W	1250X15	X
LL-150030	24V/168W 24V/168W	1500X30	Y
LL-200030	24V/168W 24V/168W	1970X30	Z

Note : 1. ○ White ● Blue ● Green ● Red ● Amber ● UV365nm ● UV400nm ● 850nm (Infrared ray) ● 940nm (Infrared ray)
2. Unit : mm

Dimensional drawings



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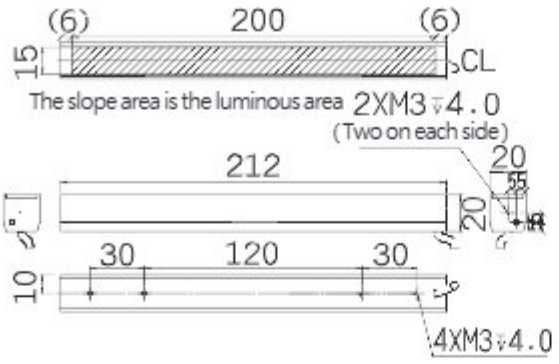
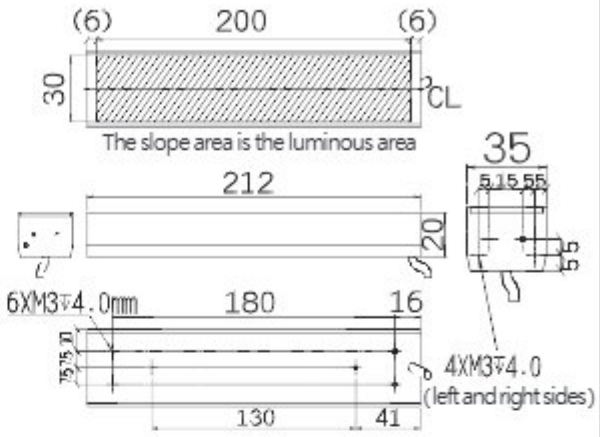
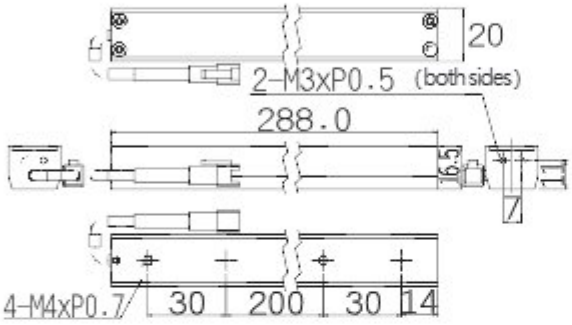

(6)
200
(6)
15
CL
The slope area is the luminous area
2XM3▽4.0
(Two on each side)
212
20
30
120
30
10
4XM3▽4.0

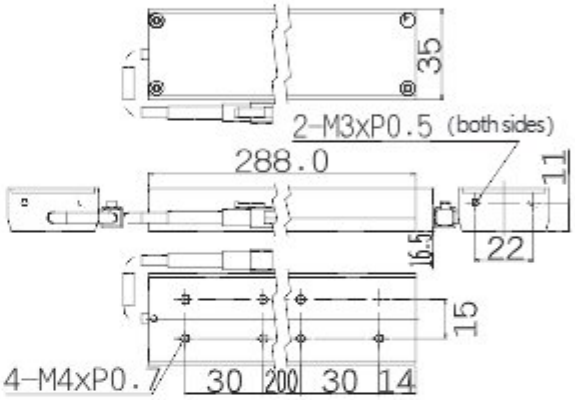
J


(6)
200
(6)
30
CL
The slope area is the luminous area
35
212
20
6XM3▽4.0mm
180
16
4XM3▽4.0
(left and right sides)
130
41

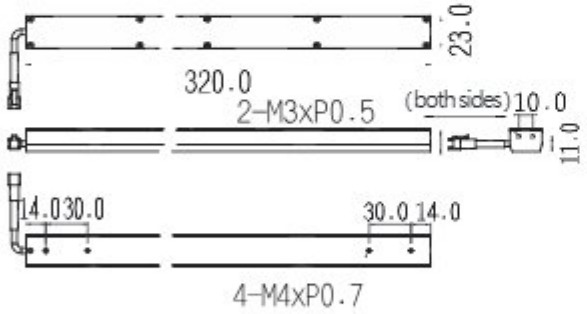
K


20
2-M3xP0.5 (both sides)
288.0
16.5
11
4-M4xP0.7
30
200
30
14

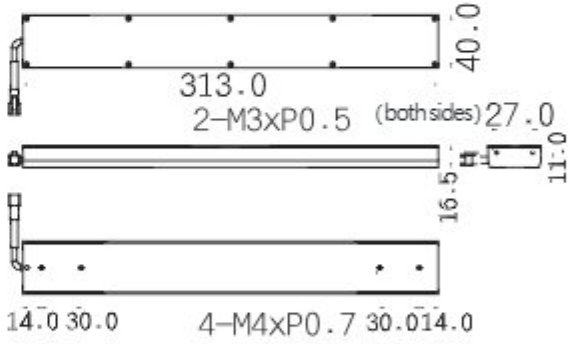
L


35
2-M3xP0.5 (both sides)
288.0
11
16.5
22
15
4-M4xP0.
30
200
30
14

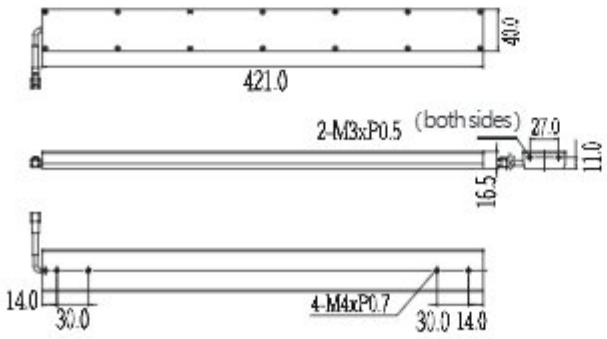
M


23.0
320.0
2-M3xP0.5
(both sides)
10.0
11.0
14.0
30.0
30.0
14.0
4-M4xP0.7

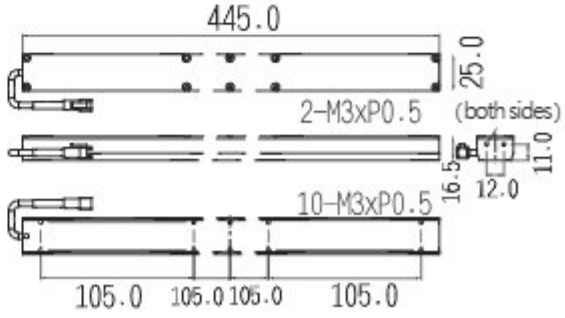
N


40.0
313.0
2-M3xP0.5
(both sides)
27.0
11.0
16.5
14.0
30.0
4-M4xP0.7
30.0
14.0

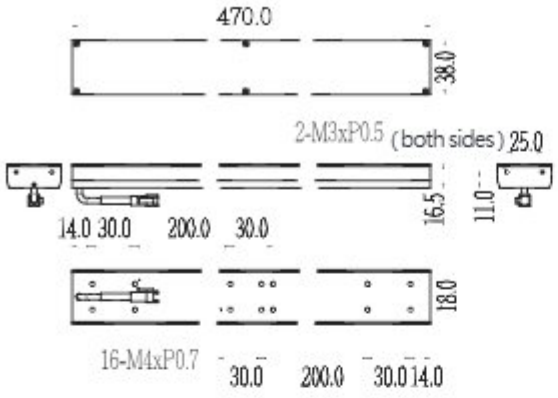
O


40.0
421.0
2-M3xP0.5
(both sides)
27.0
11.0
16.5
14.0
30.0
4-M4xP0.7
30.0
14.0

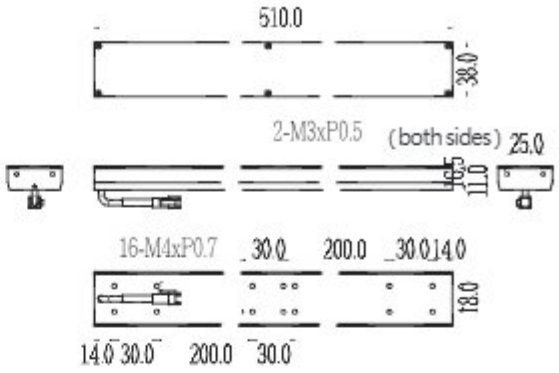
P


445.0
25.0
2-M3xP0.5
(both sides)
11.0
16.5
12.0
10-M3xP0.5
105.0
105.0
105.0
105.0

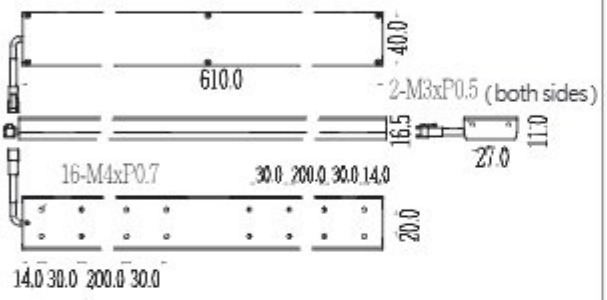
Q


470.0
38.0
2-M3xP0.5 (both sides) 25.0
16.5
11.0
14.0 30.0 200.0 30.0
18.0
16-M4xP0.7
30.0 200.0 30.0 14.0

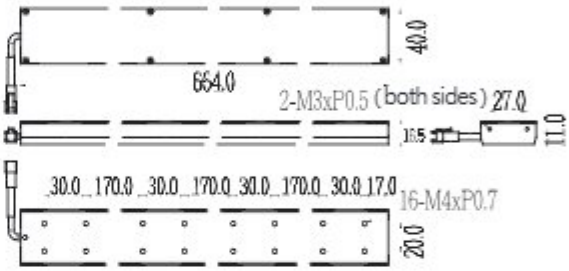
R


510.0
38.0
2-M3xP0.5 (both sides) 25.0
16.5
11.0
16-M4xP0.7
30.0 200.0 30.0 14.0
18.0
14.0 30.0 200.0 30.0

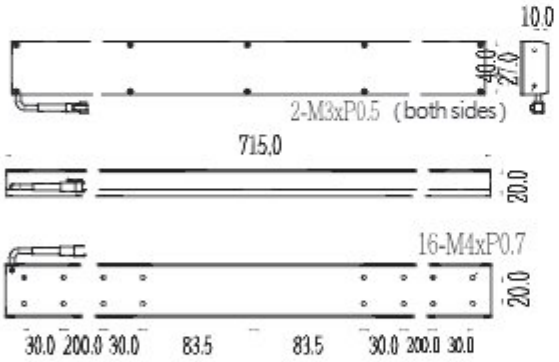
S


40.0
610.0
2-M3xP0.5 (both sides)
16.5
11.0
27.0
16-M4xP0.7
30.0 200.0 30.0 14.0
20.0
14.0 30.0 200.0 30.0

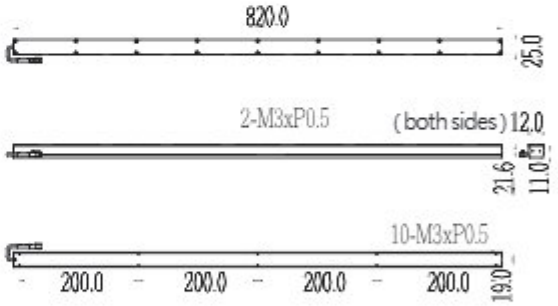
T


40.0
664.0
2-M3xP0.5 (both sides) 27.0
16.5
11.0
30.0 170.0 30.0 170.0 30.0 170.0 30.0 17.0
16-M4xP0.7
20.0

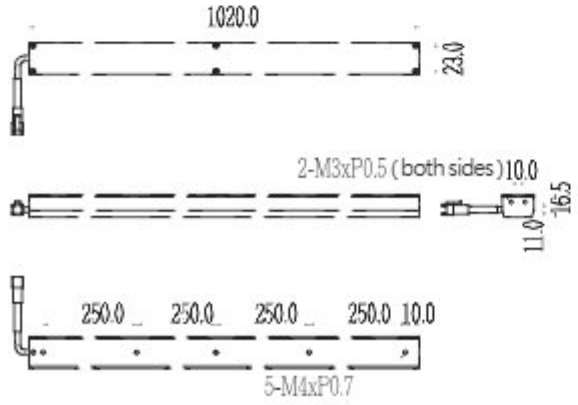
U


10.0
40.0
27.0
2-M3xP0.5 (both sides)
715.0
20.0
16-M4xP0.7
20.0
30.0 200.0 30.0 83.5 83.5 30.0 200.0 30.0

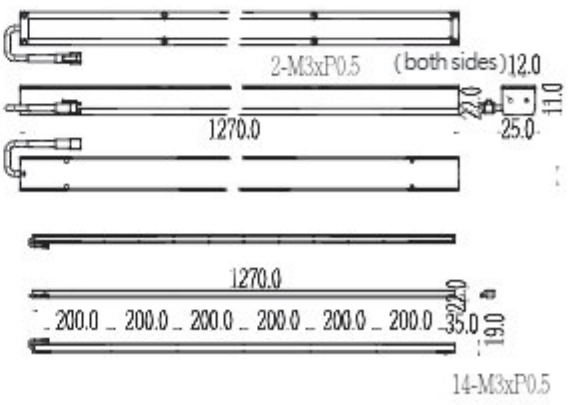
V


820.0
25.0
2-M3xP0.5 (both sides) 12.0
21.6
11.0
10-M3xP0.5
200.0 200.0 200.0 200.0
19.0

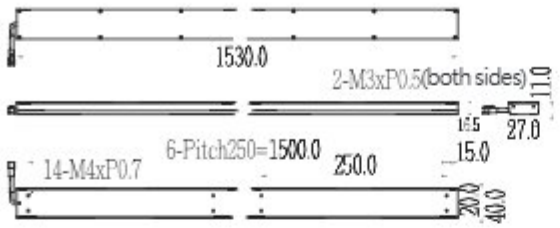
W


1020.0
23.0
2-M3xP0.5 (both sides) 10.0
16.5
11.0
250.0 250.0 250.0 250.0 10.0
5-M4xP0.7

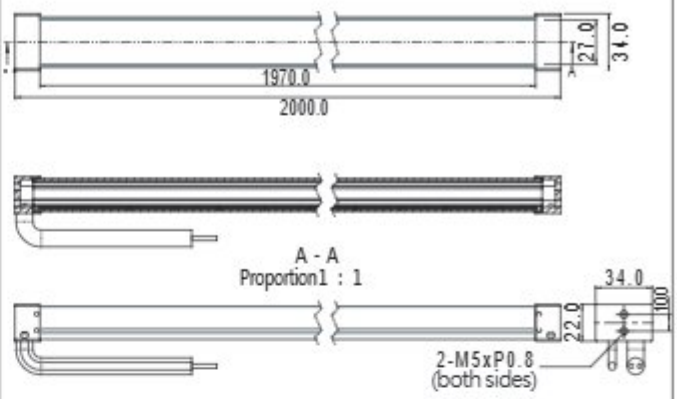
X


2-M3xP0.5 (both sides) 12.0
27.0
11.0
1270.0
25.0
1270.0
200.0 200.0 200.0 200.0 200.0 200.0 35.0
22.0
19.0
14-M3xP0.5

Y


1530.0
2-M3xP0.5(both sides)
11.0
16.5
27.0
6-Pitch250=1500.0
250.0
15.0
14-M4xP0.7
20.0
40.0

Z


27.0
34.0
1970.0
2000.0
A - A
Proportion1 : 1
34.0
22.0
2-M5xP0.8
(both sides)

Dome Lights

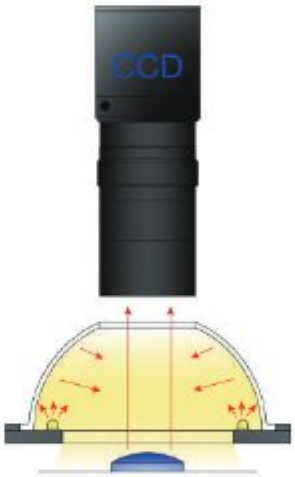
Features

- The light is illuminated from the bottom of the hemispherical light source and is evenly reflected on the object to be measured at 180 degrees.
- Effectively solve the detection problems of reflection and shadow

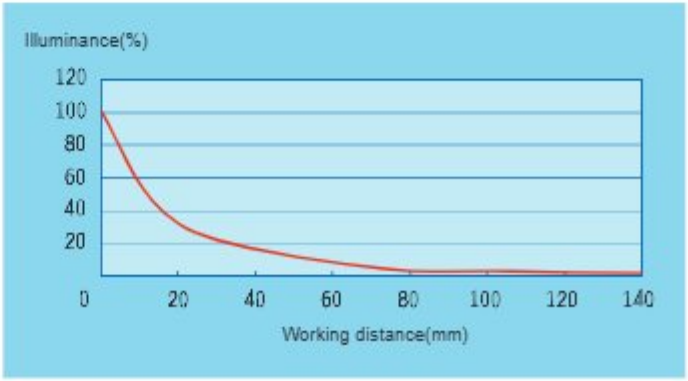
Applications

- Suitable for detecting objects with bright surfaces or high reflection coefficients and highly reflective surfaces, such as: PCB bare boards, film alignment, mark recognition and defect detection
- Various spherical objects or mark identification and printing problems

Lighting Method



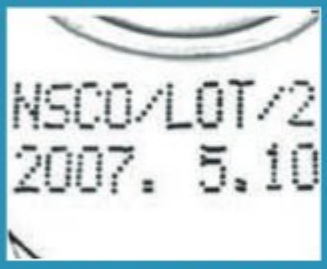
Luminous Intensity



Note：The experimental product is DL-5070W24V0.3AC ; the 100% illumination value is 170,000 (LUX)

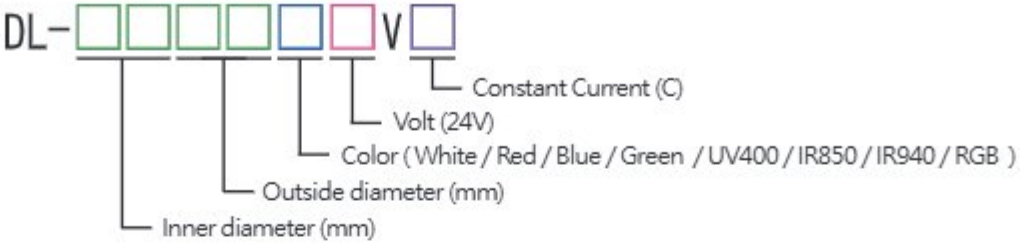
Inspect Examples

Use hemispheric light to illuminate the mobile phone keyboard,The words on the surface are evenly imaged and the printed words will be Unclear effective identification



Using hemispherical light to detect strong background Bottle caps made of reflective material can be seen The writing is very clear

Model Description



Specification

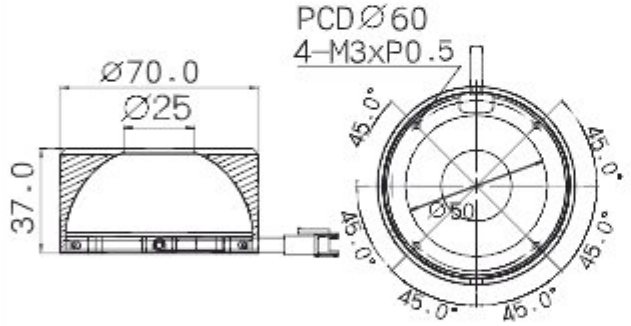
(Model)	(Color/Power Consumption)	(ID/OD)	(Dimension)
DL-5070	○ ● ● ● ● ● ● 24V/7W	50×70	A
DL-6090	○ ● ● ● ● ● ● 24V/12W	60×90	B
DL-78140	○ ● ● ● ● ● ● ◐ 24V/24W	78×140	C

Note：1. ○ White ● Blue ● Green ● Red ● UV400nm ● 850nm (Infrared ray) ● 940nm (Infrared ray) ◐ RGB (Switchable red, green and blue light)

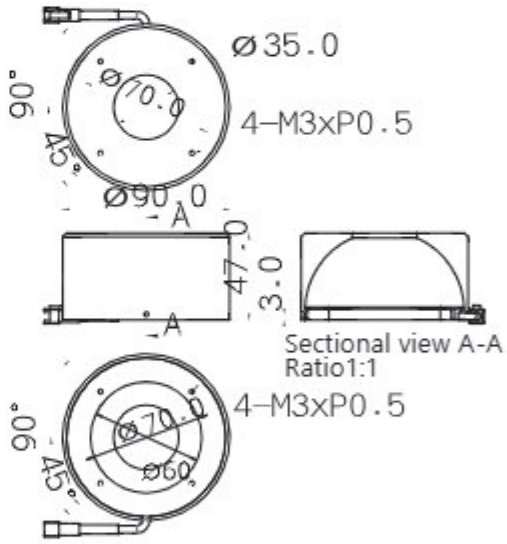
2. Unit：mm

Dimensional drawings

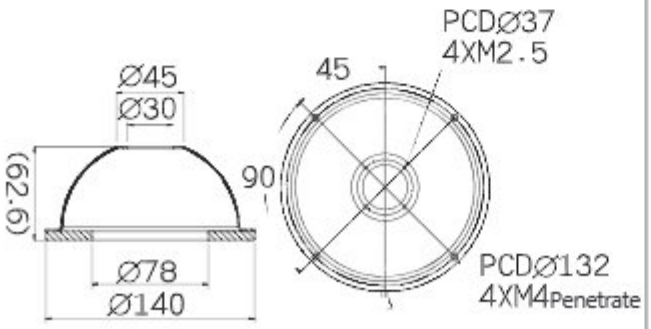
A



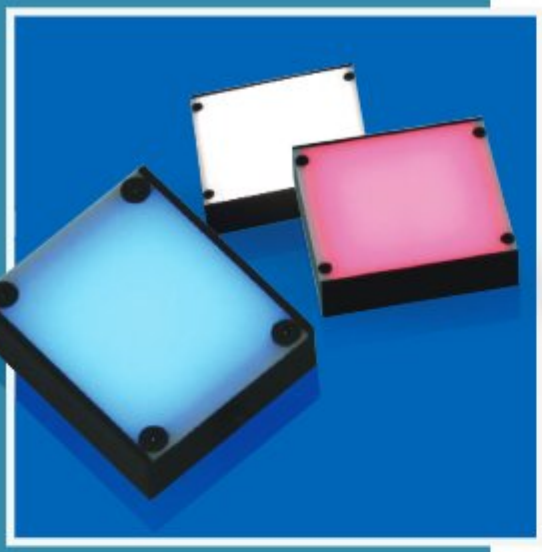
B



C



Back Lights



Features

- There are standard and high-brightness light sources, and the brightness can be selected according to needs.
- LED full back light source achieves the highest uniformity of light source
- The thickness can be divided into general type 25mm and t hin type 13mm (high brightness)
- There are a variety of sizes and colors to choose from, and they can also be customized according to your needs.
- The hole-in-the-wall backlight can be used as a glazing (replacing the ring light), providing high brightness and highly uniform illumination.

Applications

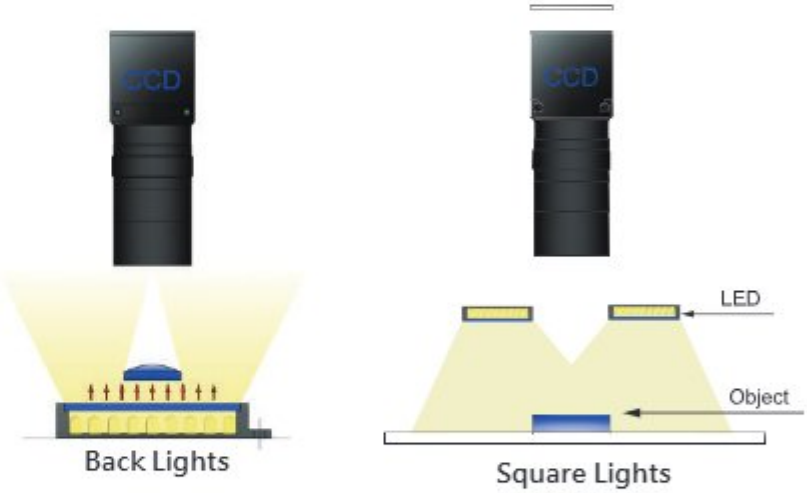
- Alignment inspection of transparent objects and glass substrates
- Basic alignment or shape identification of general objects
- Inspection of dimensions, drill bits and pinholes
- Edge inspection, surface flaw inspection on glass or shiny materials

Inspect Examples

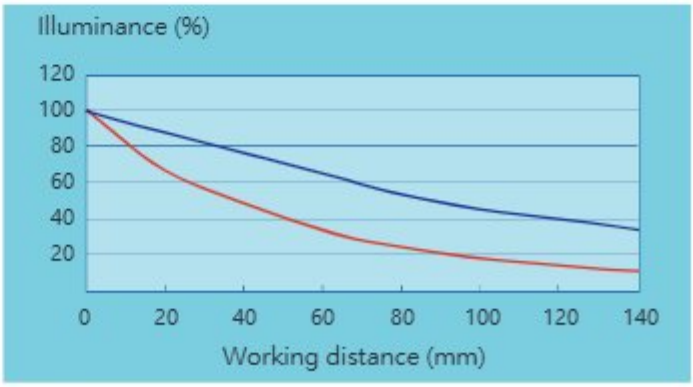
Use backlight to detect part size, each part bit aperture clearly visible

Use backlight to detect the edge of the object to be measured, black and white The contrast is obvious

Lighting Method

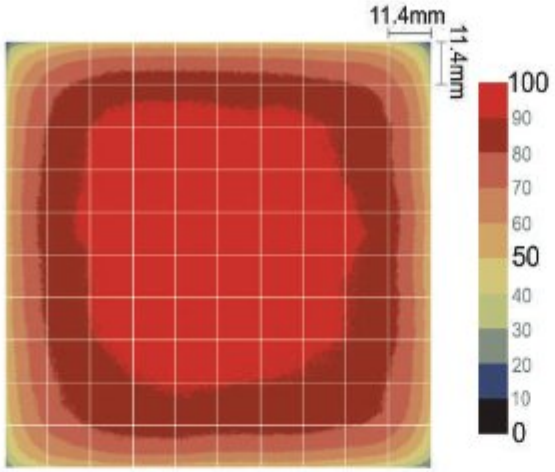


Luminous Intensity

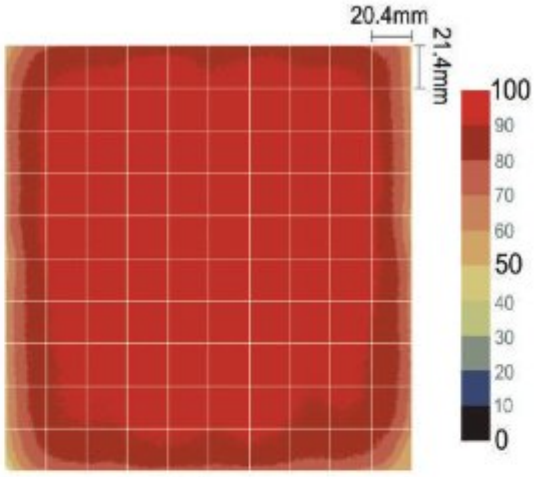


Note：The experimental product for the red line is BL-100100W24V1AC (13mm thick), the 100% illumination value is 275,000 (LUX), the experimental product for the blue line is BL-200200W24V0.72AC (25mm thick), the 100% illumination value is 80,000 (LUX).

Uniformity



Experimental product : BL-100100 (13mm thick)



Experimental product : BL-200200 (25mm thick)

Model Description

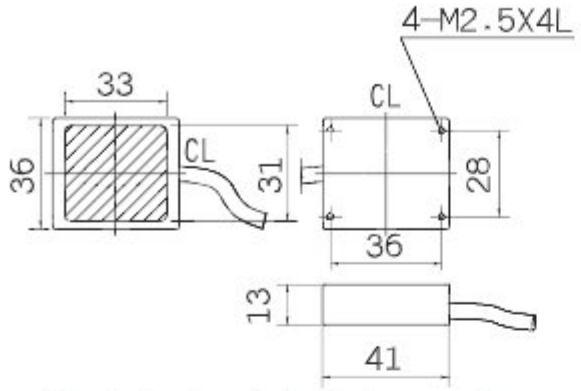
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
BL-3030	○ ● ● ● ● ● ●	33×31	○ ● ● ● ● 24V/4.8W ● ● 24V/3.6W	A
BL-6060	○ ● ● ● ● ● ●	60×60	○ ● ● ● ● 24V/9.6W ● ● 24V/11.5W	B
BL-8080	○ ● ● ● ● ● ●	86×84	○ ● ● ● ● 24V/19.2W ● ● 24V/26.9W	C
BL-100100	○ ● ● ● ● ● ●	114×114	○ ● ● ● ● 24V/24W ● ● 24V/34.6W	D
BL-150150	○ ● ● ● ● ● ●	174×159	○ ● ● ● ● ● ● 24V/10.1W	E
BL-200200	○ ● ● ● ● ● ●	214×204	○ ● ● ● ● ● ● 24V/17.3W	F
BL-20050	○ ● ● ● ● ● ●	200×50	○ ● ● ● ● 24V/21.6W ● ● 24V/12W	G
BL-30050	○ ● ● ● ● ● ●	300×50	○ ● ● ● ● 24V/33.6W ● ● 24V/18W	H
BL-320260	○ ● ● ● ● ● ●	320×260	○ ● ● ● ● 24V/47.5W	I
BL-40050	○ ● ● ● ●	400×43	○ ● ● ● ● 24V/48W	J
BL-400300	○ ● ● ● ●	400×300	○ ● ● ● ● 24V/120W	K
BL-400400	○ ● ● ● ●	428×408	○ ● ● ● ● 24V/69W	L
BL-440152	○ ● ● ● ●	440×152	○ ● ● ● ● 24V/120W	M
BL-490190	○ ● ● ● ●	490×190	○ ● ● ● ● 24V/120W	N

Note : 1. ○ White ● Blue ● Green ● Red ● UV400nm ● 850nm (Infrared ray) ● 940nm (Infrared ray) 2. Unit : mm

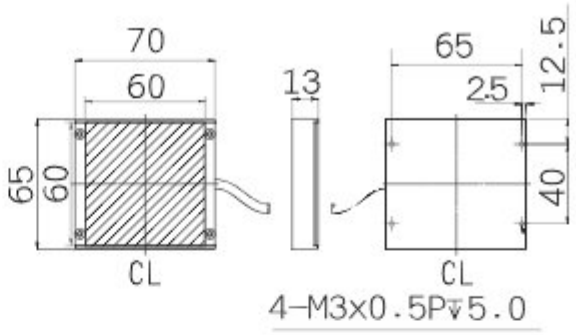
Dimensional drawings

A



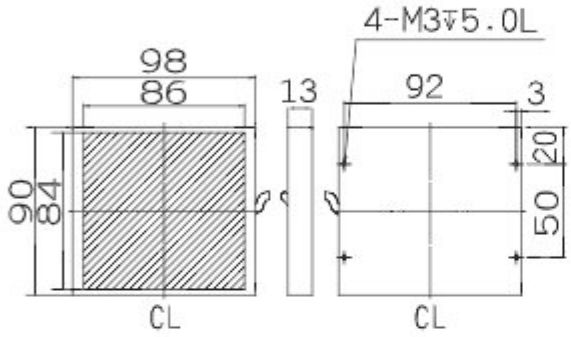
The slashed area is the luminous surface

B



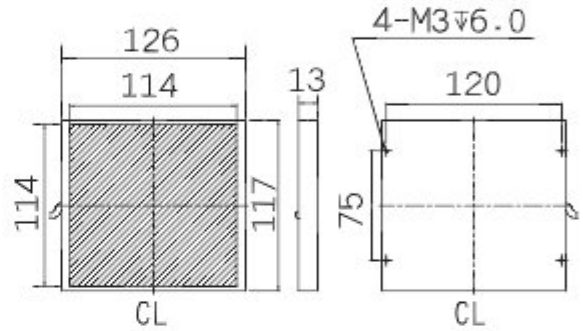
The slashed area is the luminous surface

C



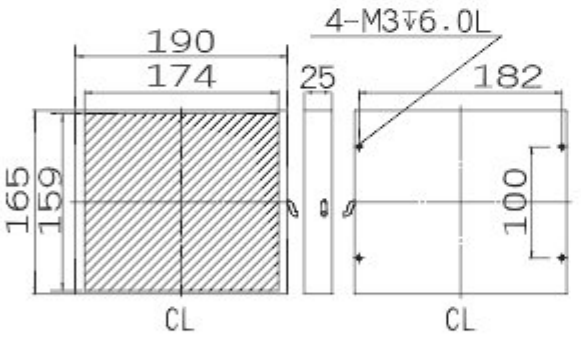
The slashed area is the luminous surface

D



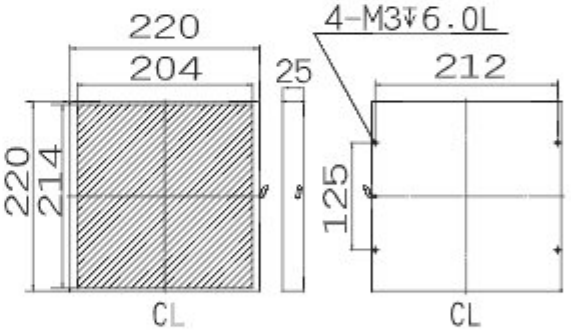
The slashed area is the luminous surface

E



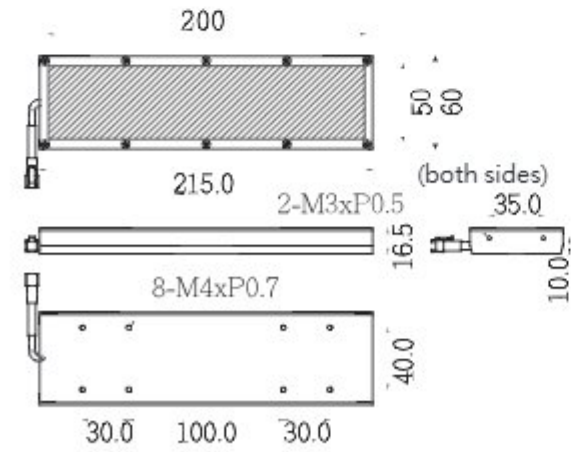
The slashed area is the luminous surface

F



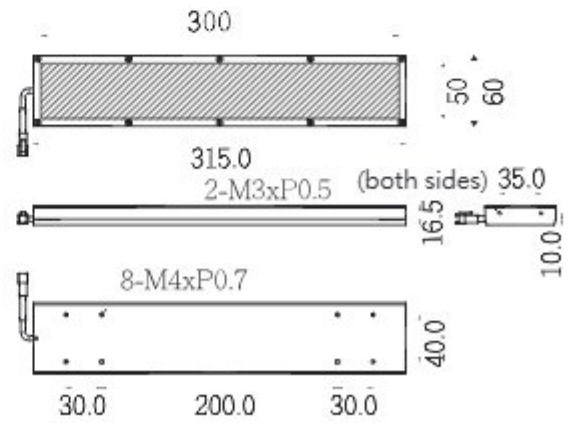
The slashed area is the luminous surface

G



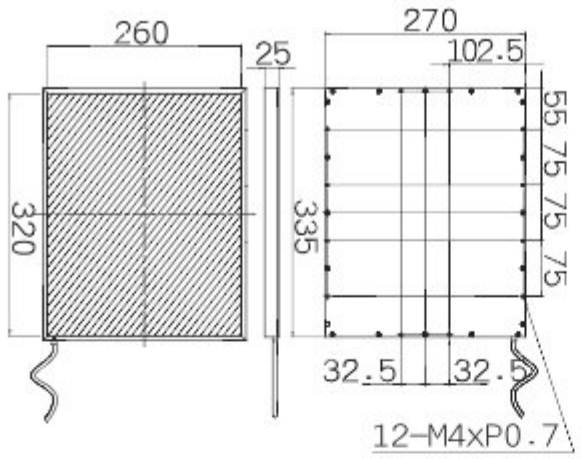
The slashed area is the luminous surface

H



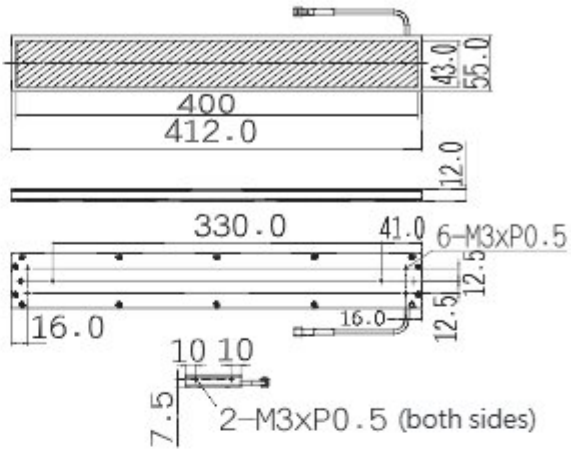
The slashed area is the luminous surface

I



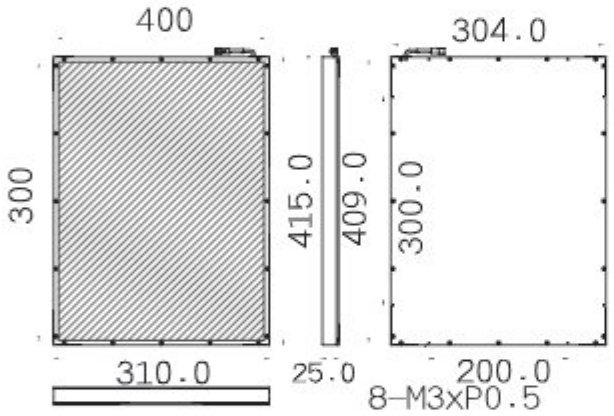
The slashed area is the luminous surface

J



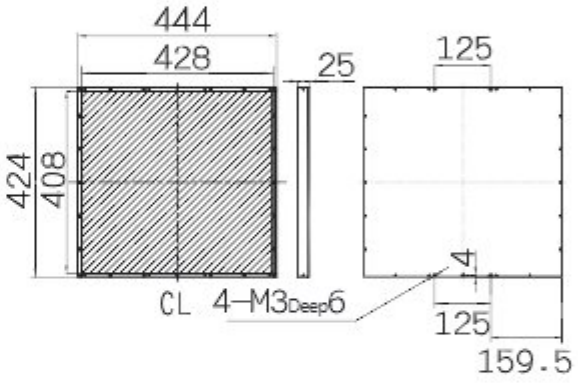
The slashed area is the luminous surface

K



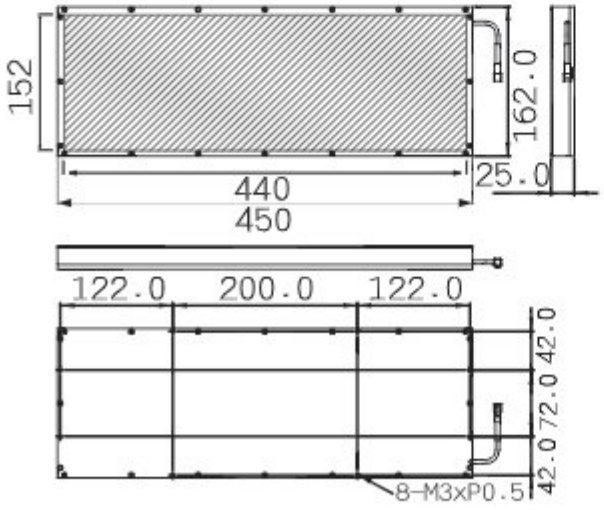
The slashed area is the luminous surface

L



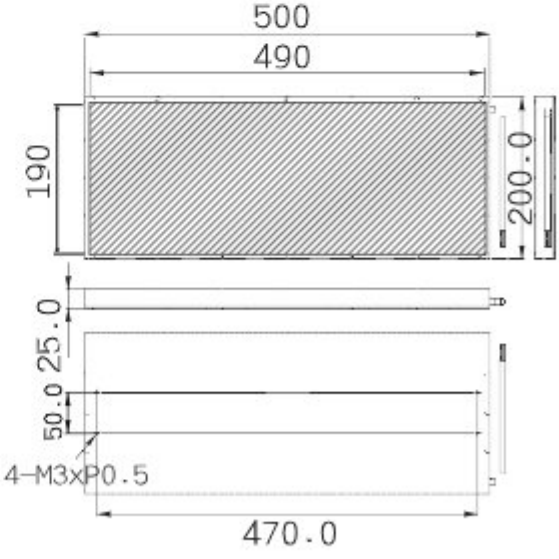
The slashed area is the luminous surface

M



The slashed area is the luminous surface

N



The slashed area is the luminous surface

Square Back Lights

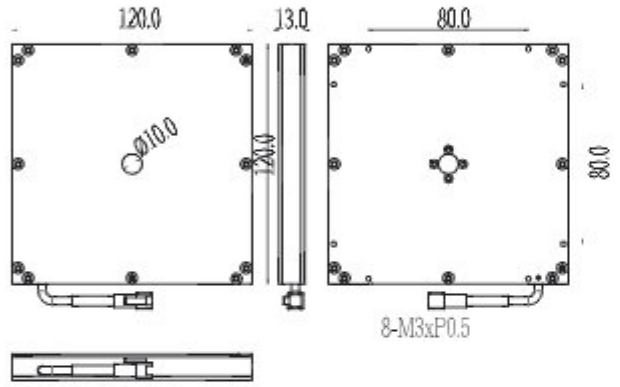
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
BL-110110-10C	○ ● ● ● ●	110×110 (10mm Circle hole)	○ ● ● ● ● 24V/17.28W	O
BL-140140-60S	○ ● ● ● ●	140×140 (60x60mm Square hole)	○ ● ● ● ● 24V/33.6W	P
BL-200200-35S	○ ● ● ● ●	200×200 (35x35mm Square hole)	○ ● ● ● ● 24V/33.6W	Q
BL-210210-85S	○ ● ● ● ●	210×210 (85x85mm Square hole)	○ ● ● ● ● 24V/33.6W (Heat sink not included) or 52W (Heat sink included)	R

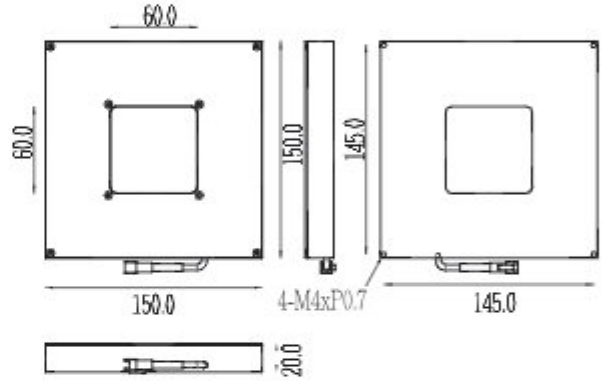
Note：1. ○ White ● Blue ● Green ● Red ● UV400nm 2. Unit：mm 3. S-Square hole，C-Circle hole

Dimensional drawings

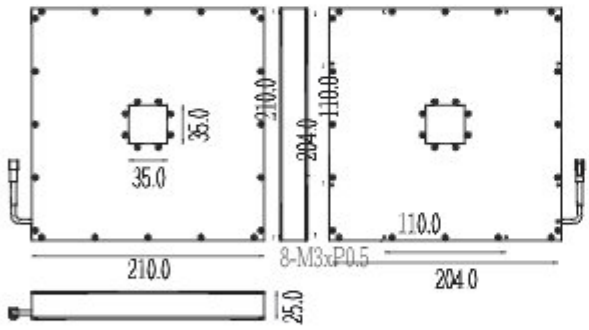
O



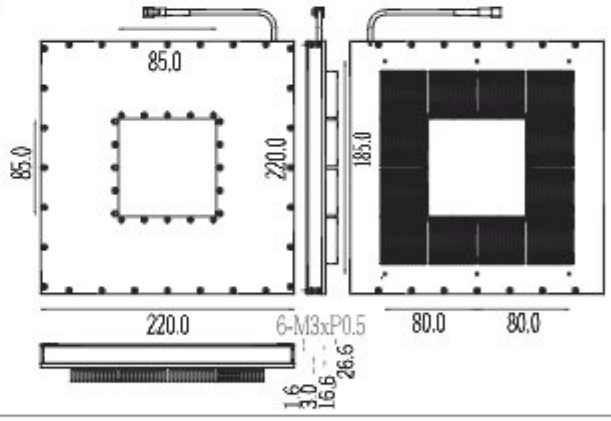
P



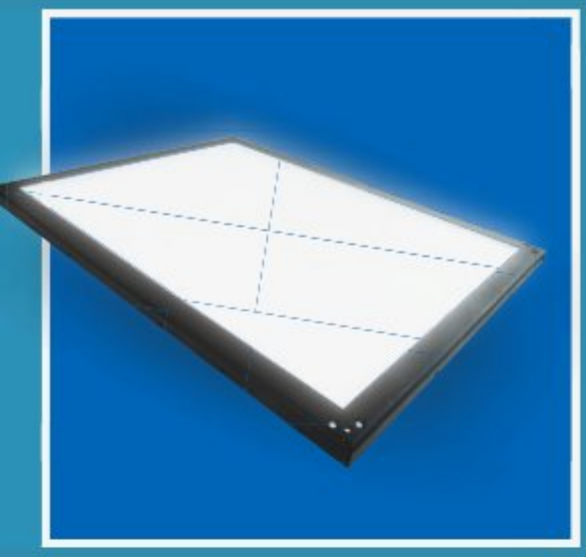
Q



R



Light Guide Back Lights



Features

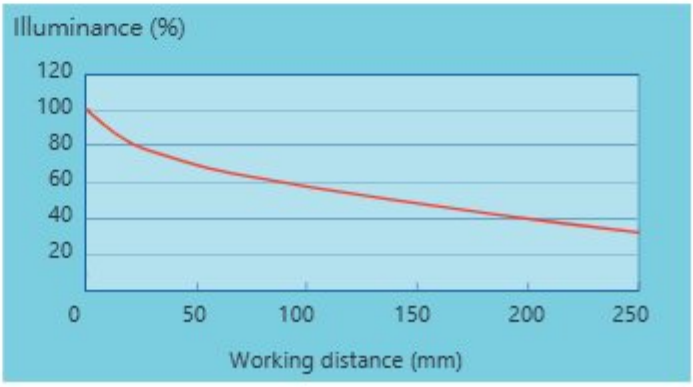
- Thin surface illumination can reach 10000 LUX
- The light-emitting area is large and different sizes can be customized according to needs.
- Affordable price

Applications

- Alignment inspection of transparent objects and glass substrates
- Basic alignment or shape identification of general objects
- Inspection of dimensions, drill bits and pinholes
- Edge inspection, surface scratch inspection on glass or shiny materials

Lighting Method

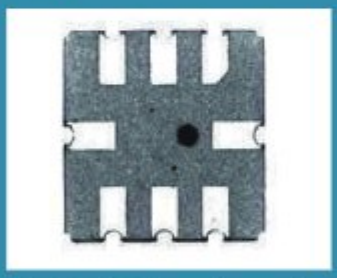
Luminous Intensity



Note：The experimental products for the LGBL-400300W24V; 100% illumination value of 11,520 (LUX)

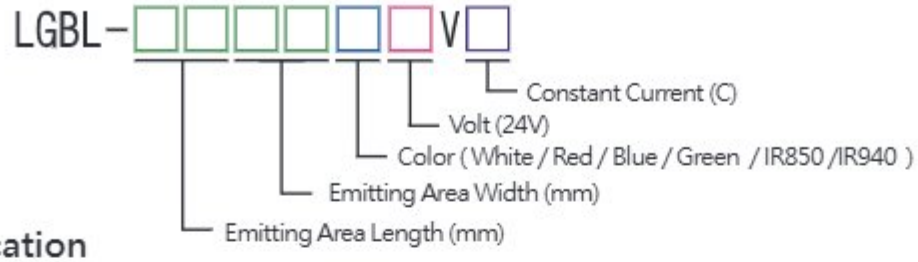
Inspect Examples

Use backlight to detect part size, each part bit aperture clearly visible



Use backlight to detect the edge of the object to be measured, black and white
The contrast is obvious

Model Description

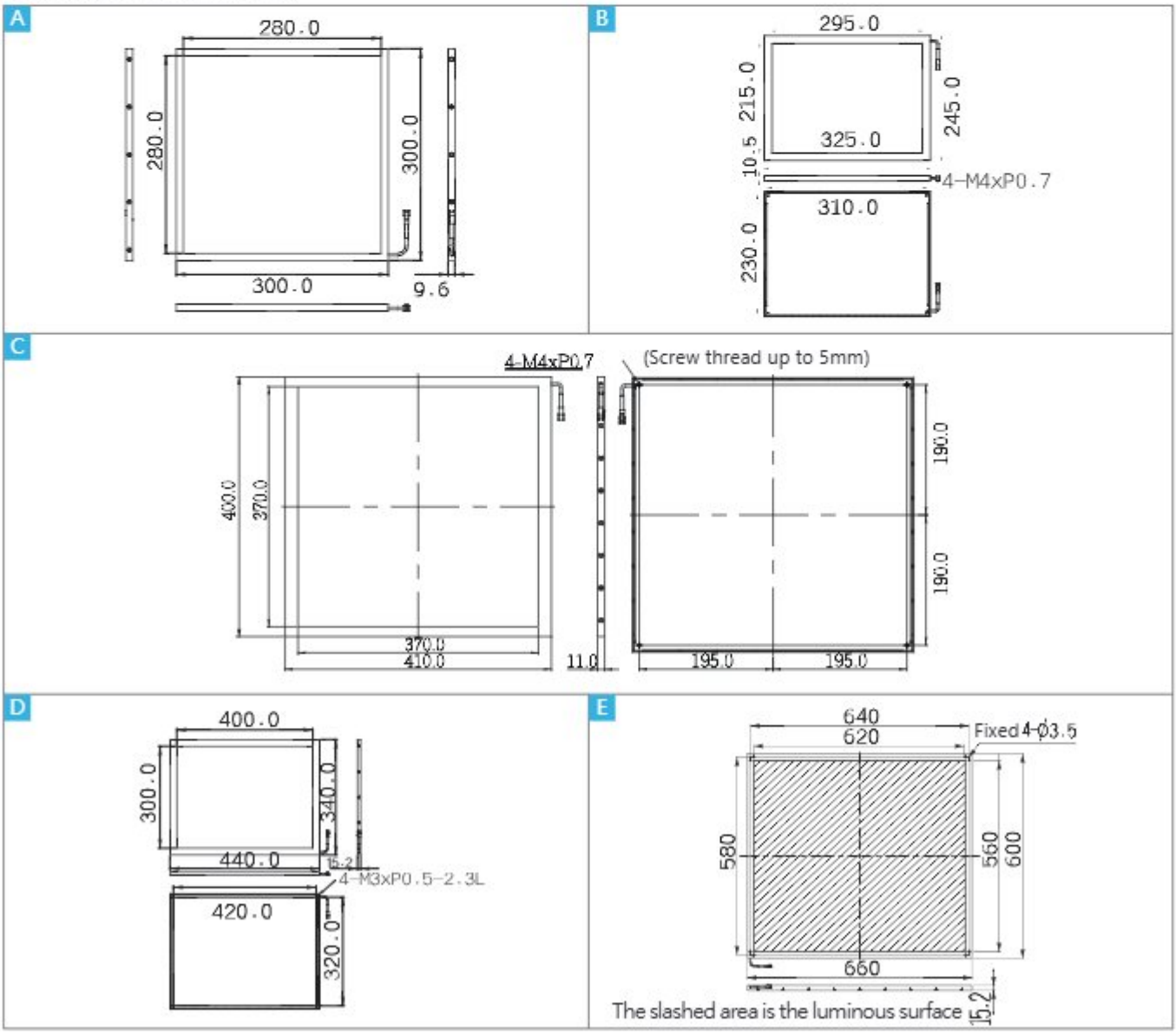


Specification

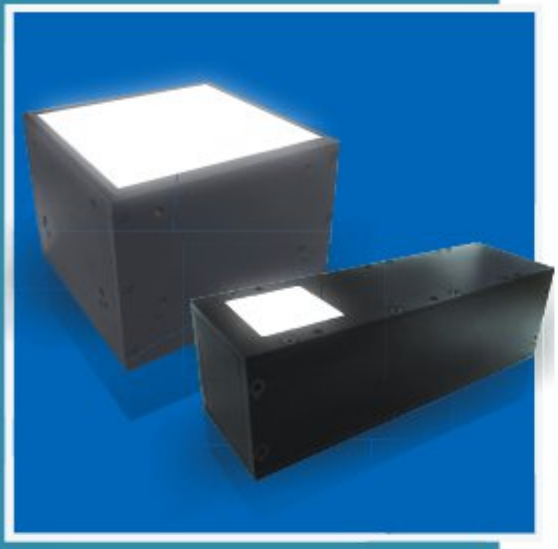
(Model)	(Color/Power Consumption)	(Emitting Area)	(Dimension)
LGBL-280280	○ ● ● ● 24V/24W ● ● 24V/14.4W	280×280	A
LGBL-295215	○ ● ● ● 24V/24W ● ● 24V/14.4W	295×215	B
LGBL-370370	○ ● ● ● 24V/28.8W ● ● 24V/24W	370×370	C
LGBL-400300	○ ● ● ● 24V/33.6W ● ● 24V/24W	400×300	D
LGBL-620560	○ ● ● ● 24V/33.6W ● ● 24V/24W	620×560	E

Note：1. ○ White ● Blue ● Green ● Red ● 850nm (Infrared ray) ● 940nm (Infrared ray)　2. Unit：mm

Dimensional drawings



Collimated Back Lights



Features

- Adopting precise optical path design, it can emit close to ideal parallel light.
  Compared with ordinary backlight sources, it can improve the accuracy of dimensional measurement.
- Improves general light source diffusion phenomenon; can clearly present the outer edge contour of the object to be measured

Applications

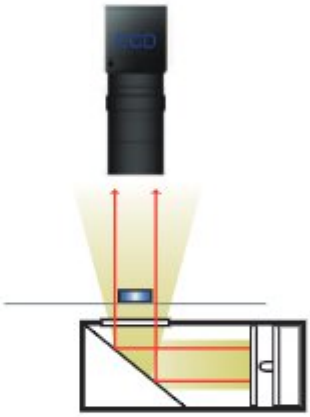
- High precision, mechanical parts size, or detection of subtle defects
- Electronic component contour inspection
- Screw and nut size inspection, glass bottle defect and scratch inspection
- When used under direct sunlight, it can detect scratches, dents, dust, etc.

Inspect Examples

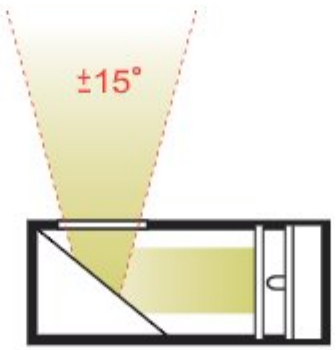
Parallel back-type light source detection effect:
Clear black and white, accurate size measurement

Detect the diameter of glass bottle mouth and image clear

Lighting Method



Luminous Intensity



The advantage of the CBL-3030 is its high uniformity

CBL-9595 has the advantage of high parallelism; the best working distance is 100mm

Model Description

CBL-□□□□□□V□

- Constant Current (C)
- Volt (6V/24V)
- Color (White / Red / Blue / Green)
- Emitting Area Width (mm)
- Emitting Area Length (mm)

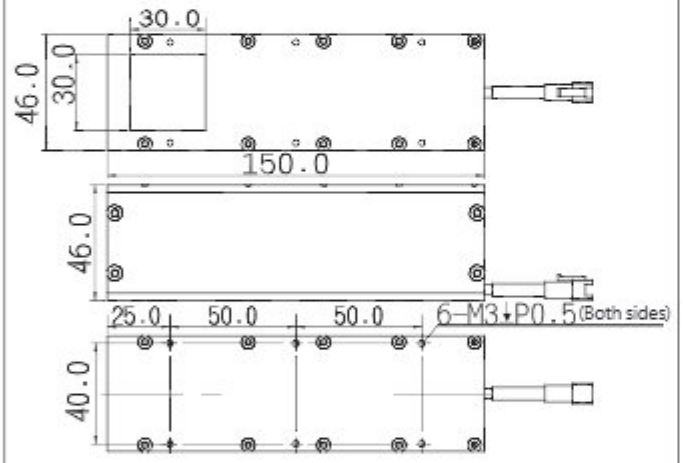
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
CBL-3030	○ ● ● ●	30×30	○ ● ● ● 24V/9.6W	A
CBL-60	○ ● ● ●	Φ60	○ 6V/8.4W ● ● ● 6V/6W	B
CBL-9595	○ ● ● ●	95×95	○ 6V/8.4W ● ● ● 6V/6W	C
CBL-180180	○ ● ● ●	180×180	○ 6V/8.4W ● ● ● 6V/6W	D

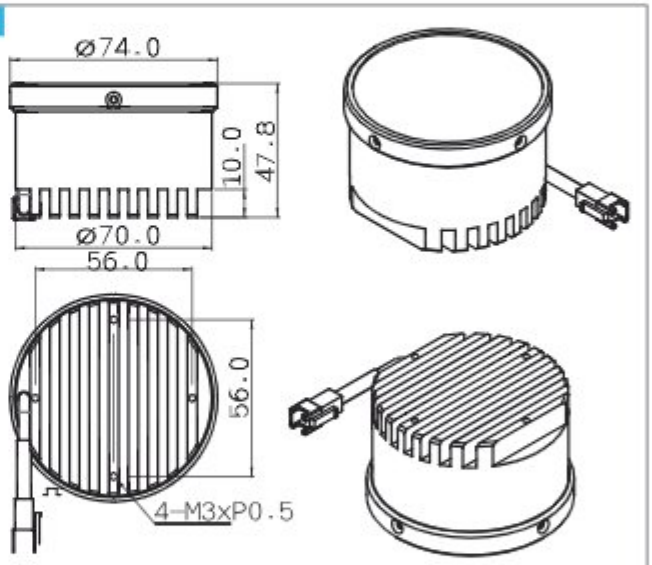
Note：1. ○ White ● Blue ● Green ● Red　　2. Unit：mm

Dimensional drawings

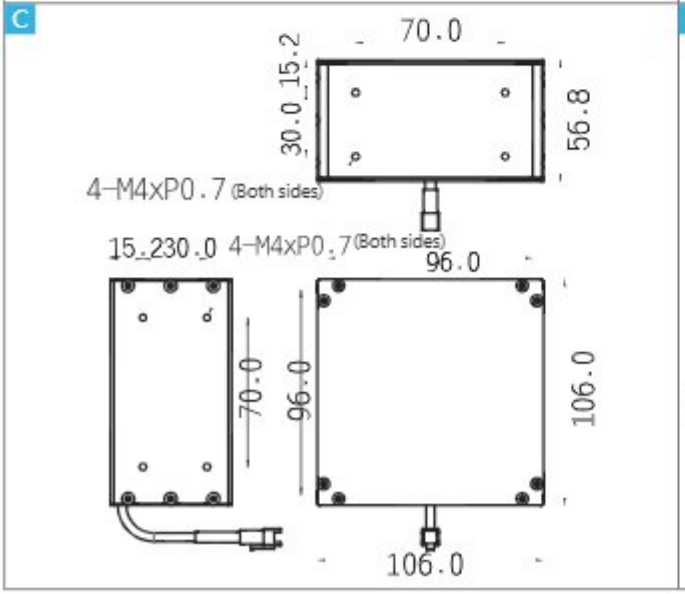
A



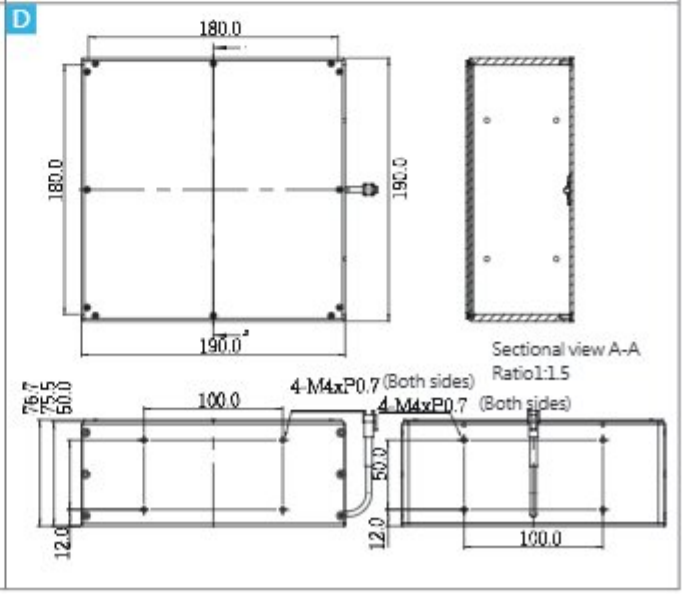
B



C



D



Model Description

CBL2-□□□6V□

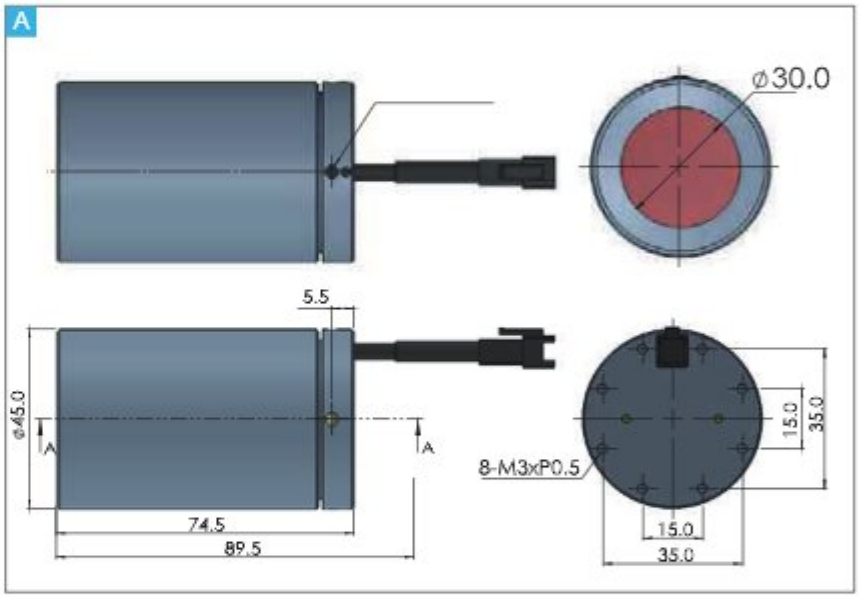
- □□□ Luminous area diameter (mm)
- □ Color (White / Red / Blue / Green)
- □ Constant Current (C)

Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
CBL2-30	○ ● ● ●	Φ30	○ ● ● ● 6V/9W,6V/18 W	A

Note：1. ○ White ● Blue ● Green ● Red　2. Unit：mm

Dimensional drawings



Spot Lights

Features

- The shell has excellent heat dissipation, does not get hot, is small in size, light in weight and has low power consumption.
- Can replace traditional halogen lamp fiber light source
- Can be used with various telecentric lenses as a coaxial light source
- In response to market demand, a single LED was developed that can freely cut red light, green light, blue light,Four-color point light source of white light

Applications

- Coaxial light source used in telecentric lenses
- Used as an alternative light source to fiber optic light sources
- Used in coaxial illumination of microscopes

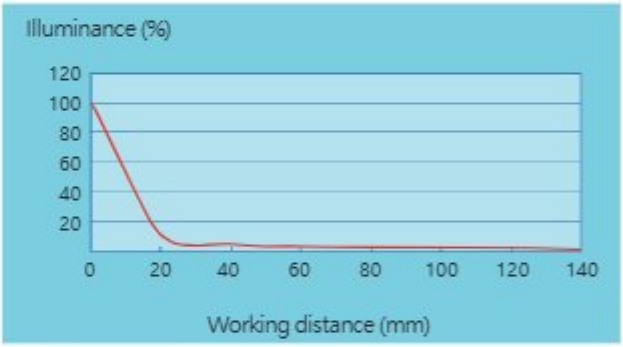
Inspect Examples

Detect the threads and protrusions of the connecting ring Clear volume imaging

Irradiate metal parts, the image shape will be clear obvious, some defects are prominent

Lighting Method

Luminous Intensity



Note : The experimental product is TL-8WW6V2.8ACF; the 100% illumination value is 400,000 (LUX)

*Comparison based on brightness : TL>TLD>TLI
(TL is about twice as bright as TLD, TLD is about twice as bright as TLI)

*Compare based on uniform FOV : TLI>TLD>TL
(if uniform FOV requirement is >6mm, use TLI)

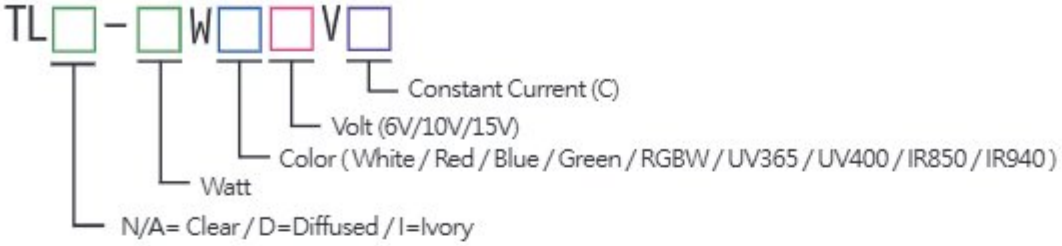
Suggestions for selecting highly reflective materials (ex: glass, metal) : TLI>TLD>TL

Suggestions for selecting highly diffused materials (ex: paper, cloth) : TL>TLD>TLI

*White paper as background, square size 10mm*10mm :

TL TLD TLI

Model Description



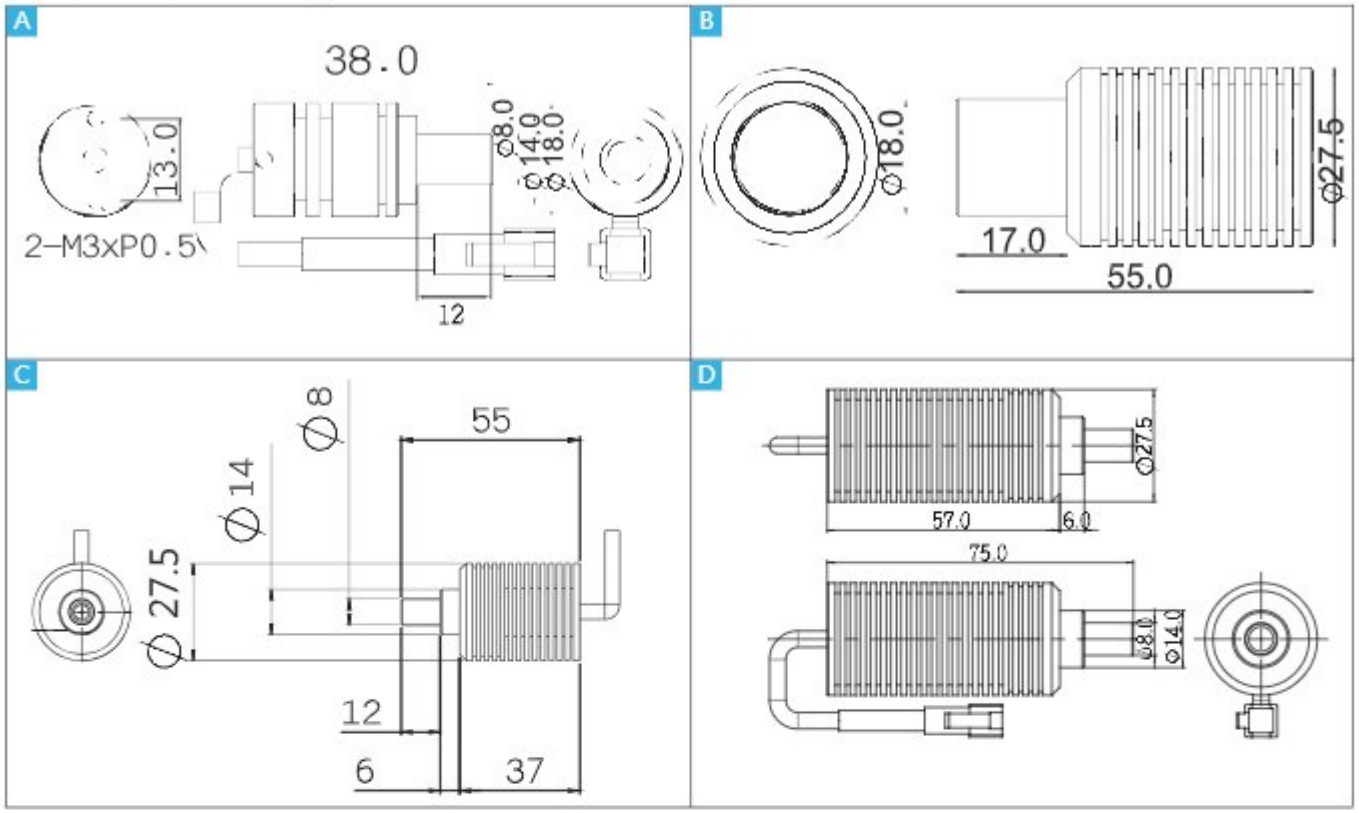
Specification

(Model)	(Power Consumption)	(Emitting Area)	(Dimension)
TL-1W	○ ● ● ● 6V/1W	Φ6	A
TL-3W-D18	○ ● ● ● 6V/3W	Φ16	B
TL-5W	○ ● ● ● ● ● ● ● ● ◐ 6V/5W	Φ6	C
TL-5W-D18	○ ● ● ● ● ● ● ● ● ◐ 6V/5W	Φ16	B
TL-6W	○ ● ● ● ● ● ● ● ● ◐ 6V/6W	Φ6	D
TL-6W-D18	○ ● ● ● ● ● ● ● ● ◐ 6V/6W	Φ16	E
TL-8W	○ ● ● ● ● ● ● ● ● ◐ 6V/8W	Φ6	F
TL-8W-D18	○ ● ● ● ● ● ● ● ● ◐ 6V/8W	Φ16	G
TL-10W	○ ● ● ● ● ● ● ● ● ◐ 6V/10W	Φ6	H
TL-40W	○ 15V/40W	Φ6	I
TL-25W	○ 25W(10V/2.5A)	Φ6	I

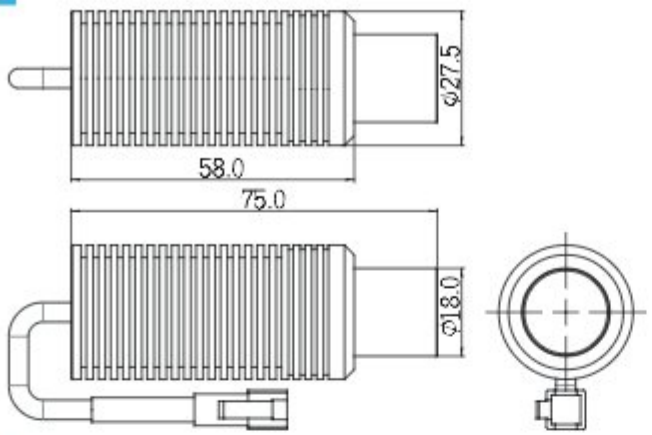
Note：1.◐ White Blue Red Green ○ White ● Blue ● Green ● Red ● UV365nm ● UV400nm ● UV850(Infrared ray) ● 940nm (Infrared ray)

2. Unit：mm
3. The power of spot lights more than 3W can provide Ø 18mm optical head
4. Spot Lights have clear (TL), diffused (TLD), ivory (TLI) light can choose. TL brightness is about twice that of TLD. TLD brightness is about twice that of TLI. Uniformity：TLI>TLD>TL

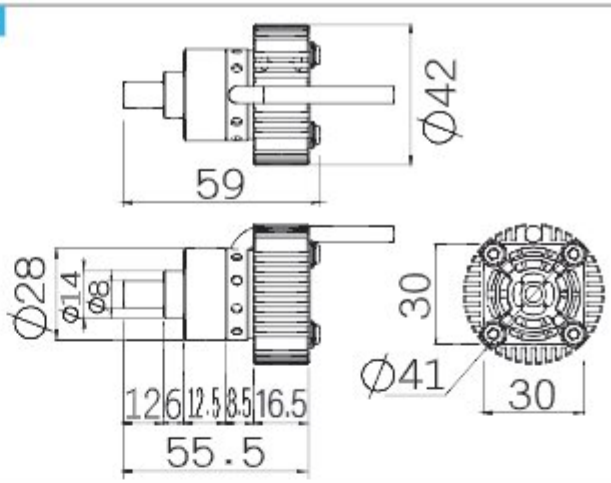
Dimensional drawings



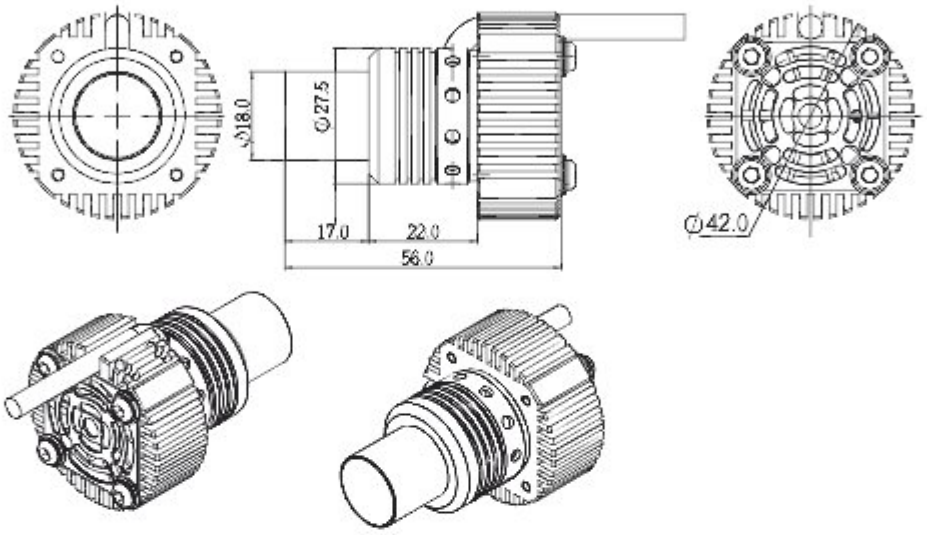
E


ϕ27.5
58.0
75.0
ϕ18.0

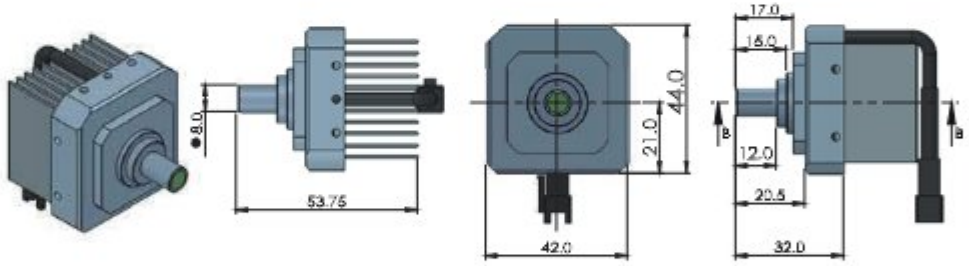
F


ϕ42
59
ϕ28
ϕ14
ϕ8
12
6
12.5
8.5
16.5
55.5
30
ϕ41
30

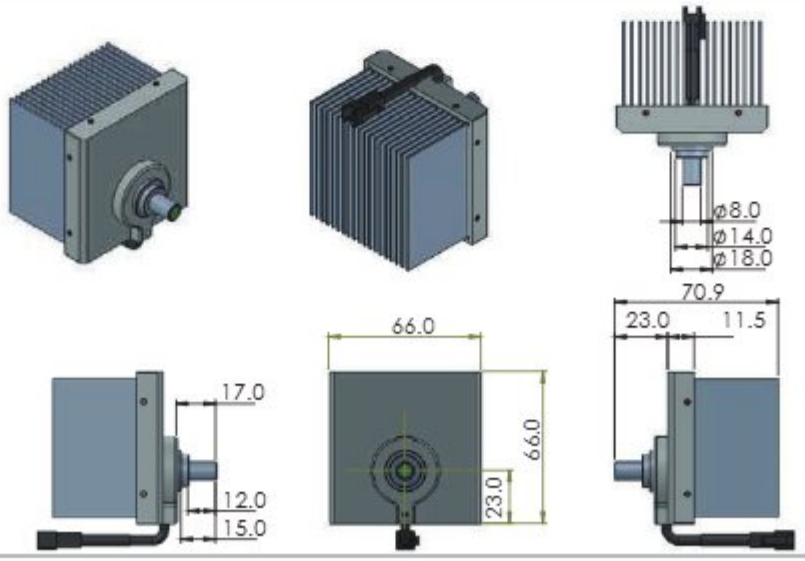
G


ϕ18.0
ϕ27.5
17.0
22.0
56.0
ϕ42.0

H


ϕ8.0
53.75
44.0
21.0
42.0
17.0
16.0
12.0
20.5
32.0

I


ϕ8.0
ϕ14.0
ϕ18.0
70.9
23.0
11.5
66.0
66.0
23.0
17.0
12.0
15.0

Collimated Spot Lights

Features

- Can be used individually or can be used as an adjustable ring light source/strip light/backlight splicing
- High brightness is close to parallel light, and the illumination value is not easy to change significantly due to distance.
- The focusing angles are plus or minus five degrees and plus or minus fifteen degrees, which are suitable for various working distances. Lighting needs

Applications

- Detection of transparent objects that require high brightness, such as glass, etc.
- Installation environment requiring long working distance
- Detection of subtle defects that highlight scratches or roughness

Lighting Method

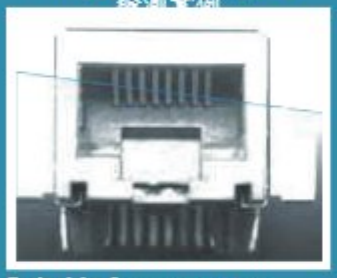
A Collimated Spot Lights

Adjustable Ring Light Source

Relationship between spot size and working distance

Note : This experimental product is white light

Inspect Examples



Suitable for connector
Pin feet need to be slit
Detection of spacing

Curved housing suitable for lighting angles Detection

Accessory

A single parallel point light can be rotated Fixed piece to form an adjustable ring light source

Model Description

□-CSL-□W□□V□-□D-□

- Fixture (FIX)
- angle 5D(±5°)、10D(±10°)、15D(±15°)
- Constant Current (C)
- Volt (6V)
- Color (White / Red / Blue / Green)
- Watt
- Accessory (AS)

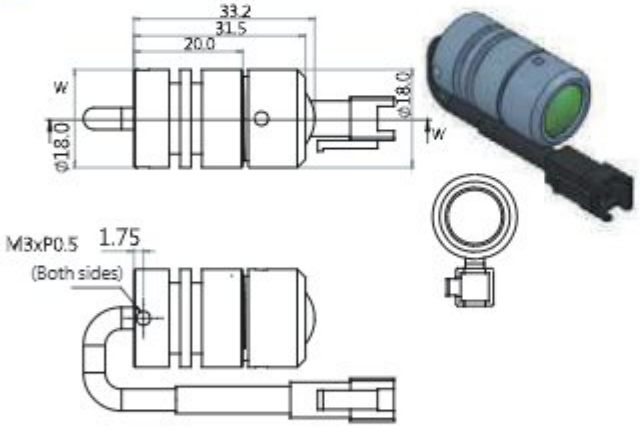
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
CSL-1W-10D	○ ● ● ●	Φ12	○ ● ● ● 6V/1W	A
CSL-5W-5D	○ ● ● ●	Φ22	○ ● ● ● 6V/5W	B
AS-CSL5W-FIX				C Single piece fixed piece
HRL-50142	○ ● ● ●		○ 24V/33.6W ● ● ● 24V/24W	D Adjustable Ring Light Source
CSL-5W-15D	○ ● ● ●	Φ19.5	○ ● ● ● 6V/5W	E
CSL-8W-5D	○ ● ● ●	Φ17	○ ● ● ● 6V/8W	F
CSL-10W-10D	○ ● ● ●	Φ12	○ ● ● ● 6V/10W	G

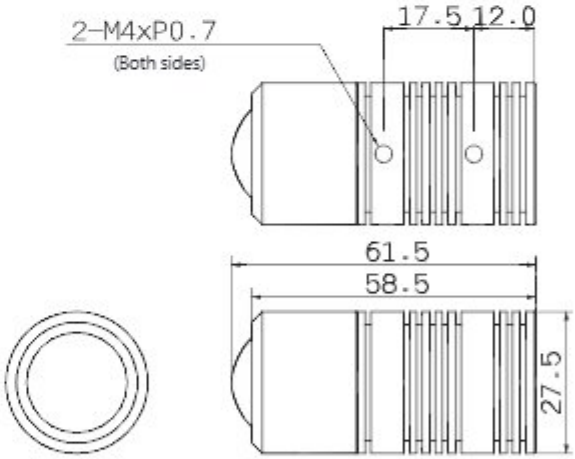
Note：1. ○ White ● Blue ● Green ● Red　　2. Unit：mm

Dimensional drawings

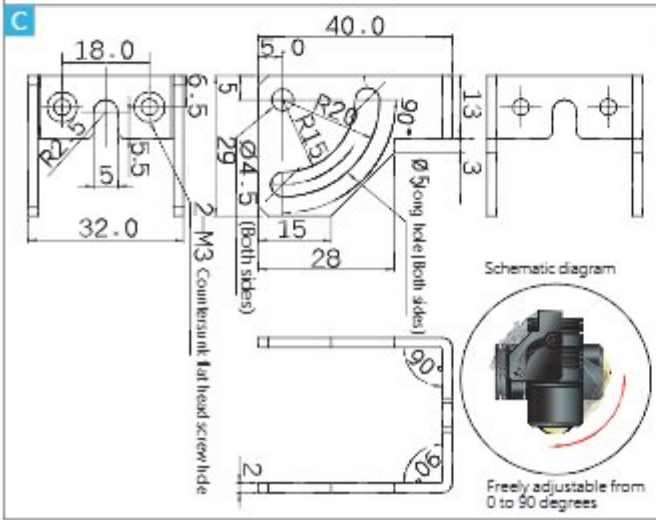
A



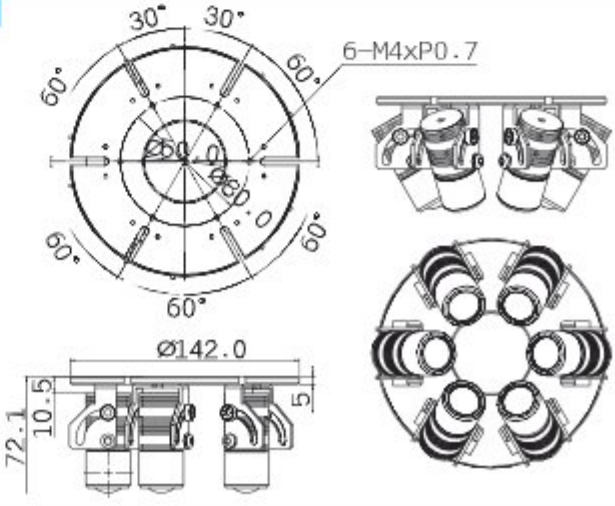
B



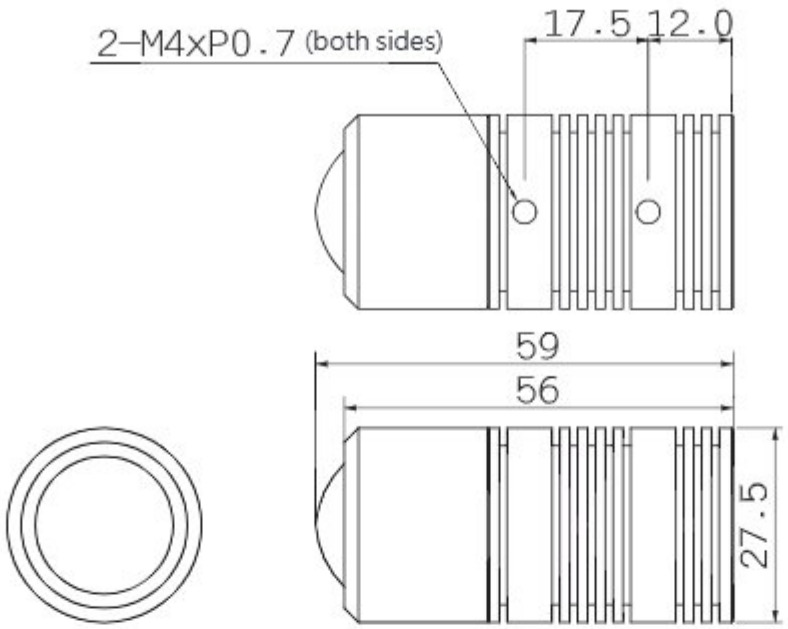
C



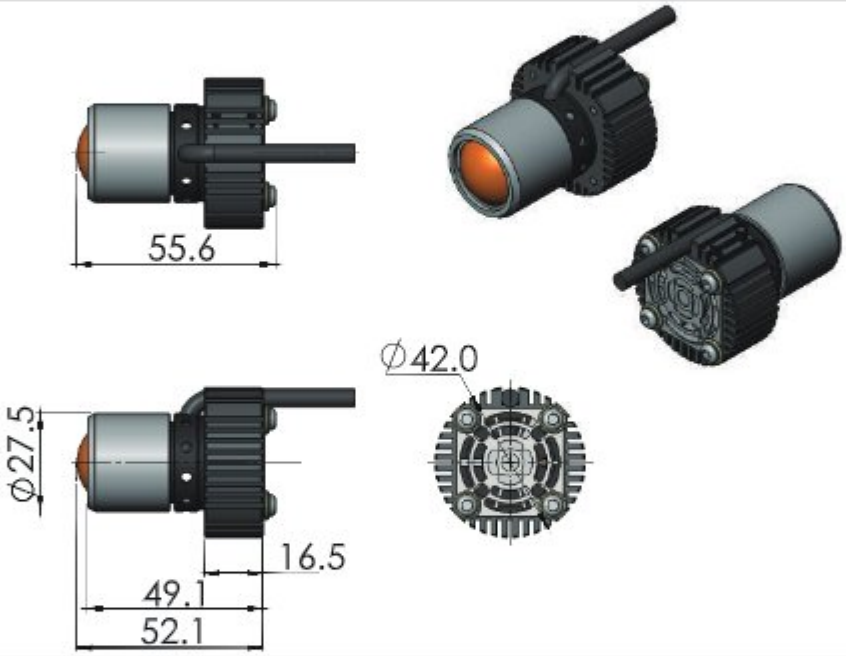
D



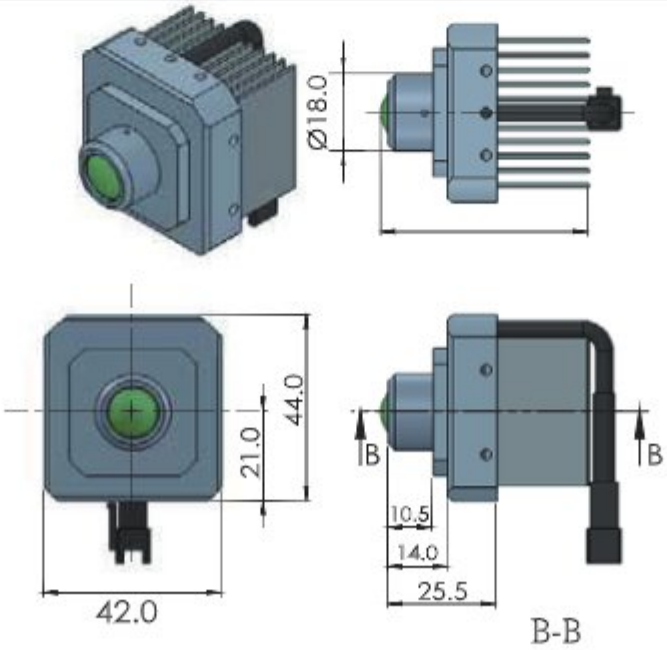
E


2–M4xP0.7 (both sides)
17.5
12.0
59
56
27.5

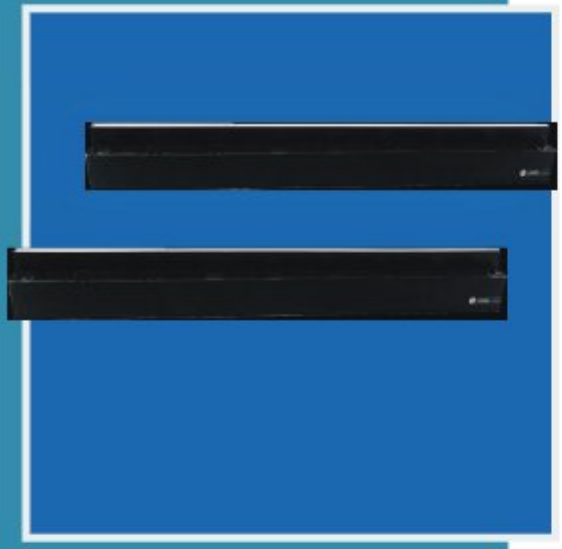
F


55.6
Ø42.0
Ø27.5
16.5
49.1
52.1

G


Ø18.0
21.0
44.0
42.0
B
B
10.5
14.0
25.5
B-B

High Uniformity Filament Lights



Features

- Different from concentrated linear light sources, the uniformity can reach 95%
- High heat dissipation design, both uniformity and brightness
- Customized services can be provided according to customer needs, with a length up to 3000mm.
- The width of the light outlet can be adjusted by 6~10mm
- Supports four-color switching, RGBW/RGBA, can replace traditional sodium lamps

Applications

- Detect film thickness, LCD mura and other defects with minimal grayscale differences

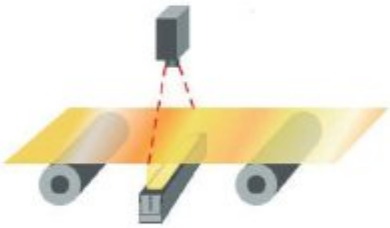
Inspect Examples

Applied to LCD mura detection

Used in glass coating and uniformity testing

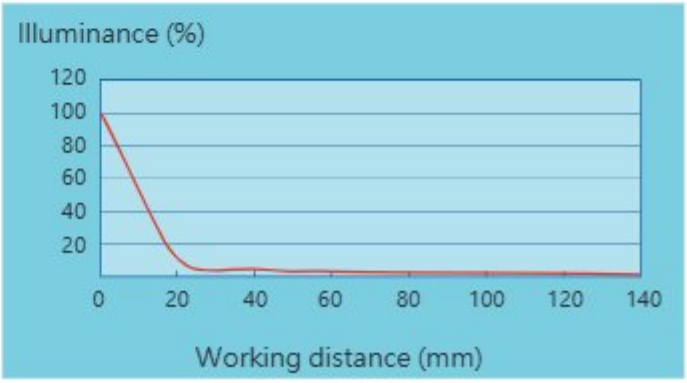
Lighting Method

Can be used to detect defects on large-area objects on production lines



Can be used to detect defects in glass materials

Luminous Intensity



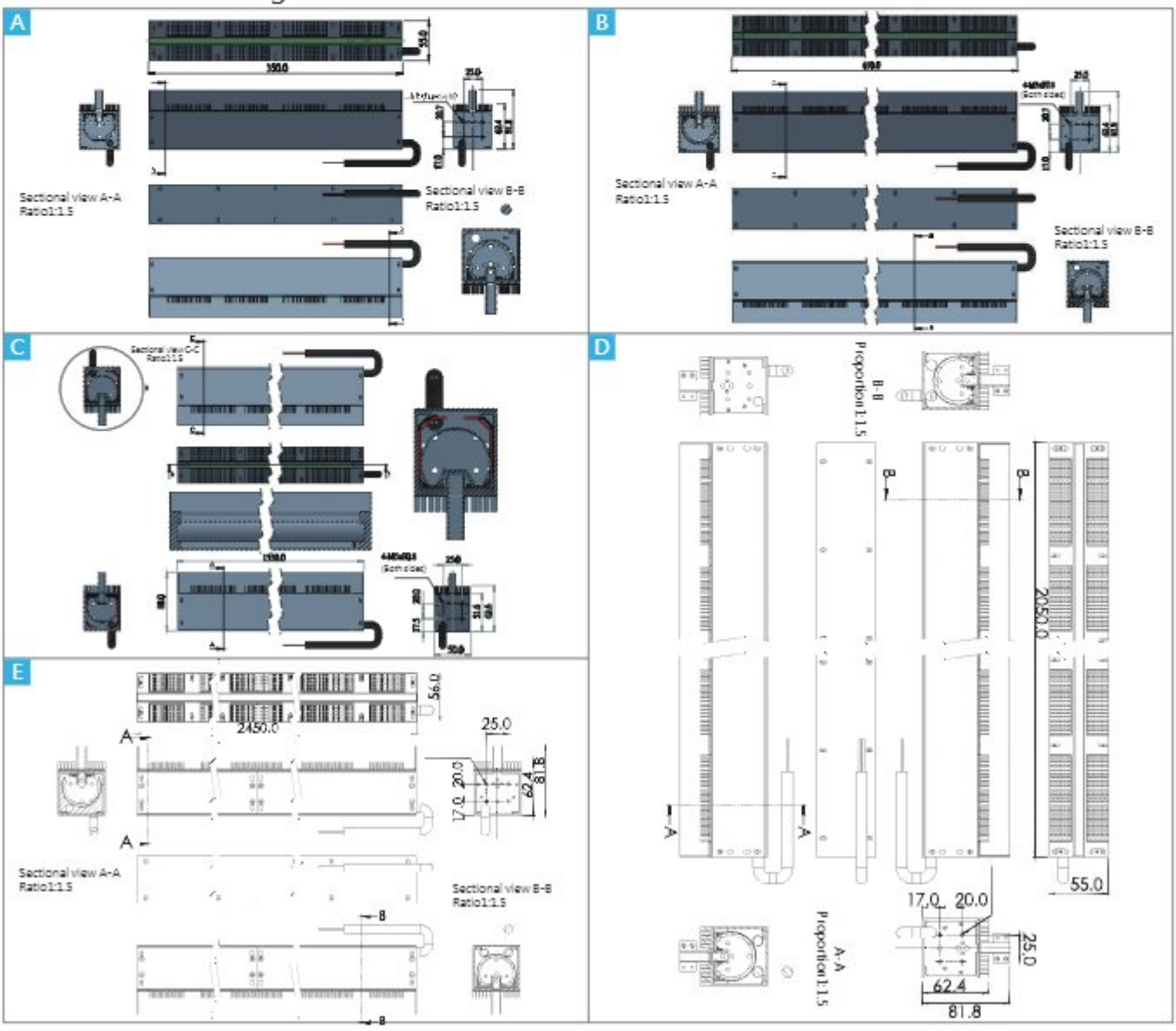
Model Description

Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
DFL-300	○ ● ● ● ●	300×6-10	○ ● ● ● ● 24V/50W/CH	A
DFL-600	○ ● ● ● ●	600×6-10	○ ● ● ● ● 24V/100W/CH	B
DFL-1500	○ ● ● ● ●	1500×6-10	○ ● ● ● ● 24V/250W/CH	C
DFL-2000	○ ● ● ● ●	2000×6-10	○ ● ● ● ● 24V/350W/CH	D
DFL-2400	○ ● ● ● ●	2400×6-10	○ ● ● ● ● 24V/400W/CH	E

Note：1.○ White ● Blue ● Green ● Red ● Amber 2. Unit：mm

Dimensional drawings



Collimated Filament Lights

Features

- Compared with ordinary light sources, the beam is nearly parallel and does not scatter, making it suitable for longer working distances.
- Special uniform light effect, the transmittance reaches nearly 90%, and the brightness can be as high as 1.6 million Lux using high-power LED
- Customized services can be provided according to the client's needs, up to 2200mm (customized)
- A fan can be added to increase the brightness of the light source; a detachable coaxial beam splitter module can also be provided to change the coaxial line Light can be used in coaxial three-dimensional component detection, such as: SMT, etc.
- The FLC2 fanless series can achieve the same brightness as the FLCF fan version series

Applications

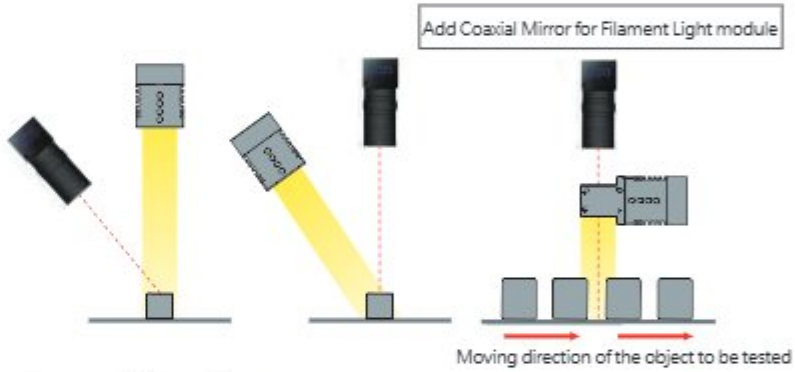
- Textiles, SMT, PCB, glass panels, large-area three-dimensional objects, plug-in terminals, metal Rolled material, high-speed printing quality inspection and identification, etc.

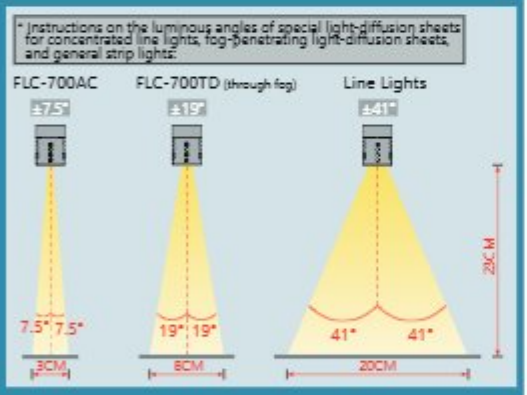
Inspect Examples

Using standard line light to detect large areas of metal has poor surface uniformity

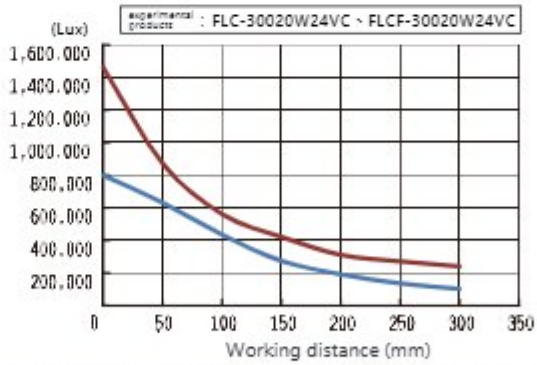
Use condenser line light to detect large-area metal surfaces with good uniformity

Lighting Method



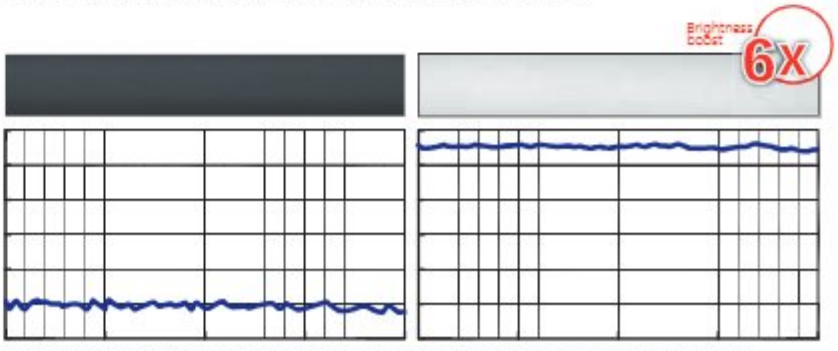


Luminous Intensity



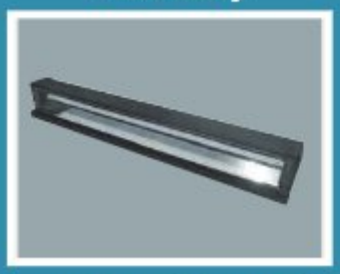
WD/mm	Lux (No Fan)	Lux (FAN)
0	797,500	1,460,000
50	630,500	870,000
100	433,000	560,000
150	273,500	420,000
200	190,700	310,000
250	135,750	270,000
300	101,200	240,000

The red line means there is a fan (FLCF/FLC2) / The blue line is fanless (FLC)



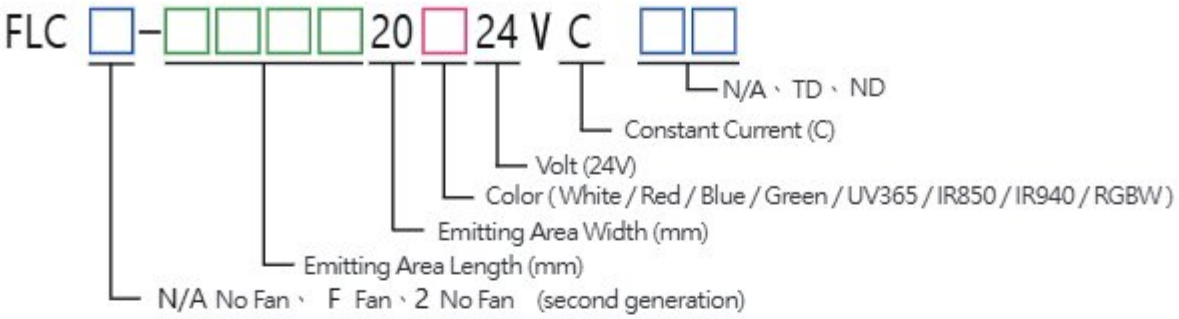
Comparison conditions: the working distance between the uniformity comparison and the brightness comparison is 300mm
Note: The experimental product on the left is Filament Light (FL-20016W24VC).
The experimental product on the right is Collimated Filament Light (FLCF-20020W24VC).

Accessory



External coaxial beam splitter module (model CML) is suitable for use in high-speed mobile Three-dimensional component detection

Model Description



Specification

Model	Color	Emitting Area	Power Consumption		Dimension
			Fan	No Fan	
			FLCF/FLC2	FLC	
FLC-5020	○ ● ● ● ● ◐	50 ×20	24V/43W	24V/43W	
FLC-10020	○ ● ● ● ● ◐	100×20	24V/43W	24V/43W	A FLC B FLCF C FLC2
FLC-15020	○ ● ● ● ● ◐	150×20	24V/65W	24V/65W	
FLC-25020	○ ● ● ● ● ◐	250×20	24V/108W	24V/108W	
FLC-30020	○ ● ● ● ● ◐	300×20	24V/130W	24V/130W	
FLC-40020	○ ● ● ● ● ◐	400×20	24V/173W	24V/173W	
FLC-50020	○ ● ● ● ● ◐	500×20	24V/216W	24V/216W	
FLC-60020	○ ● ● ● ● ◐	600×20	24V/259W	24V/259W	
FLC-70020	○ ● ● ● ● ◐	700×20	24V/24W	24V/24W	
FLC-80020	○ ● ● ● ● ◐	800×20	24V/65W	24V/65W	
FLC-90020	○ ● ● ● ● ◐	900×20	24V/108W	24V/108W	
FLC-100020	○ ● ● ● ● ◐	1000×20	24V/43W	24V/43W	
FLC-110020	○ ● ● ● ● ◐	1100×20	24V/86W	24V/86W	
FLC-120020	○ ● ● ● ● ◐	1200×20	24V/130W	24V/130W	
FLC-130020	○ ● ● ● ● ◐	1300×20	24V/173W	24V/173W	
FLC-140020	○ ● ● ● ● ◐	1400×20	24V/216W	24V/216W	
FLC-150020	○ ● ● ● ● ◐	1500×20	24V/259W	24V/259W	
FLC-160020	○ ● ● ● ● ◐	1600×20	24V/173W	24V/173W	
FLC-170020	○ ● ● ● ● ◐	1700×20	24V/216W	24V/216W	
FLC-180020	○ ● ● ● ● ◐	1800×20	24V/259W	24V/259W	

Note：1.◐ White Blue Red Green ○ White ● Blue ● Green ● Red ● UV365nm
2. Unit：mm
3. The standard product length can reach 2000mm. If the length exceeds, customization is required.

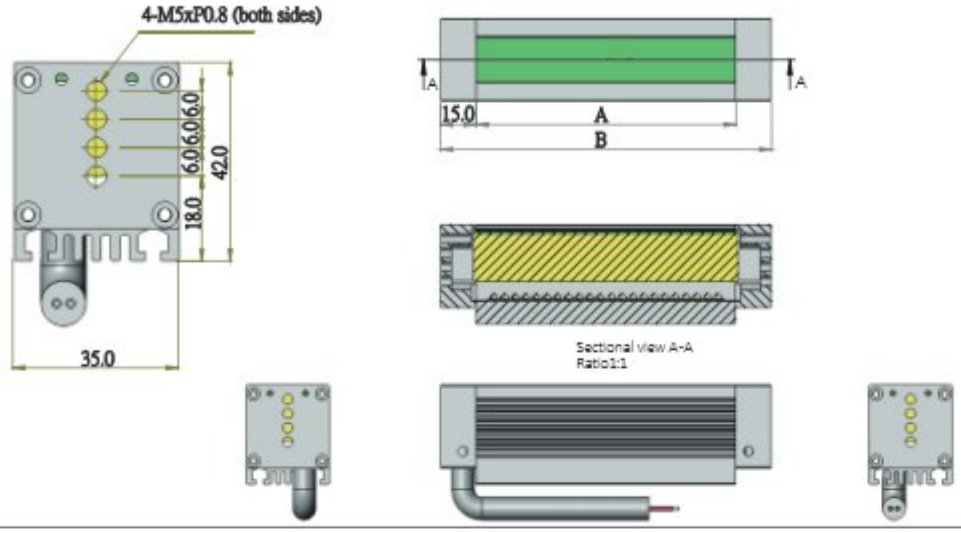
Dimensional drawings

A

FLC-(nX100)20 (n=1 to 18)

nX100+10(Luminous area) : A

nX100+40(total length) : B(Does not include power cord)

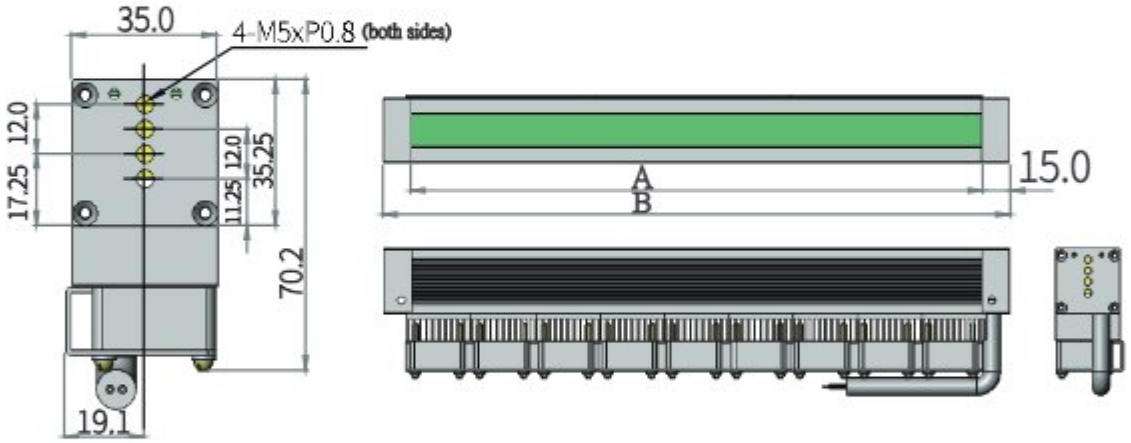


B

FLCF-(nX100)20 (n=1 to 18)

nX100+10(Luminous area) : A

nX100+40(total length) : B(Does not include power cord)

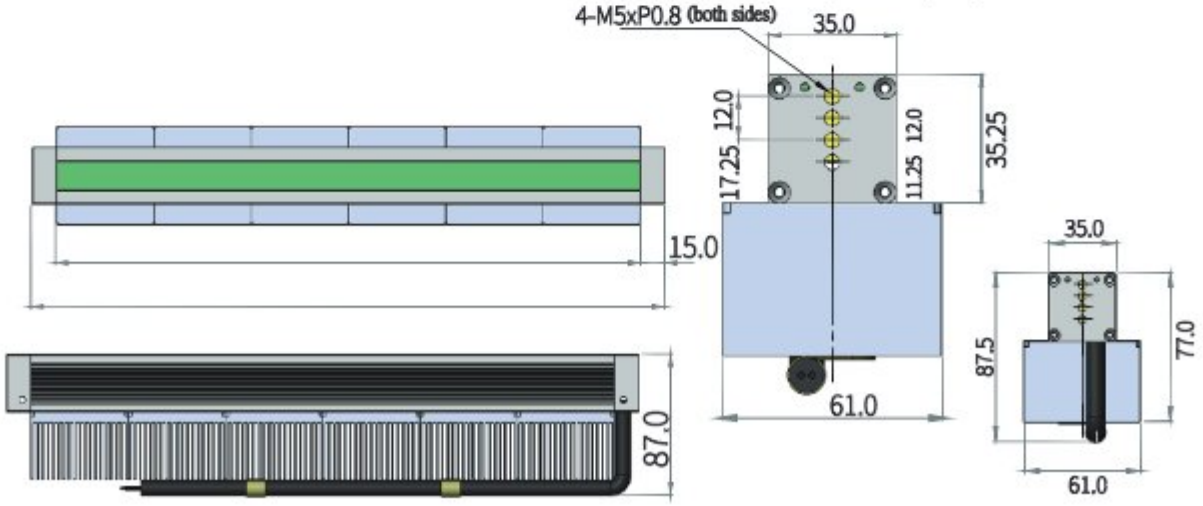


C

FLC2-(350、400、450、500)20

350、400、450、500 (Luminous area) : A

390、440、490、540 (total length) : B(Does not include power cord)



Coaxial Mirror Lighting Module

Features

CML-100-PRISM is suitable for resolution <3μm/pixel

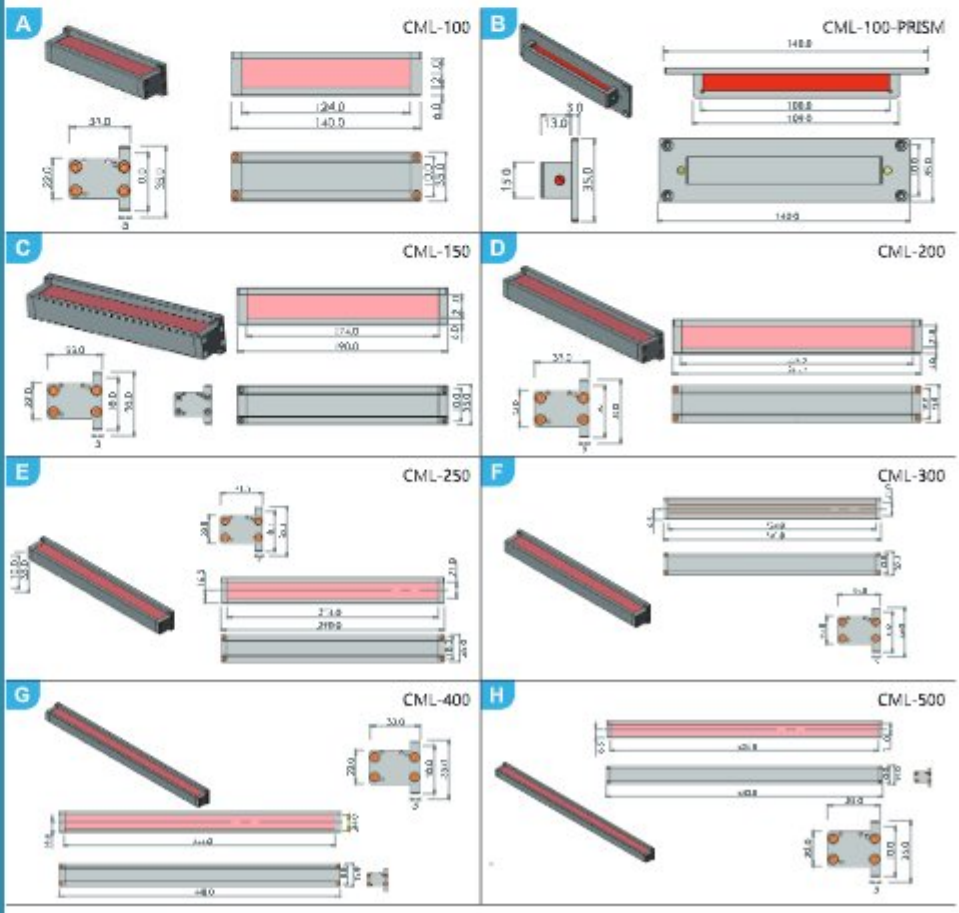
Model Description

CML-□□□-□□□□□

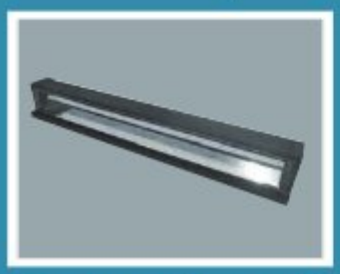
- N/A semi-reflective glass、PRISM (Applicable<3μm/pixel)
- 100、150、200、250、300、400、500mm
- Coaxial Mirror Lighting Module

(Model)	(Mechanism size)	(Dimension)
CML-100	140X35X33	A
CML-100-PRISM	140X35X16	B
CML-150	190X35X33	C
CML-200	240X35X33	D
CML-250	290X35X33	E
CML-300	340X35X33	F
CML-400	440X35X33	G
CML-500	540X35X33	H

註：1.PRISM 為雙鏡版



Accessory



External coaxial beam splitter module (model CML) is suitable for use in high-speed mobile Three-dimensional component detection

Tunnel Dome Lights

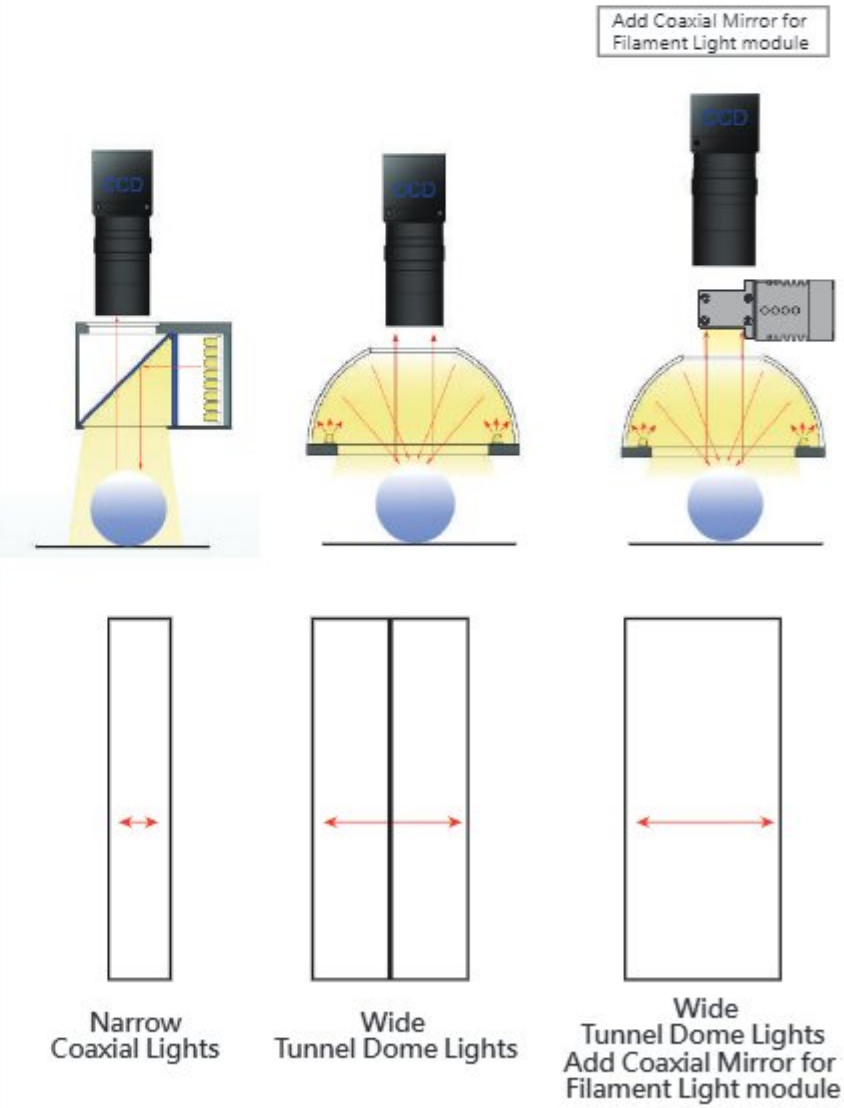
Features

- The beam can be directly illuminated from multiple angles to the object to be measured, and is suitable for cylindrical highly reflective materials.
- Samples such as curved cylinders can evenly illuminate the image from the imaging surface, effectively printing
  The light angle can reach 160 degrees (nearly horizontal), and high-power LED is used to increase diffusion.brightness
- It can be used on any cylindrical testing equipment and irregular and special objects.

Applications

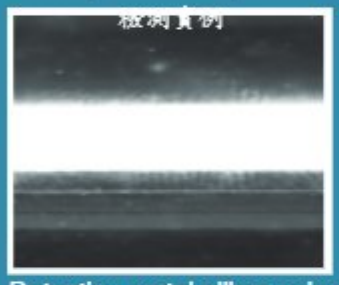
- Metal cylinder objects, PCBs, automobile plastic surface and curved surface objects, medical drug packaging are easily refractory Detection or identification of optical film, etc.

Lighting Method

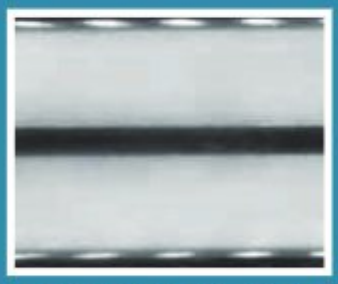


Especially suitable for lighting highly reflective cylindrical objects, with uniform lighting and a wide range
※ The maximum brightness can reach 130,000 Lux (actual measuring scale TDL- 40020)

Inspect Examples



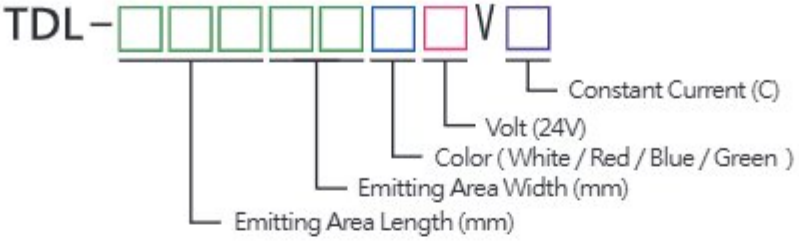
Detecting metal pillars using an external coaxial light source The irradiation range of the surface is narrow and cannot Complete irradiation on the cylindrical surface



Using arch light source, the illumination range is wider Wide, the light-emitting angle can reach 160 degrees. Illuminating a cylindrical single-sided surface

Arch type light source combined with external coaxial light source makes Use shadows to fill gaps

Model Description



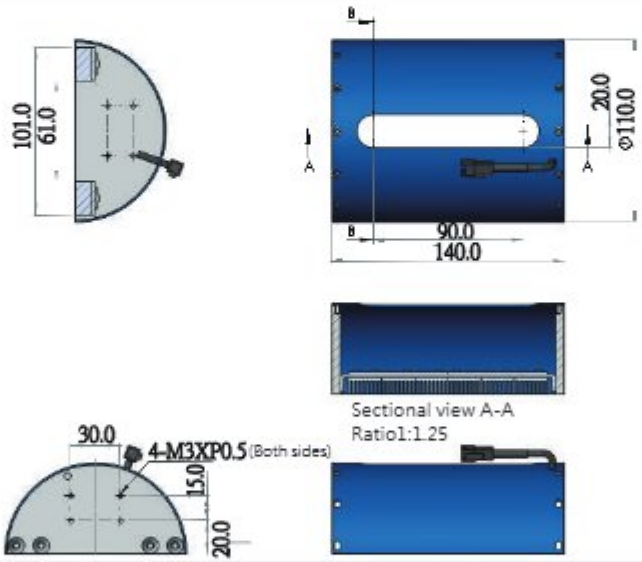
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
TDL-9020	○ ● ● ●	Open 90x20mm long hole	○ ● ● ● 24V/1.25A	A
TDL-9010-D45	○ ● ● ●	90 (Ø45mm Circle hole)	○ ● ● ● 24V/1.25A	B
TDL-21020	○ ● ● ●	Open 210x20mm long hole	○ ● ● ● 24V/2.5A	C
TDL-33020	○ ● ● ●	Open 330x20mm long hole	○ ● ● ● 24V/3.75A	D
TDL-45020	○ ● ● ●	Open 450x20mm long hole	○ ● ● ● 24V/5A	E

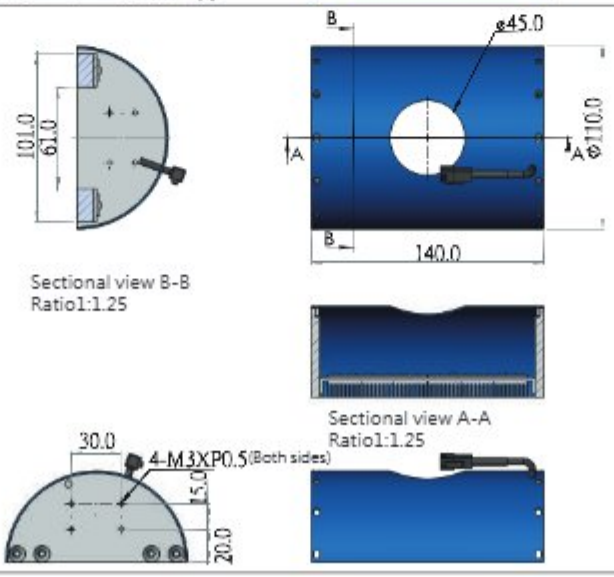
Note：1. ○ White ● Blue ● Green ● Red　　2. Unit：mm

Dimensional drawings

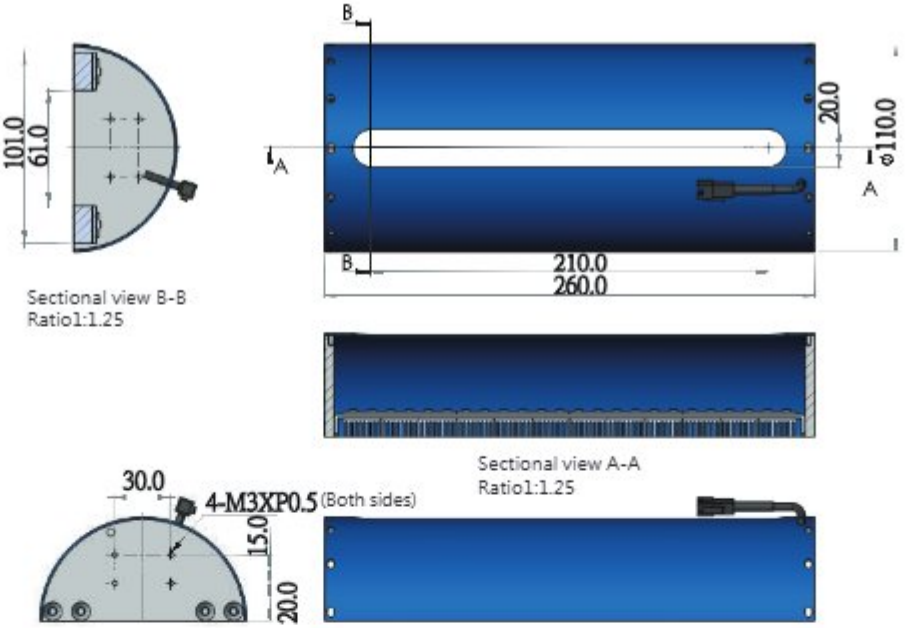
A



B



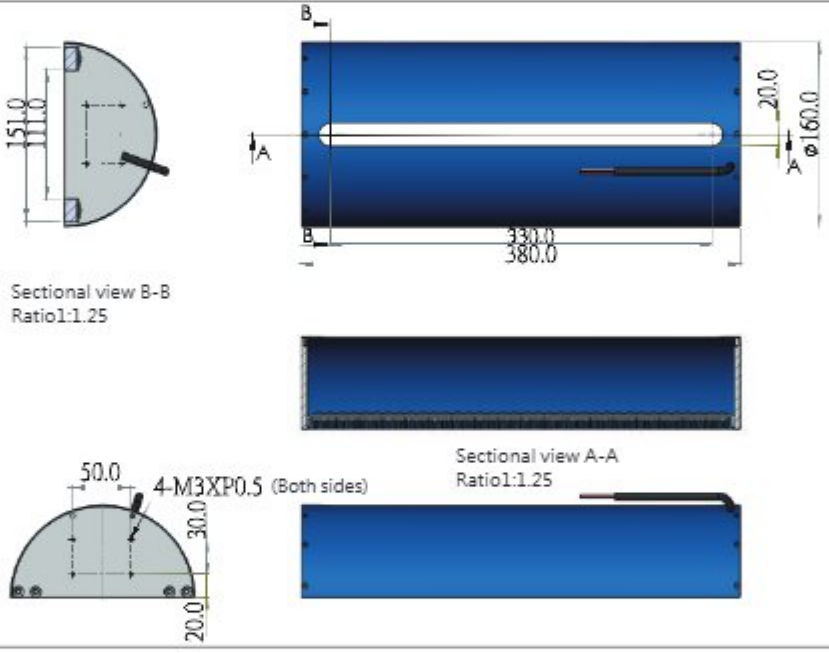
C



Sectional view B-B
Ratio1:1.25

Sectional view A-A
Ratio1:1.25

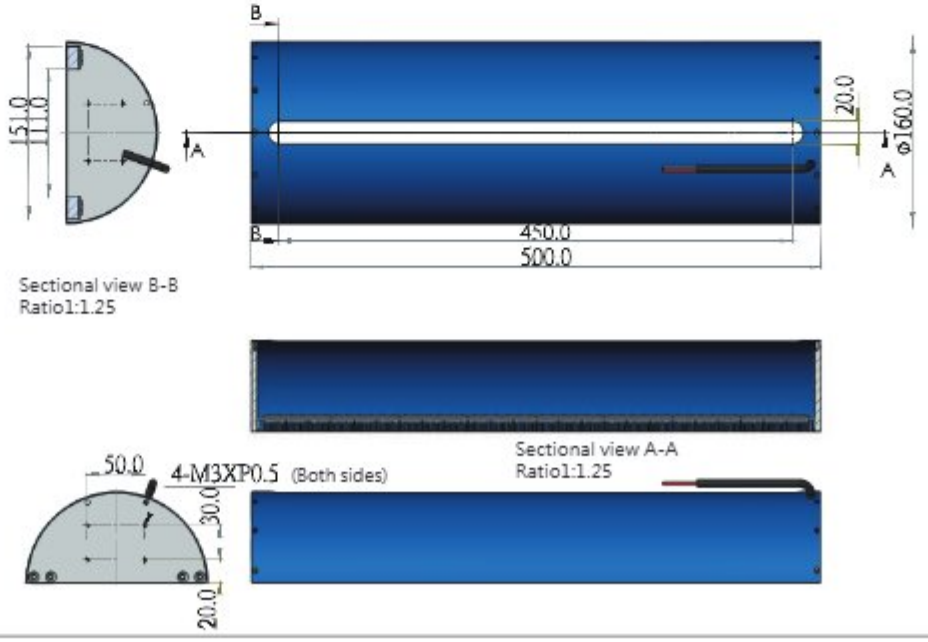
D



Sectional view B-B
Ratio1:1.25

Sectional view A-A
Ratio1:1.25

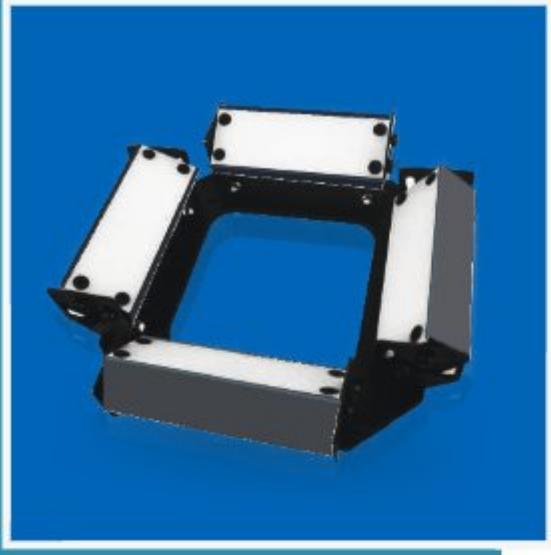
E



Sectional view B-B
Ratio1:1.25

Sectional view A-A
Ratio1:1.25

Adjustable Square Lights



Features

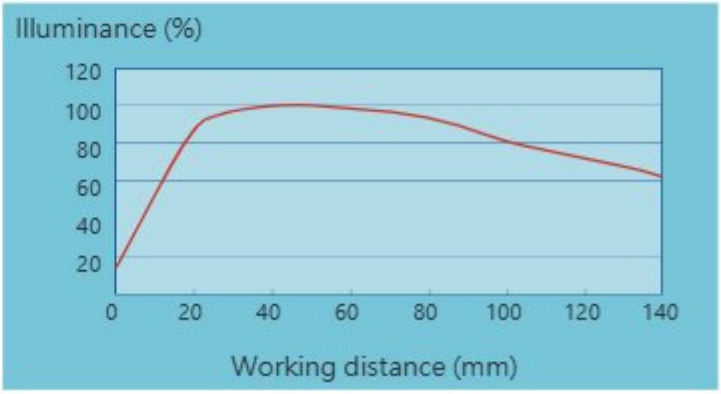
- Special high-brightness design can shorten the exposure time required by the camera and is suitable for high-speed sample lines Detection
- The adjustable angle return light provides an illumination angle between 0 and 90 degrees, which can be matched with the objects to be tested with different characteristics. Objects and different working distances
- The adjustable angle return light is composed of multiple strip light sources to make the illumination range more uniform.
- Customized sizes are also available
- Heat sinks can be added to double the brightness

Applications

- Detection of surface printing, solder distribution, IC pin deviation and PC board missing parts, etc.
- Detection of scratches and dust particles on various glass substrates, lenses or wafer surfaces

Lighting Method

Luminous Intensity



Note : The experimental product is SLL-10015W24V1AC; (light source is adjusted to 90 degrees vertical down test); 100% illumination value is 17,940 (LUX)

Inspect Examples

Detect the edge of the workpiece and see the contrast degree is obvious

It can be seen that the words on the surface are complete, and There are scratches

Model Description

SLL-□□□□□□□V□

- Constant Current (C)
- Volt (24V)
- Color (White / Red / Blue / Green / UV400 / IR850 / IR940)
- Emitting Area Width (mm)
- Emitting Area Length (mm)

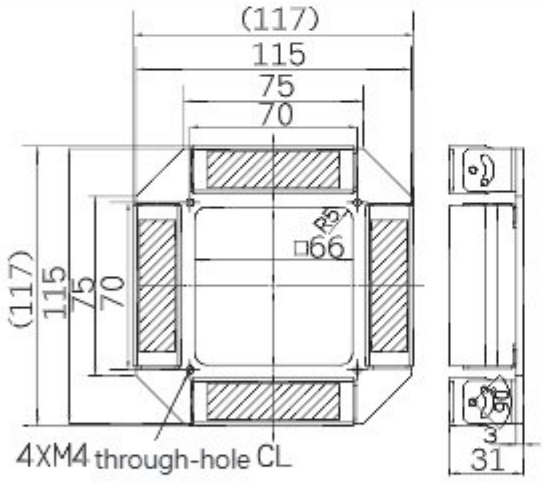
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
SLL-5015	○ ● ● ● ● ● ●	55×15	○ ● ● ● ● 24V/19.2W ● ● 24V/9.6W	A
SLL-5030	○ ● ● ● ● ● ●	55×30	○ ● ● ● ● 24V/28.8W ● ● 24V/24W	B
SLL-10015	○ ● ● ● ● ● ●	110×15	○ ● ● ● ● 24V/24W ● ● 24V/33.6W	C
SLL-10030	○ ● ● ● ● ● ●	110×30	○ ● ● ● ● 24V/28.8W ● ● 24V/28.8W	D
SLL-15015	○ ● ● ● ● ● ●	150×15	○ ● ● ● ● 24V/28.8W ● ● 24V/28.8W	E
SLL-15030	○ ● ● ● ● ● ●	150×30	○ ● ● ● ● 24V/57.6W ● ● 24V/28.8W	F
SLL-20015	○ ● ● ● ● ● ●	200×15	○ ● ● ● ● 24V/28.8W ● ● 24V/33.6W	G
SLL-20030	○ ● ● ● ● ● ●	200×30	○ ● ● ● ● 24V/60W ● ● 24V/33.6W	H

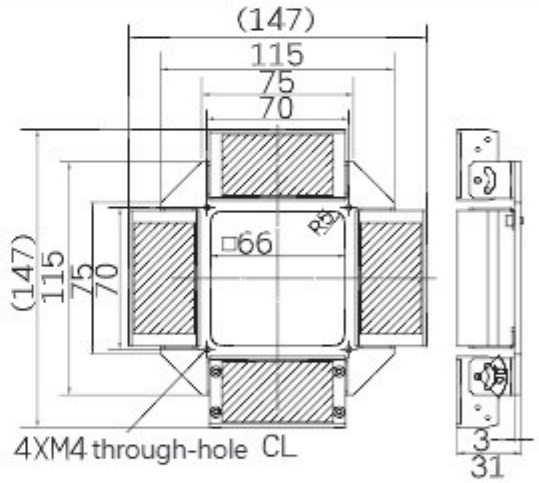
Note：1.○White ●Blue ●Green ●Red ●UV400nm ●UV850(Infrared ray) ●940nm (Infrared ray) 2. Unit：mm

Dimensional drawings

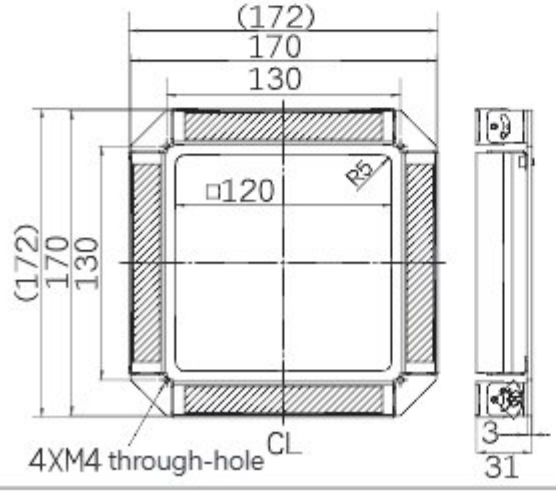
A



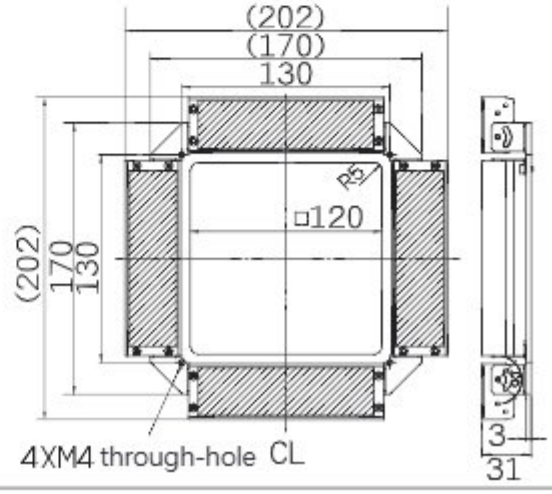
B



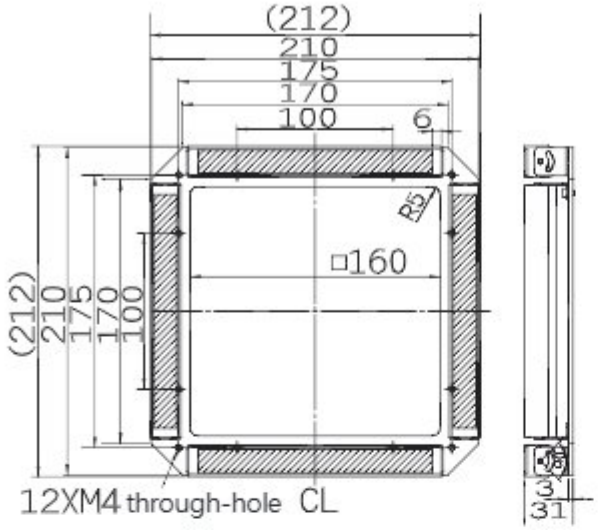
C



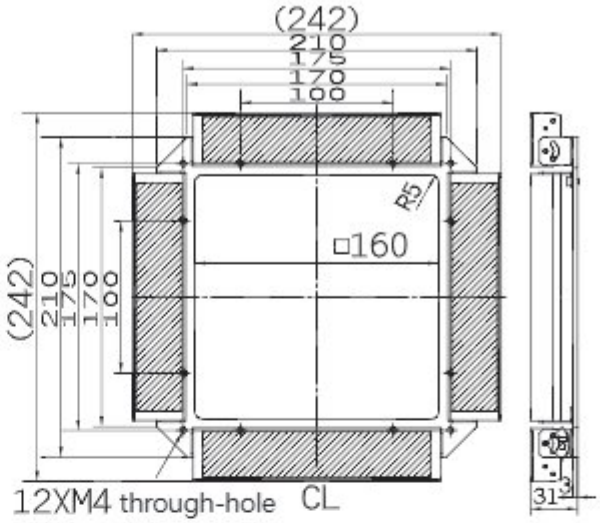
D



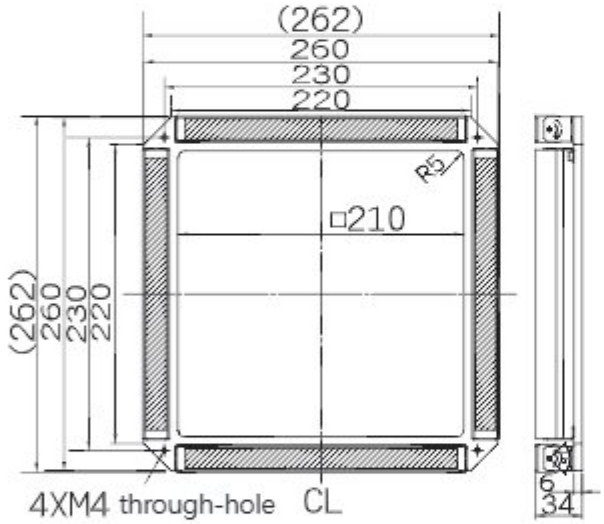
E


(212)
210
175
170
100
6
R5
□160
(212)
210
175
170
100
12XM4 through-hole
CL
3
31

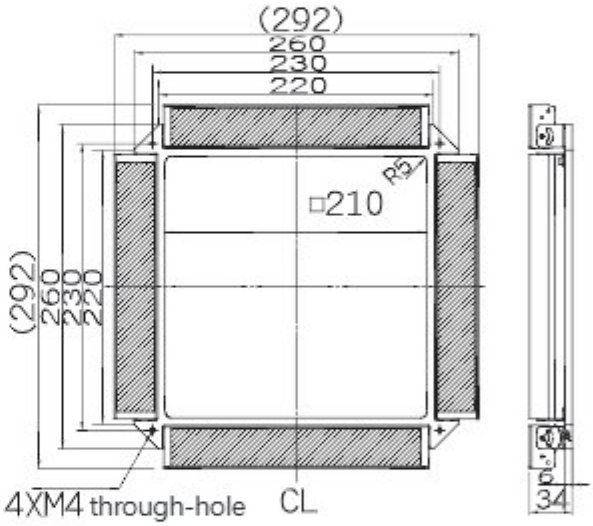
F


(242)
210
175
170
100
R5
□160
(242)
210
175
170
100
12XM4 through-hole
CL
31

G


(262)
260
230
220
R5
□210
(262)
260
230
220
4XM4 through-hole
CL
6
34

H


(292)
260
230
220
R5
□210
(292)
260
230
220
4XM4 through-hole
CL
6
34

Coaxial Lights

Features

- The lighting range is from 25X25mm to 350X120mm.
- The entire series uses high-transmittance multi-layer coating lenses to protect the beam splitter, making it easier to remove dust and more Suitable for long time use
- There is no step-by-step adjustment of the built-in light source brightness (some models
- It can be used with Viswell controller for continuous or strobe lighting control.
- 90-degree external coaxial rotation angle can rotate the light path 90 degrees, suitable for side lighting applications
- Parallel outer coaxial is suitable for detecting surface concavities, undulations, indentations and scratches

Applications

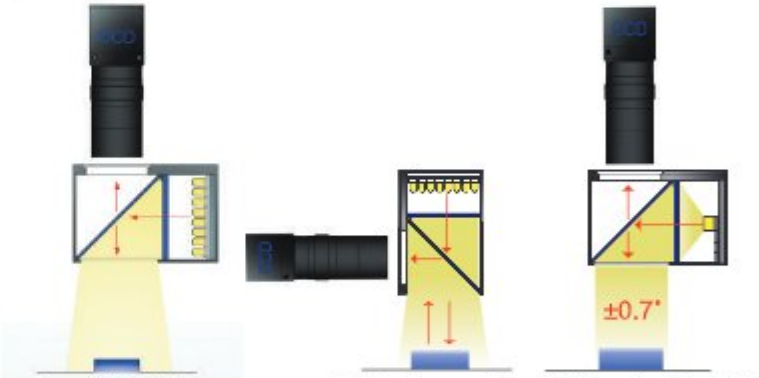
- The image has no reflective or glare highlights and is most suitable f or detecting various characteristics of specular reflective objects. or defective use
- Suitable for detection of specular reflection or high reflection coefficient objects. For example: PCB bare board, Film alignment, mark recognition and defect inspection
- Identification of scratches, dents or marks on the surface of various glass, coating or metal easily reflective materials
- Panel finished products in the wafer or panel industry, alignment and marking of glass substrates and filters Awareness and defect inspection

Inspect Examples

Use external coaxial to detect defects of optical discs, Surface scratches are clearly imaged

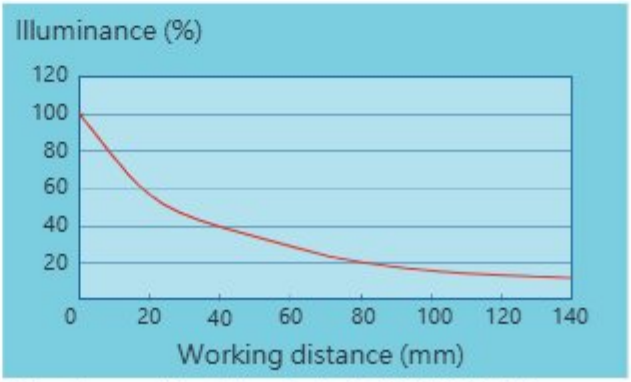
External coaxial detection of metal parts, table
The convex characters are clear

Lighting Method



Coaxial Lights | 90-Angle coaxial lights | Collimated Coaxial Lights

Luminous Intensity



Note : The experimental product is CL-8080W24V0.9AC; the 100% illumination value is 100,700 (LUX)

Model Description

CL-□□□□□□V□-□□□□□

- Emitting Area Length (mm)
- Emitting Area Width (mm)
- Color (White / Red / Blue / Green / UV365 / UV400 / IR850 / IR940)
- Volt (24V)
- Constant Current (C)
- N/A / PRISM

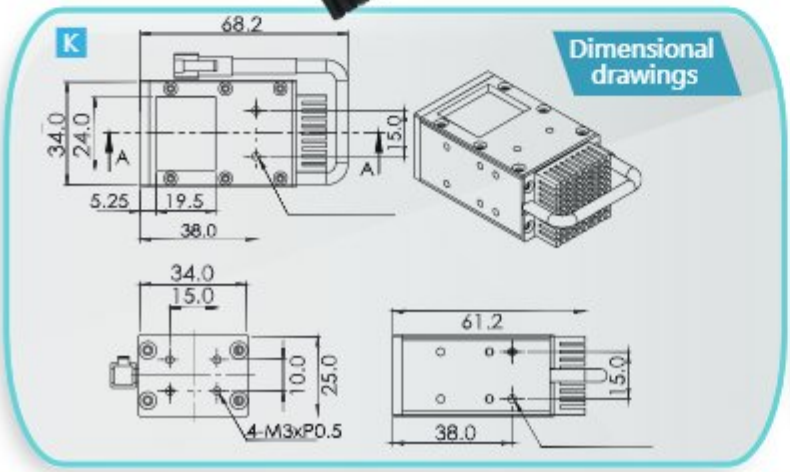
Specification

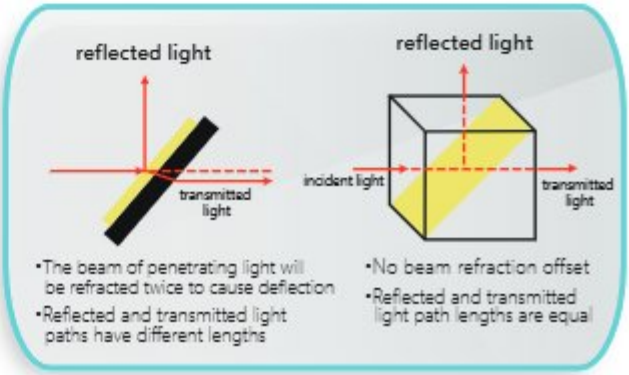
(A) Coaxial Lights

(Model)	(Color / Power Consumption)	(Emitting Area)	(Dimension)
CL-2525	○ ● ● ● ● 24V/4.8W ● ● 24V/3.6	26×26	A
CL-3535	● 24V 2.9W	35×35	B
CL-5050	○ ● ● ● ● 24V/14.4W ● ● 24V/11.5W	57×60	C
CL-8080	○ ● ● ● ● 24V/21.6W ● ● 24V/19.4W	80×80	D
CL-100100	○ ● ● ● ● 24V/25.2W ● ● 24V/25.2W	100×100	E
CL-150140	○ ● ● ● ● 24V/57.6W ● ● 24V/33.6W	150×140	F
CL-250120	○ ● ● ● ● 24V/57.6W	250×120	G
CL-350120	○ ● ● ● ● 24V/86.4W	350×120	H
CL-400210	○ ● ● ● ● 24V/216W	400×210	I
CL-565265	○ ● ● ● ● 24V/240W	565×265	J
CL-2520	○ ● ● ● 6V/18W	24X195	K

Note：1.○ White ● Blue ● Green ● Red ● UV365nm ● UV400nm ● UV850(Infrared ray) ● 940nm (Infrared ray) 2. Unit：mm

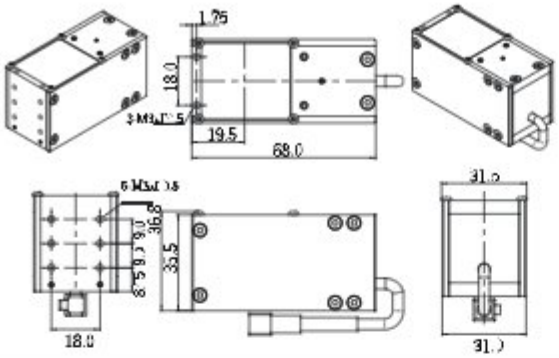
PRISM Coaxial Lights



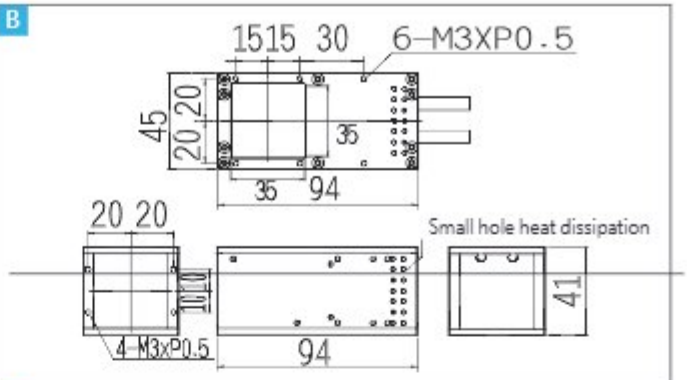


Dimensional drawings

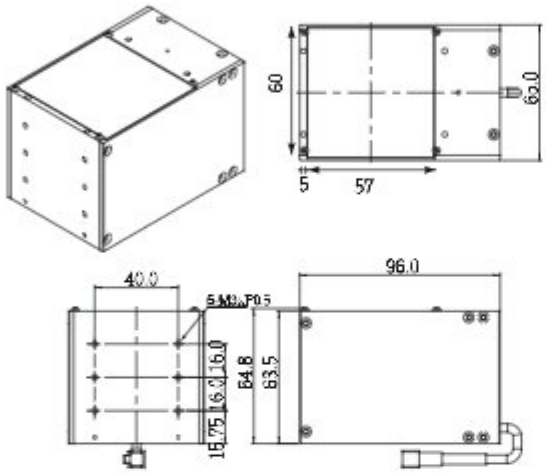
A



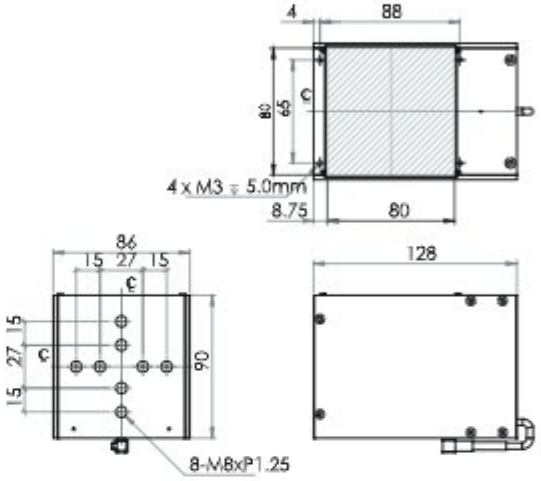
B



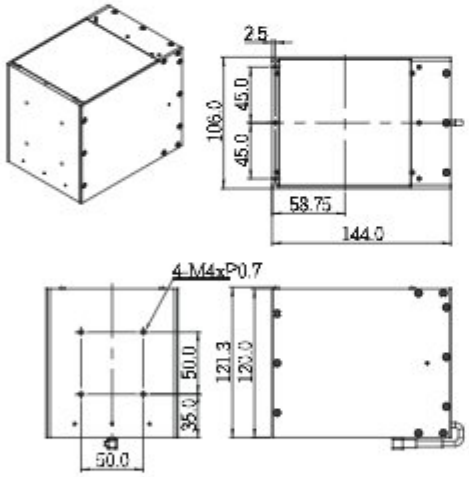
C



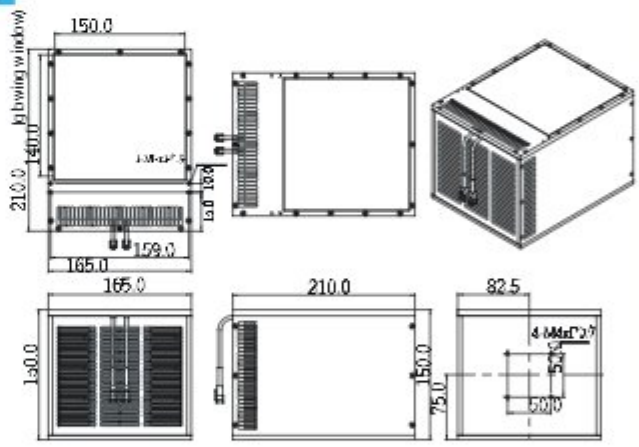
D



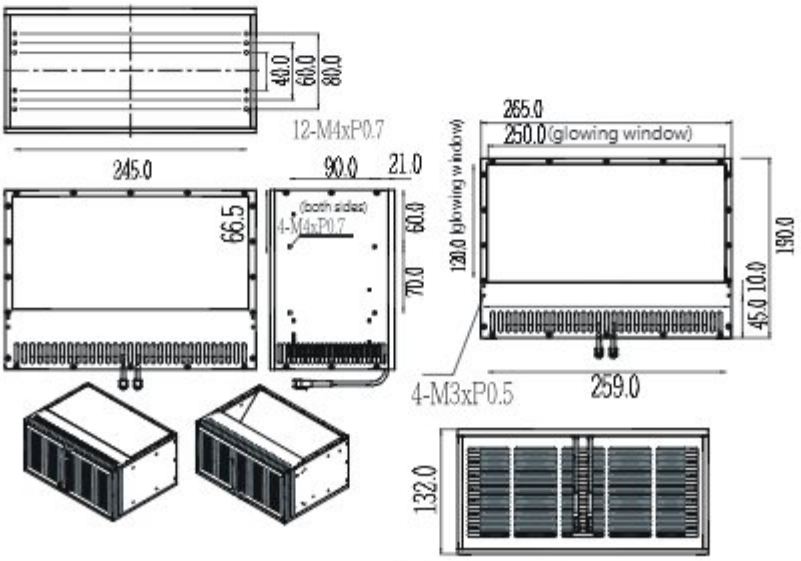
E



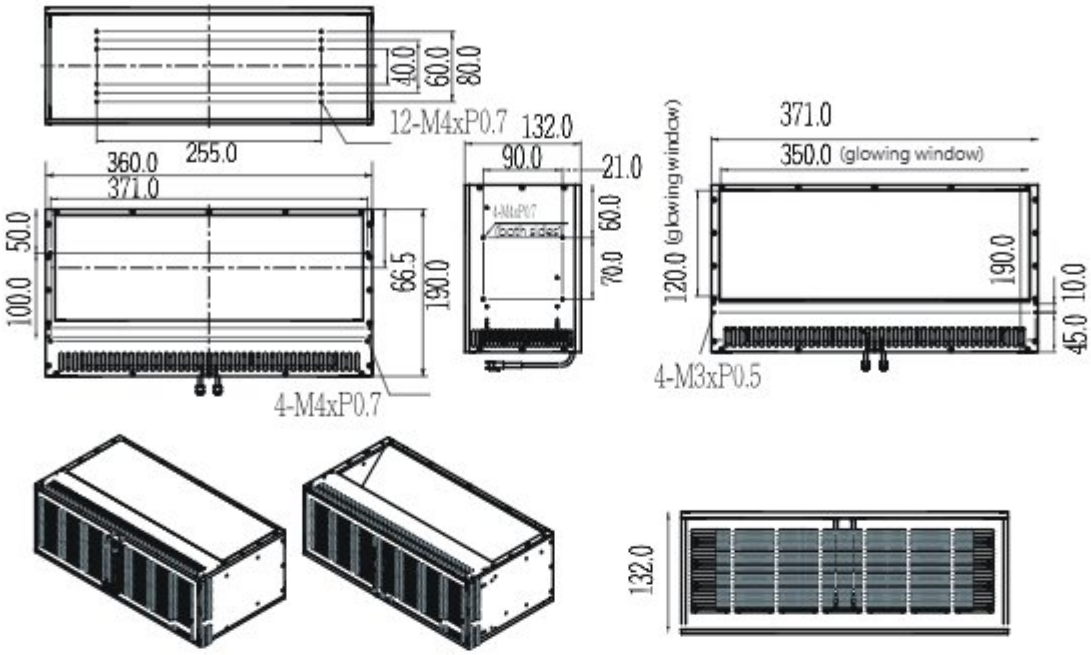
F



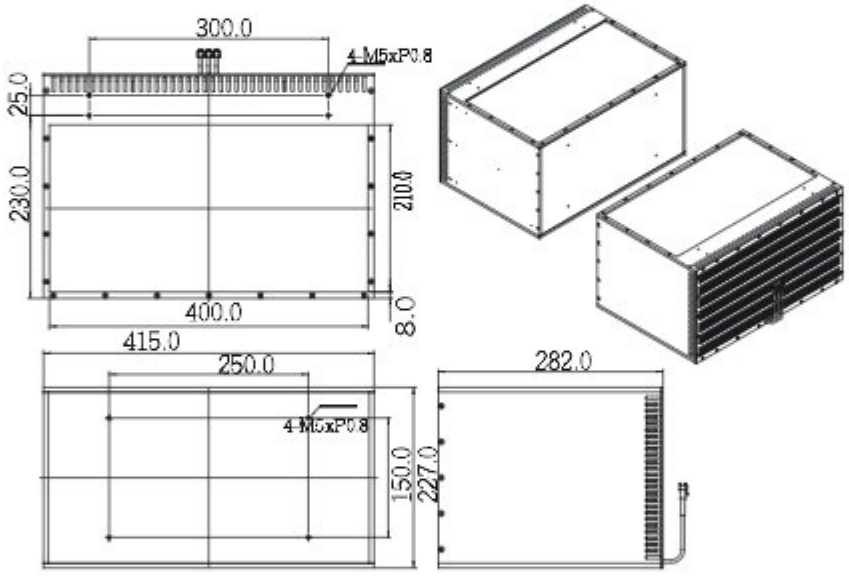
G



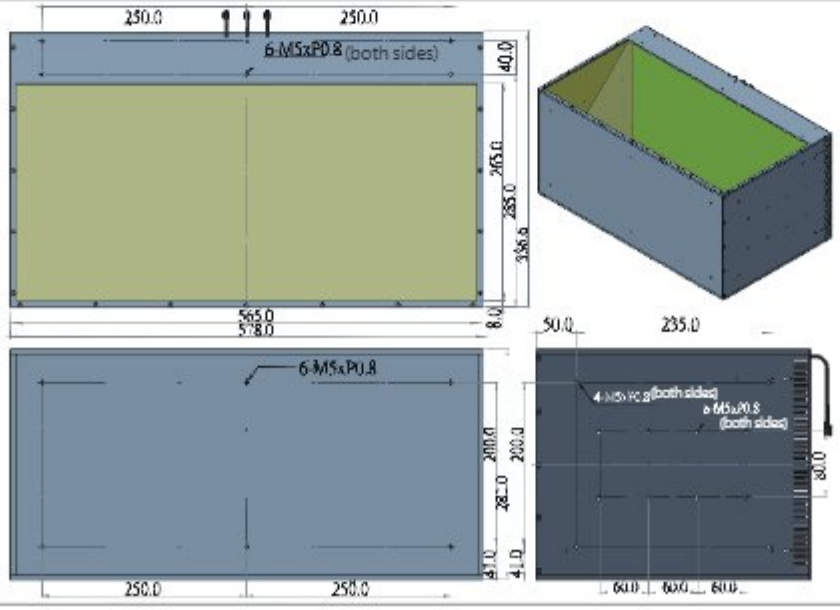
H


40.0
60.0
80.0
12-M4xP0.7
132.0
90.0
21.0
360.0
371.0
255.0
50.0
100.0
66.5
190.0
4-M4xP0.7
4-M3xP0.5
371.0
350.0 (glowing window)
120.0 (glowing window)
190.0
10.0
45.0
132.0

I


300.0
4-M5xP0.8
25.0
230.0
210.0
400.0
8.0
415.0
250.0
4-M5xP0.8
150.0
227.0
282.0

J


250.0
250.0
6-M5xP0.8 (both sides)
40.0
265.0
285.0
336.6
565.0
578.0
8.0
50.0
235.0
6-M5xP0.8
4-M5xP0.8 (both sides)
6-M5xP0.8 (both sides)
200.0
282.0
80.0
250.0
250.0
60.0
60.0
60.0

Specification

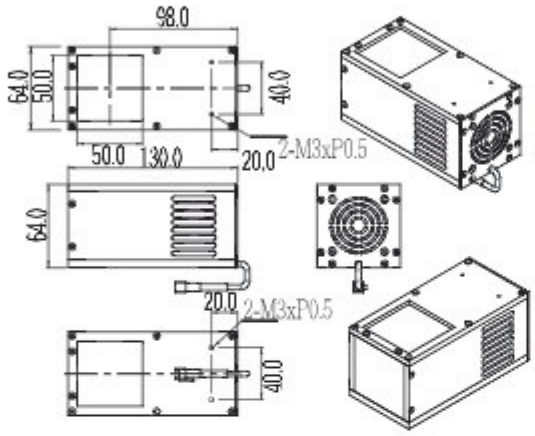
(B) High Power Coaxial Lights

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
HCL-5050	○ ● ● ● ●	50×50	○ ● ● ● ● 24V/57.6W	L
HCL-15050	○ ● ● ●	158×50	○ ● ● ● 24V/120W	M

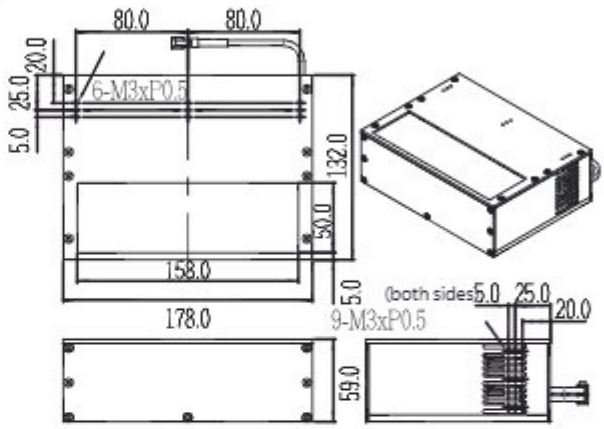
Note：1.○White ● Blue ● Red ● UV365nm ● UV400nm　　2. Unit：mm

Dimensional drawings

L



M



Specification

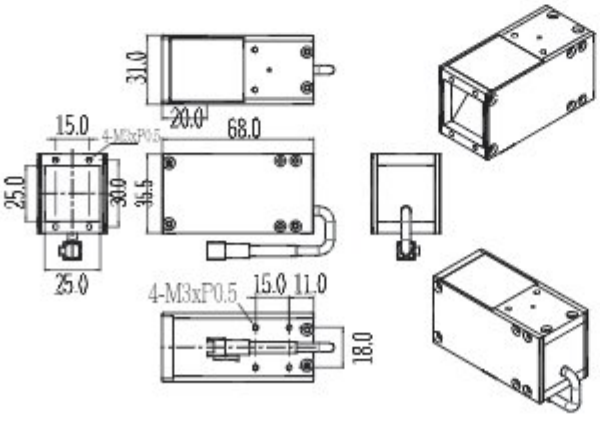
(C) 90-Angle coaxial lights

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
CL-2525-90D	○ ● ● ● ●	25×25	○ ● ● ● ● 24V/4.8W	N
CL-5050-90D	○ ● ● ● ●	58×53.5	○ ● ● ● ● 24V/12W	O
CL-100100-90D	○ ● ● ● ●	100×100	○ ● ● ● ● 24V/24W	P

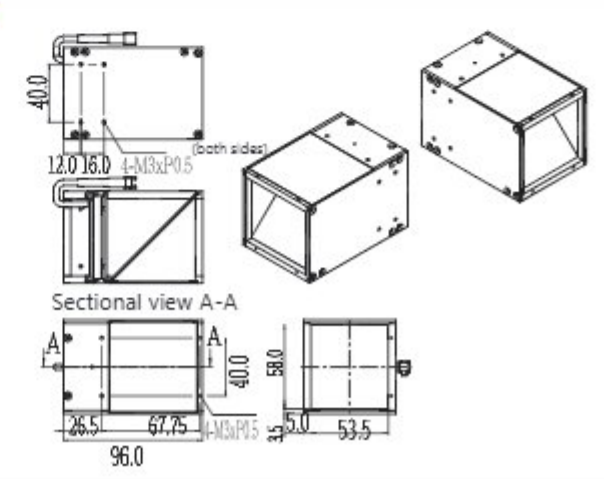
Note：1.○White ● Blue ● Green ● Red ● UV400nm　　2. Unit：mm

Dimensional drawings

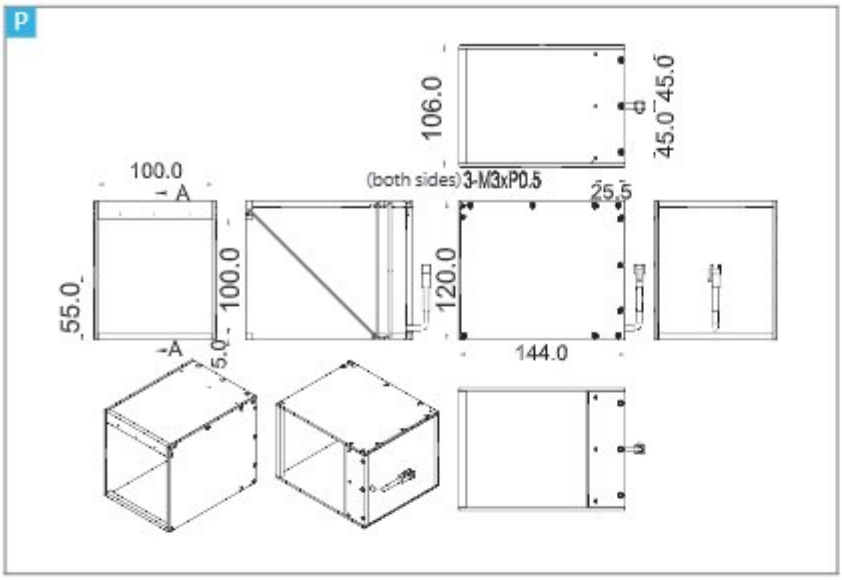
N



O



P



Specification

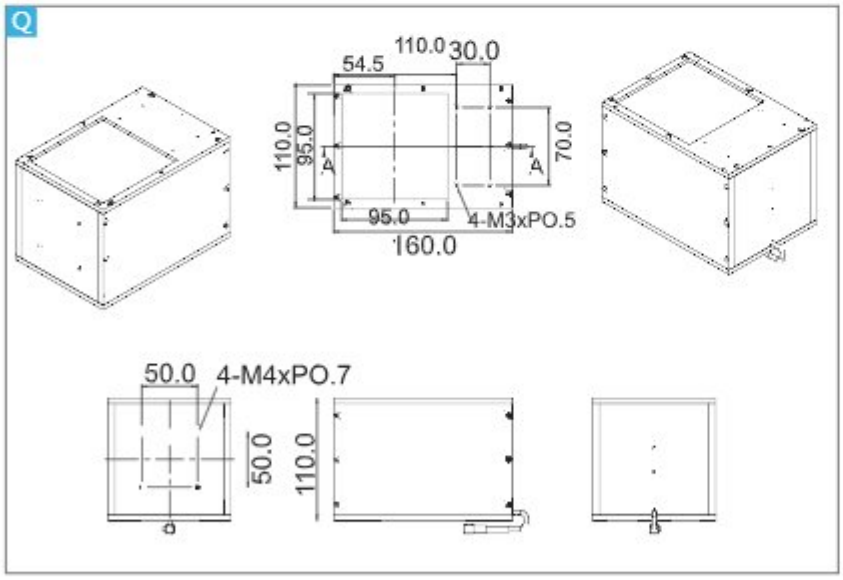
(D) Collimated Coaxial Lights

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
CCL-9595	○ ● ● ●	95X95	○ ● ● ● 6V/5.6W	Q

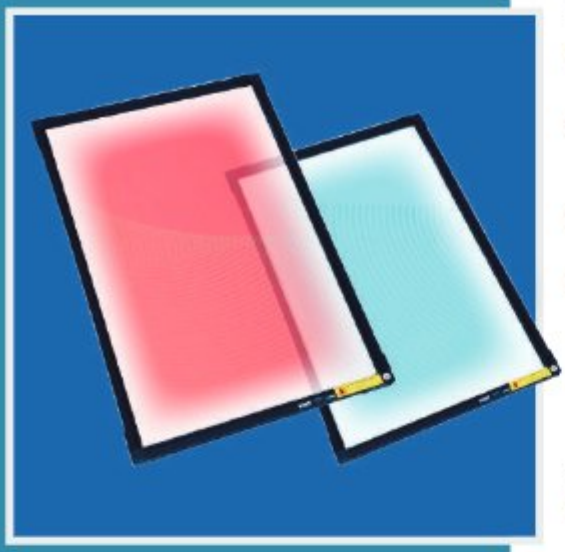
Note：1.○White ●Blue ●Green ●Red　　2. Unit：mm

Dimensional drawings

Q



Flat Square Dome Lights



Features

- Special optical material design provides high transparency, high brightness, and high uniformity coaxial lighting
- The product is only 14mm thick and ultra-thin, making it especially suitable for harsh environments where general external coaxial installations cannot be installed due to space constraints.
- Illumination range from 145×120mm to maximum 560×322mm available
- Ultra-high CP value, less than half the price of ordinary external coaxial, suitable for lighting applications with limited budget

Applications

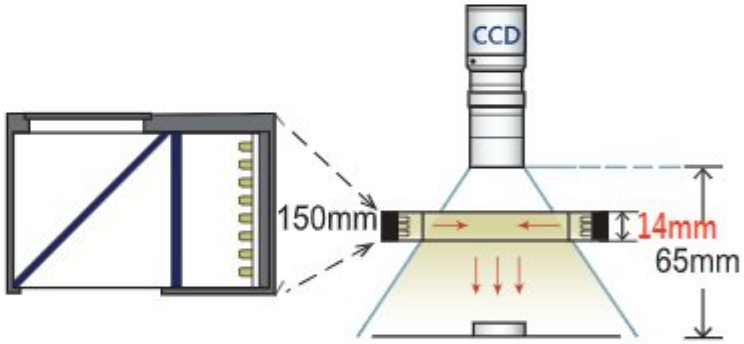
- The image has no reflective or glare highlights and is most suitable for detecting various characteristics of specular reflective objects. or defective use
- Suitable for detection of specular reflection or high reflection coefficient objects. For example: PCB bare board and film alignment, mark identification and defect inspection
- Identification of scratches, dents or marks on the surface of various glass, coating or metal easily reflective materials
- Panel products in the wafer or panel industry, alignment, mark identification and defect inspection of glass substrates and optical filters

Inspect Examples
檢測實例

Lighting with general ring light is affected by the height of the object. The lighting varies from low to high.

Use thin outer coaxial to effectively punch large The range is uniform and coaxial with the light source to avoid Avoid misjudgments caused by shadows and vignetting.

Lighting Method



CL-150140 FSDL-145120

Luminous Intensity

Model Description

FSDL – □□□□□□V□

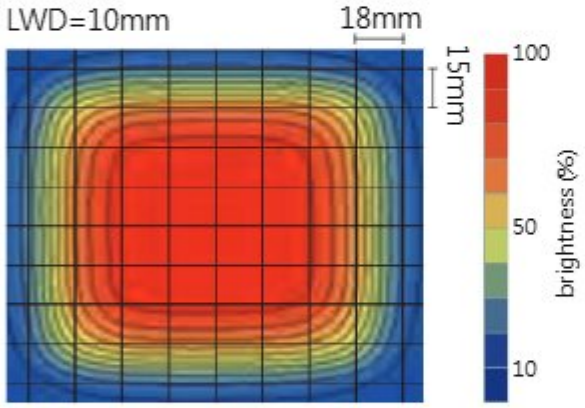
- Constant Current (C)
- Volt (24V)
- Color (White / Red / Blue / Green / Amber / IR850 / IR940)
- Emitting Area Width (mm)
- Emitting Area Length (mm)

Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
FSDL-145120	○ ● ● ● ● ● ●	145×120	○ ● ● ● ● 24V/13W ● ● 24V/13W	A
FSDL-197170	○ ● ● ● ● ● ●	197×170	○ ● ● ● ● 24V/18W ● ● 24V/18W	B
FSDL-278197	○ ● ● ● ● ● ●	278×197	○ ● ● ● ● 24V/18W ● ● 24V/18W	C
FSDL-435300	○ ● ● ● ● ● ●	435×300	○ ● ● ● ● 24/33.6W ● ● 24/33.6W	D
FSDL-560322	○ ● ● ● ● ● ●	560×322	○ ● ● ● ● 24V/58W ● ● 24V/58W	E

Note：1.○ White ● Blue ● Green ● Red ● Amber ● UV850(Infrared ray) ● 940nm (Infrared ray)　2. Unit：mm

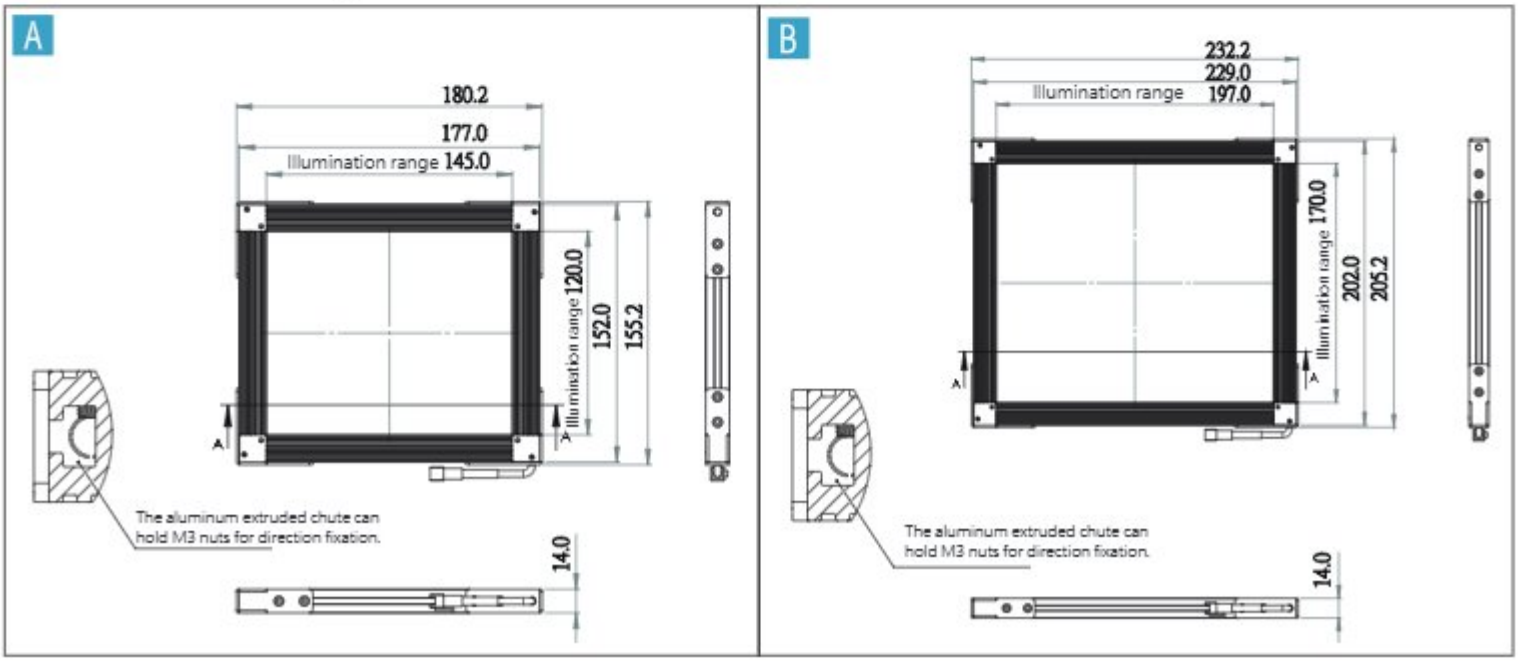
Uniformity



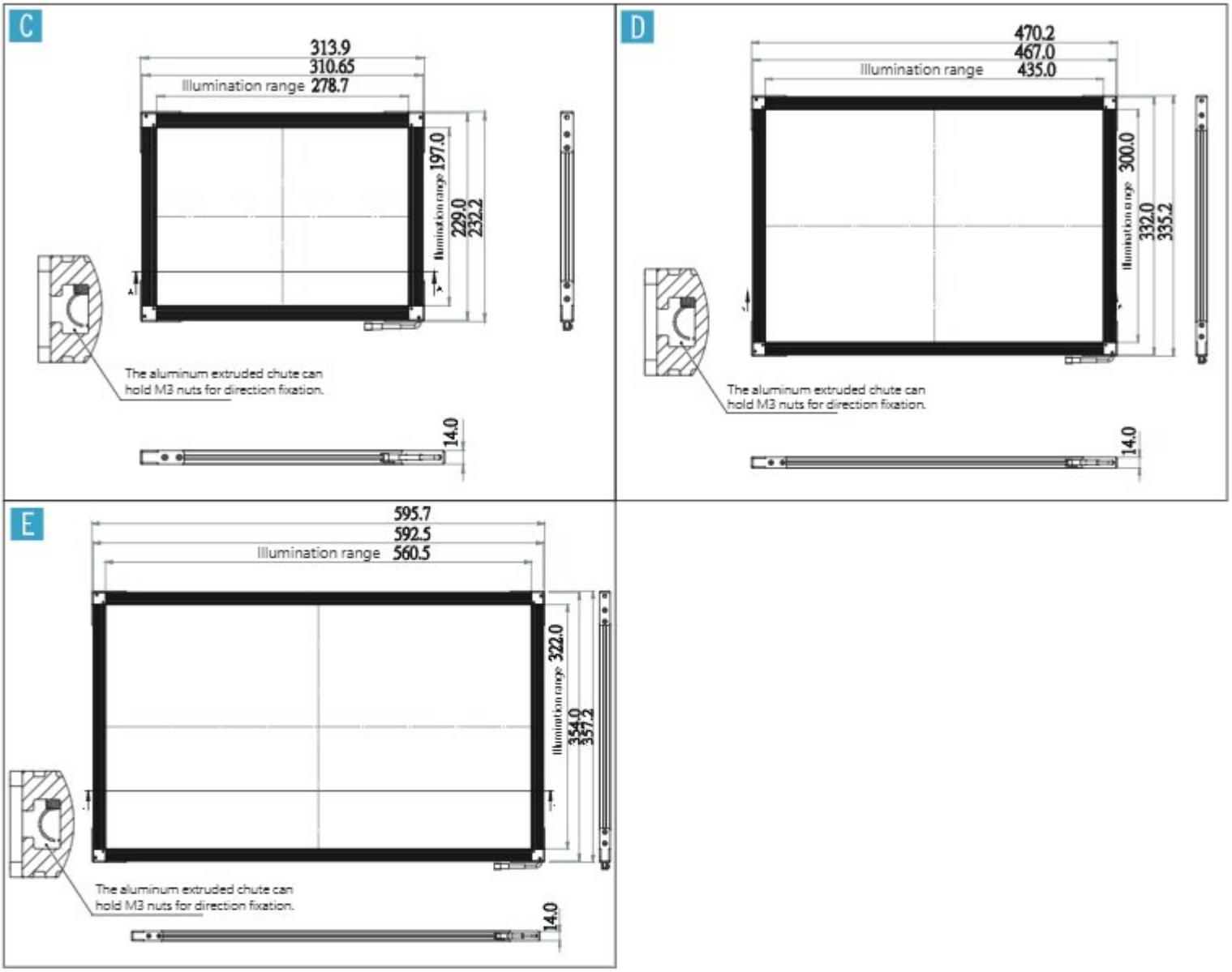
*The picture on the left was measured with FSDL-145120

Note：Data included is for reference only and results for individual products may vary.
If the uniformity is >80%, it is safer to deduct 30mm from the top, bottom, left and right.

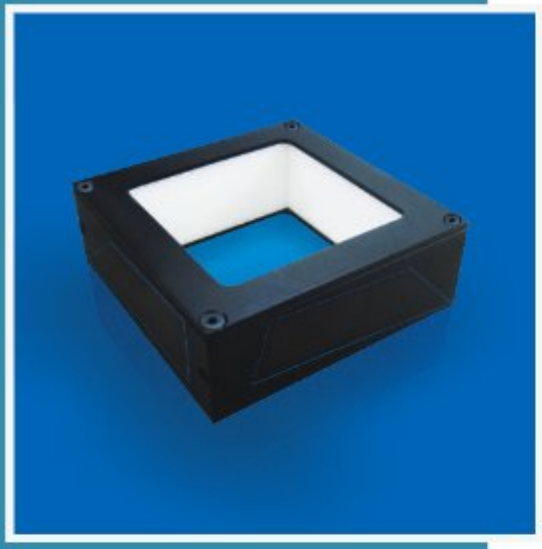
Dimensional drawings



Dimensional drawings



Diffused Square Lights



Features

- Using a uniquely designed diffusion plate, the light is reflected and scattered multiple times to form multiple The square symmetrical light field with uniform direction and high brightness can illuminate the object surface from different angles. Even irradiation.
- Indirect diffuse light, suitable for detection of highly mirrored and highly reflective objects.

Applications

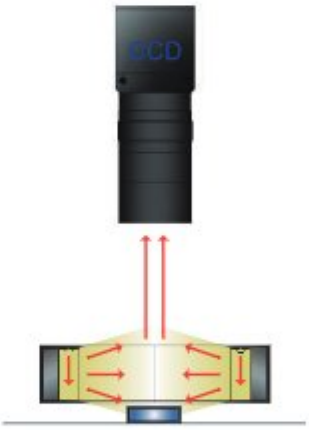
- IC pin location, laser marking detection
- Device installation positioning
- Surface character pattern recognition
- Dimensional inspection

Inspect Examples

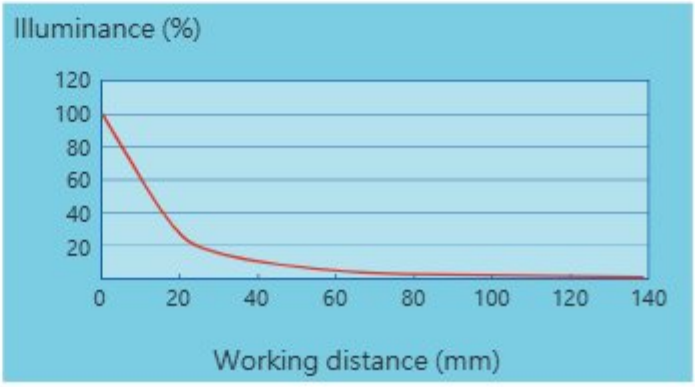
Shadowless light source detection effect: IC pin position, surface laser engraving is clear

Hemispheric light source detection effect: surface Laser engraving is less clear

Lighting Method



Luminous Intensity



Note : The experimental product is DSL-5070W24V0.3AC ; the 100% illumination value is 60,000 (LUX)

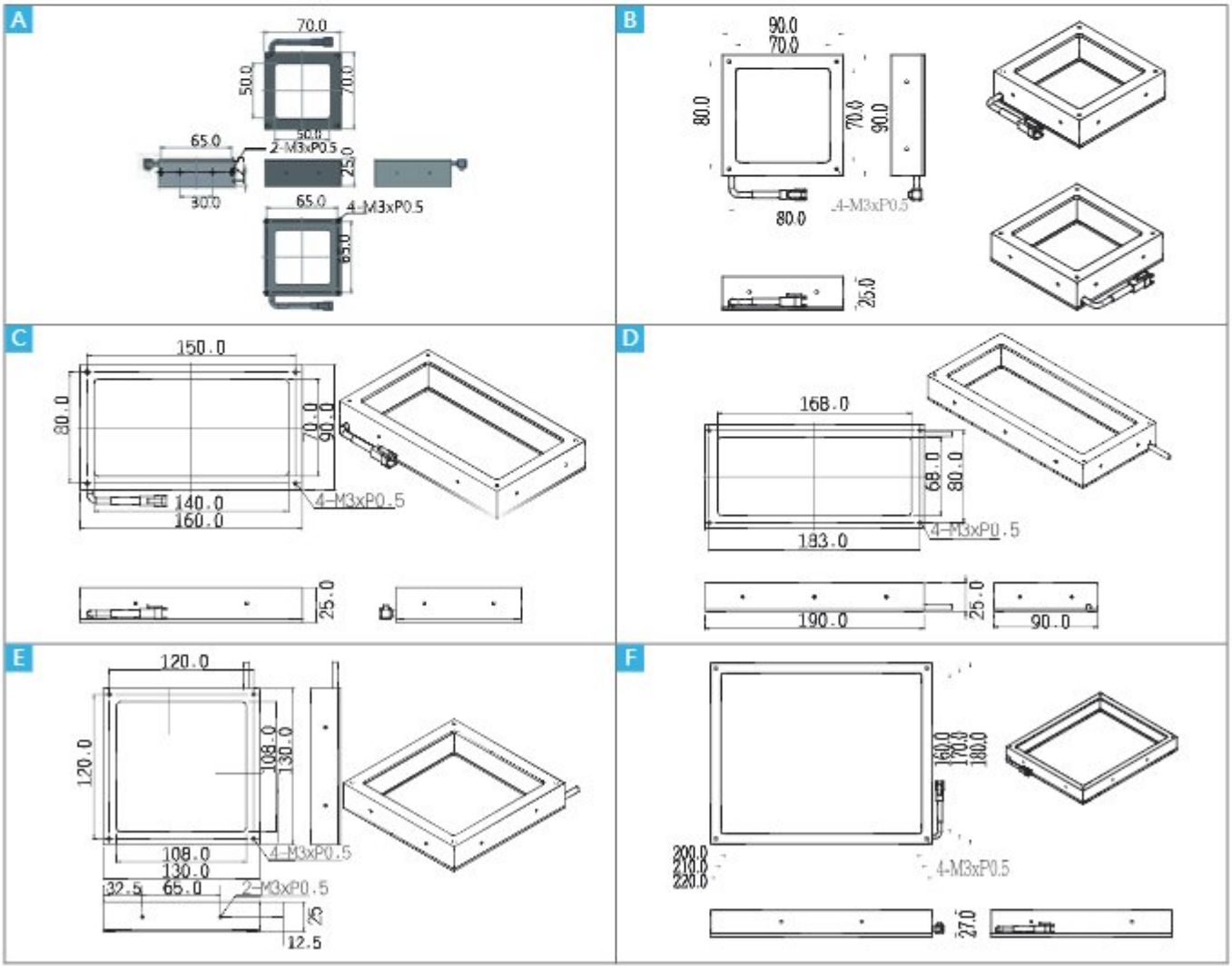
Model Description

Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
DSL-5070	○ ● ● ● ● ●	50×50	○ ● ● ● 24V/7.2W ● ● 24V/5.8W	A
DSL-7090	○ ● ● ● ● ●	70×70	○ ● ● ● 24V/11.5W ● ● 24V/9.2W	B
DSL-90160	○ ● ● ● ● ●	70×140	○ ● ● ● 24V/12W ● ● 24V/9.6W	C
DSL-90190	○ ● ● ● ● ●	68×168	○ ● ● ● 24V/13.4W ● ● 24V/10.7W	D
DSL-108130	○ ● ● ● ● ●	108×108	○ ● ● ● 24V/14.4W ● ● 24V/11.6W	E
DSL-180220	○ ● ● ● ● ●	160×200	○ ● ● ● 24V/19.2W ● ● 24V/12W	F

Note：1. ○White ●Blue ●Green ●Red ●850nm(Infrared ray) ●940nm (Infrared ray)　2. Unit：mm

Dimensional drawings



Light-source with Built-in Dimmer

Features

- Built-in constant current dimming control circuit, the light source brightness is stable and does not flicker
- High cost performance: built-in manual VR dimming function, no need to purchase additional dimmer, effectively saving vision system construction costs

Applications

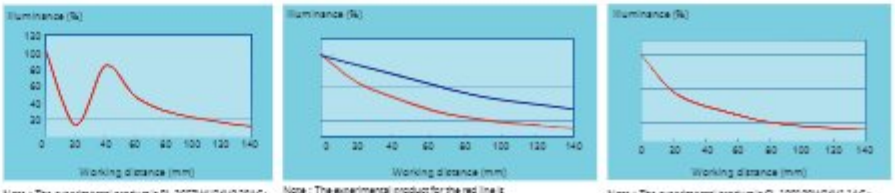
- Basic alignment or shape identification of general objects, especially suitable for those who attach great importance to cost. visual system development
- Edge inspection, surface scratch inspection on glass or shiny materials
- Alignment inspection of transparent objects and glass substrates

Lighting Method

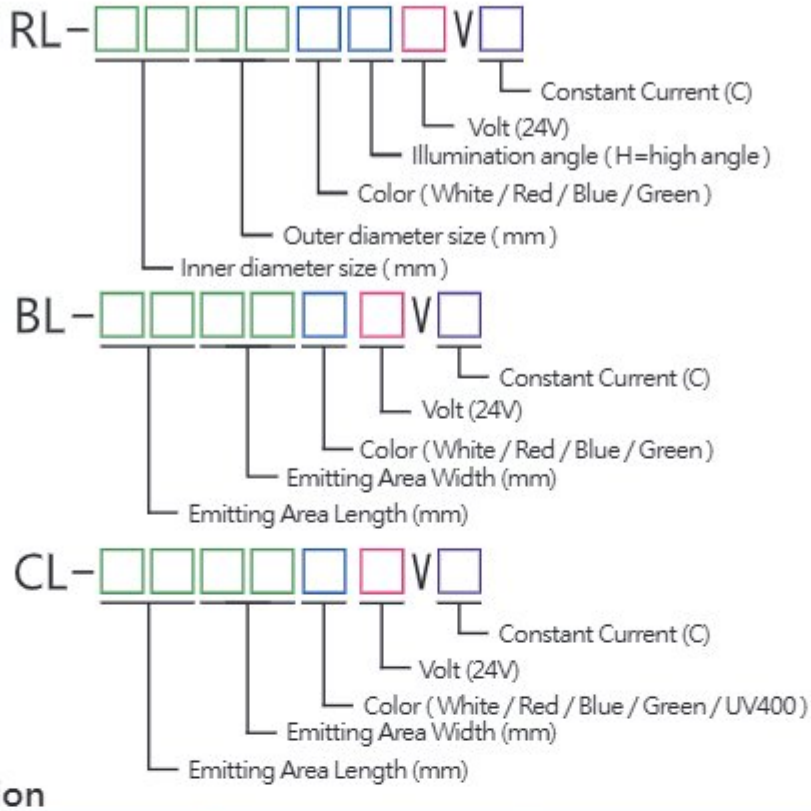
H high angle 70°

Ring Lights　　Back Lights　　Coaxial Lights

Luminous Intensity



Model Description



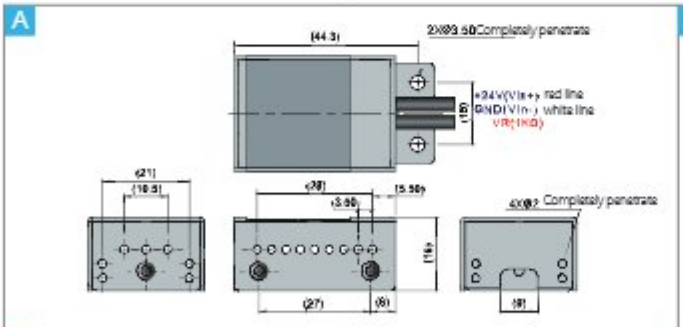
Specification

(Model)	(Color)	(Emitting Area)	(Power Consumption)	(Dimension)
BL-2525	○ ● ● ●	25×25	○ ● ● ● 24V/0.96W	A
RL-3667	○ ● ● ●	36inner diameter/67outer diameter	○ ● ● ● 24V/0.96W	B
CL-2020	○ ● ● ● ●	20×20	○ ● ● ● ● 24V/2.88W 24V/2.88W	C
CL-3535	○ ● ● ● ●	35×35	○ ● ● ● ● 24V/3.36W 24V/3.36W	D

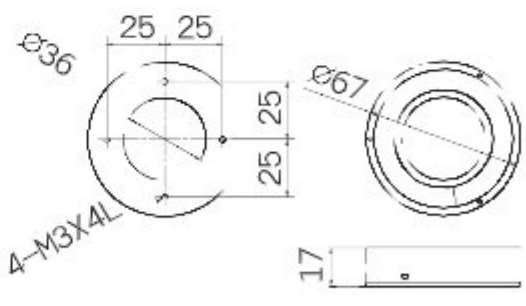
Note：1.○White ●Blue ●Green ●Red ●UV400　　2. Unit：mm

Dimensional drawings

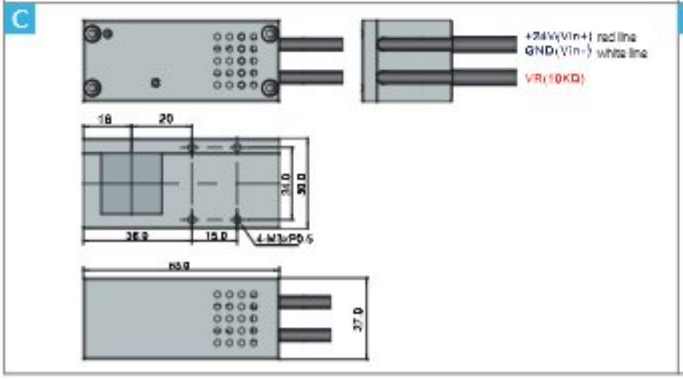
A



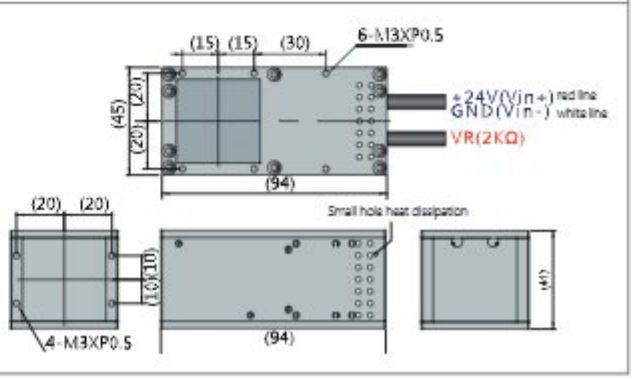
B



C



D



Constant Voltage LED Controllers

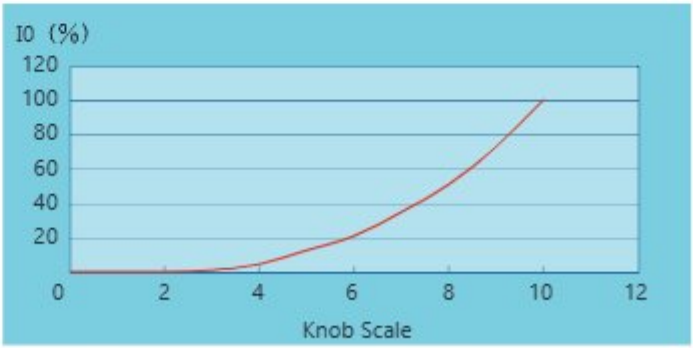
Features

- Lightweight and practical, emphasizing stable dimming function, small size and easy installation, stepless Adjustable to any brightness
- Optimal stability, adopting regulated output mode, noise and ripple coefficient <1%, non- PWM control, no flickering problem
- Affordable price

Applications

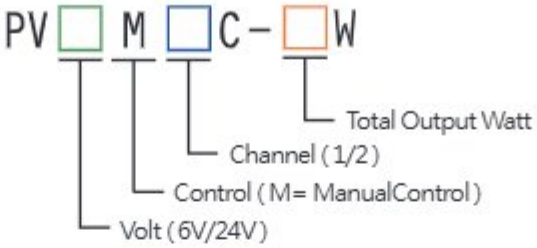
- Matched with various brands of LED light sources, used in optoelectronics, LCD, connectors, plastics, metals, etc. Electronics industry, semiconductors, personal computers

Linearity



Note : The experimental product is PV12M1C

Model Description



Specification

6 Volt

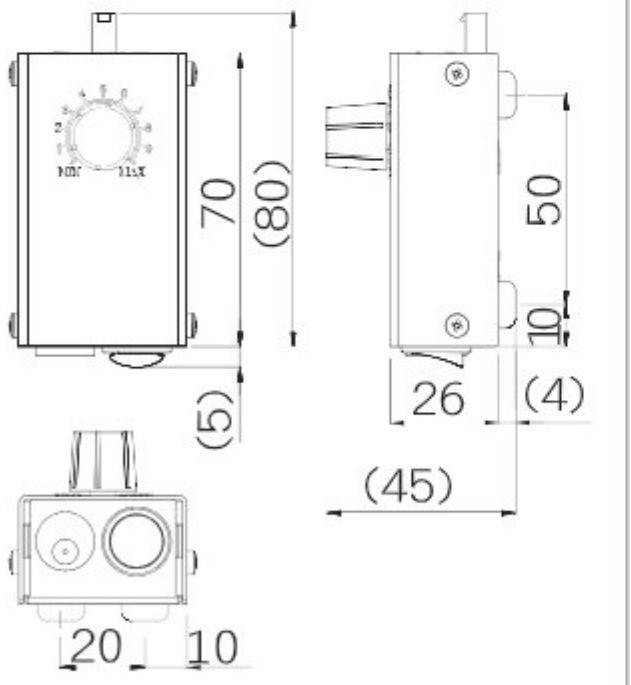
(Dimension)	A	B
(Model)	PV6M1C	PV6M2C
(Channel)	1	2
(Input Voltage)	AC100~240 Input	
(Output Voltage)	DC 1.2~6V	
(Output Power)	9W	15W
(Output Current)	1.5A/CH	1.5A/CH，Total 2.6A
(Humidity)	20%~80% RH	
(Temperature)	0°C~50°C	
(Control)	Manual VR adjustment	

24 Volt

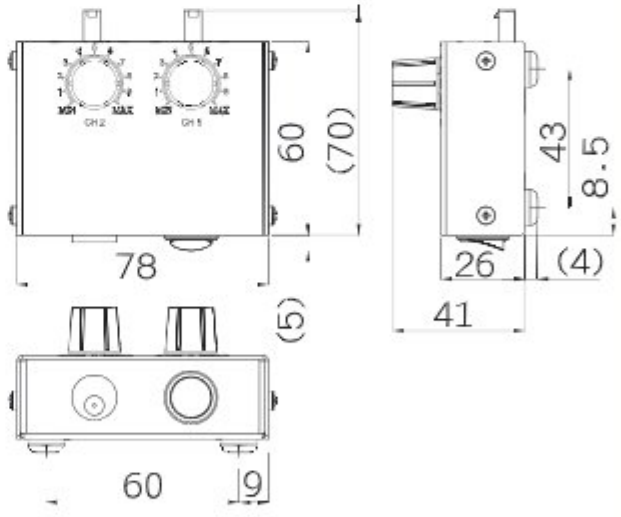
(Dimension)	A	B
(Model)	PV24M1C	PV24M2C
(Channel)	1	2
(Input Voltage)	AC100~240 Input	
(Output Voltage)	DC 8~24V	
(Output Power)	26W	62W
(Output Current)	1.1A/CH	1.5A/CH，Total 2.6A
(Humidity)	20%~80% RH	
(Temperature)	0°C~50°C	
(Control)	Manual VR adjustment	

Dimensional drawings

A



B



Constant Current LED Controllers

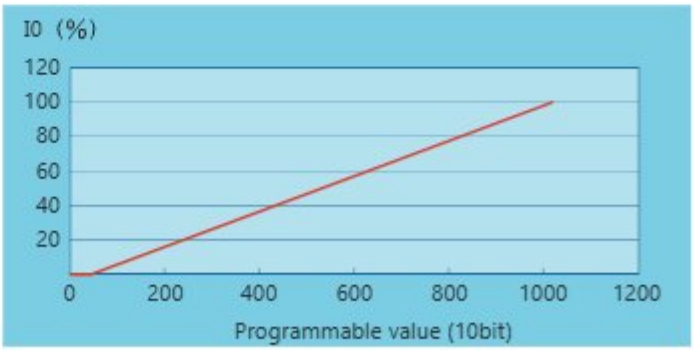
Features

- Regardless of load impedance changes, the voltage will be automatically adjusted to maintain a certain current supply to maintain stability. fixed LED brightness
- Using a constant current flow to drive LED will be better than the same in terms of brightness, stability and dimming linearity. Constant voltage driving light source with the same brightness
- Provide high power constant current dimmer
- Provides manual or RS-232 program control
- Provide flash or high-speed switching function
- International universal full range AC input (110-220V)
- Provide complete overheating/short circuit/overvoltage/overload protection circuit measures

Applications

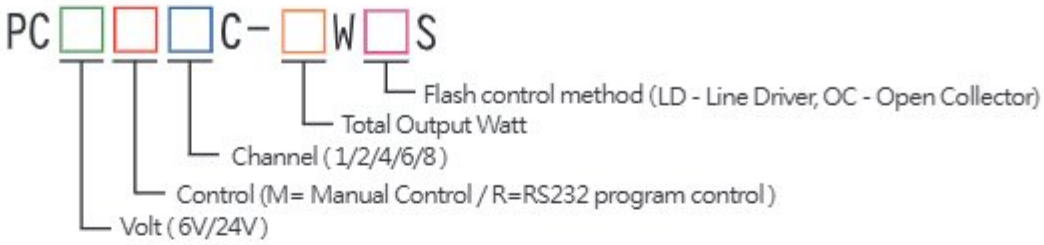
- Matched with various brands of LED light sources, used in optoelectronics, LCD, connectors, plastics, metals, etc. Electronics industry, semiconductors, personal computers

Linearity



Note : The test product is PC24R4C-150W

Model Description



Specification

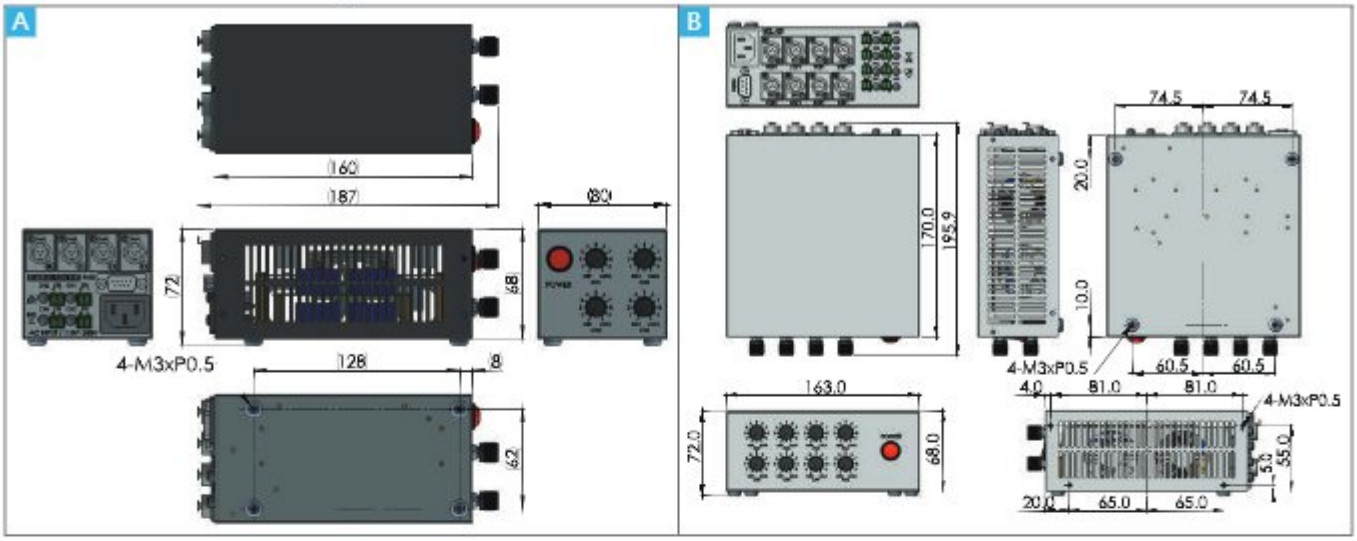
6 Volt

(Dimension)	A	A	A	B	B
(Model)	PC6 □ 1C	PC6 □ 2C	PC6 □ 4C	PC6 □ 6C	PC6 □ 8C
(Channel)	1	2	4	6	8
(Input Voltage)	AC100~240 Input				
(Output Voltage)	DC 6V Max				
(Output Power)	9W	18W	36W	54W	65W
(Output Current)	1.5A/CH				
(Humidity)	20%~80% RH				
(Temperature)	0°C~50°C				
(Control)	Manual VR/RS-232 Program control				

24 Volt

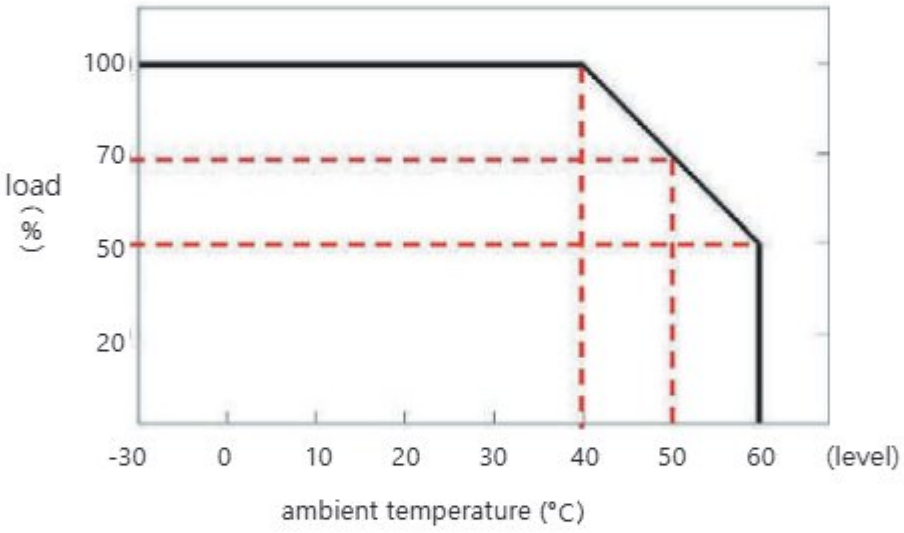
(Dimension)	A	A	A	B	B
(Model)	PC24 □ 1C	PC24 □ 2C	PC24 □ 4C	PC24 □ 6C	PC24 □ 8C
(Channel)	1	2	4	6	8
(Input Voltage)	AC100~240 Input				
(Output Voltage)	DC 24V Max				
(Output Power)	36W	65W	150W 65W low wattage	216W 150W low wattage 65W low wattage	300W 150W low wattage 65W low wattage
(Output Current)	1.5A/CH				
(Humidity)	20%~80% RH				
(Temperature)	0°C~50°C				
(Control)	Manual VR/RS-232 Program control				

Dimensional drawings



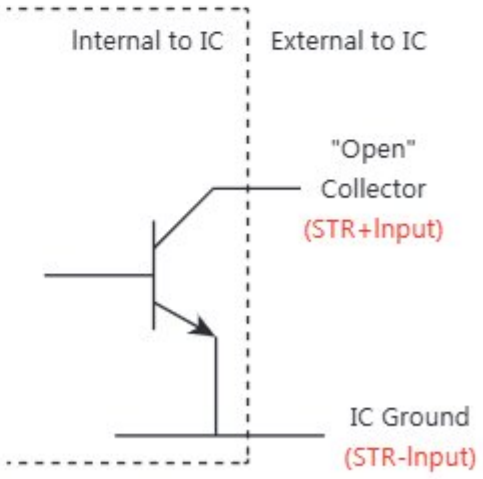
■ derating curve

Note : When installing the dimmer, please place it in an environment with good ventilation and heat dissipation. If the enclosed space causes the ambient temperature to rise, the maximum output of the dimmer will decrease according to the following derating curve.



Flash level controller specifications (NPN form-Open Collector/Line Driver)		
Flash input control method	Open Collector	Line Driver
Flash on input voltage range	Open / GND	3~40VDC (Do not connect positive and negative reversely)
Flash control current	1uA / CH	1mA/CH
Turn-On time delay	1V <1us	
Turn-Off time delay		

Note : The above design and specifications are subject to change without further notice.
* For higher speed flash strobe specifications and over-driving types, please call us separately.
* Multiple CHs are connected using common ground.



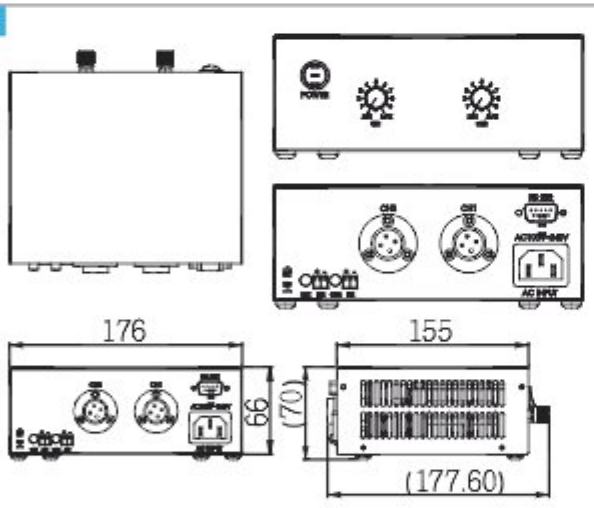
*Open Collector Type connection instructions

High Power RS-232 Program Control Constant Current Controllers Specification

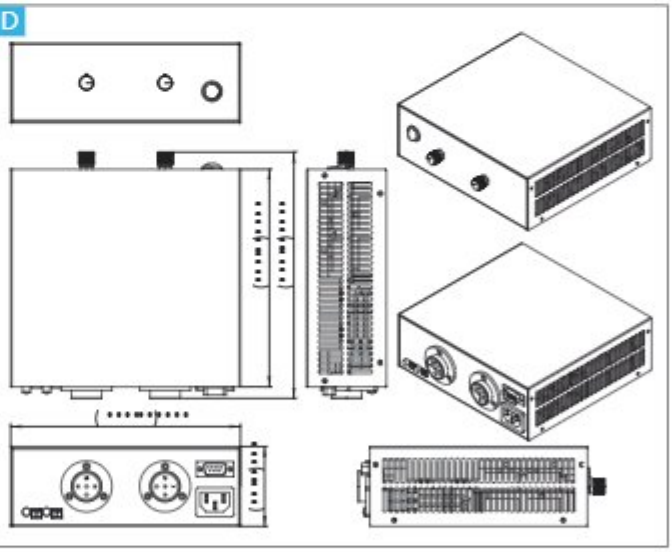
(Dimension)	C	C	D	D	E
(Model)	PC24 □ 1C-300W	PC24 □ 2C-300W	PC24 □ 1C-400W	PC24 □ 2C-400W	PC24 □ 1C-1200W
(Channel)	1	2	1	2	1~4
(Input Voltage)	AC100~240 Input				
(Output Voltage)	DC 24V Max				
(Output Power)	300W	300W	400W	400W	1200W
(Output Current)	7A/CH	5A/CH	14A/CH	7A/CH	Total Max 38A
(Pin Numbers)	4P	4P	5P	5P	5P
(Temp. & Humidity)	20%~80% RH				
(Control)	Manual VR/RS-232 Program control				

Dimensional drawings

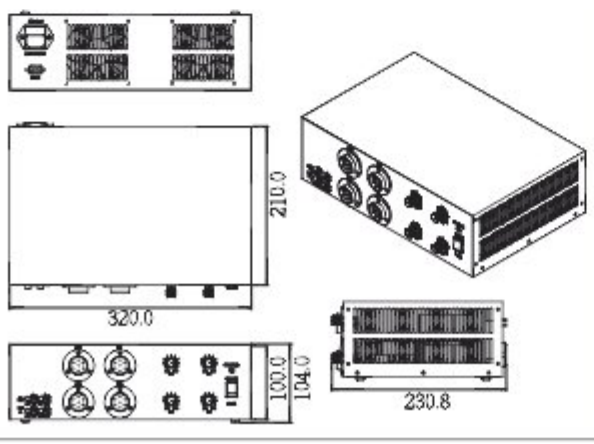
C



D



E



Mini Constant Current LED Controllers

▲ Mini Constant Current LED Controllers

Features

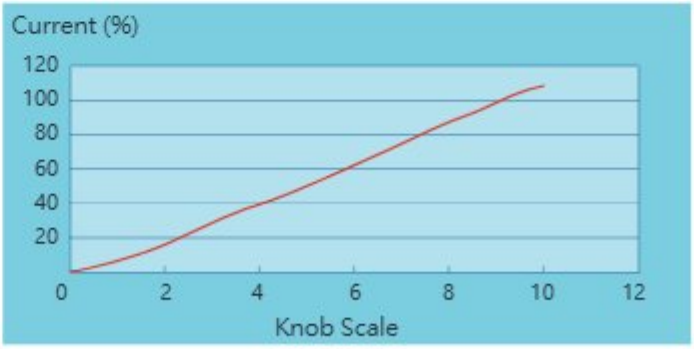
- The smallest size in the industry and easy installation
- Manual control method
- Provide track-type Mini dimmer, which can be installed on the machine to facilitate electrical control personnel's power distribution and line running.

▲ Mini Track Constant Current LED Controllers/
Mini Track Constant Current LED Controllers (Heating flakes)

Applications

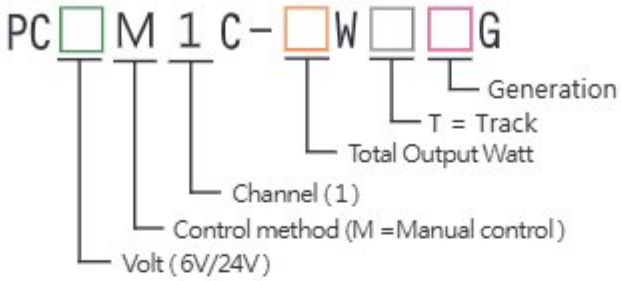
- The mini dimmer is the smallest dimmer in the industry, providing 24W high power output.
power, and provide different output voltage options of 6V/24V
- Matched with various brands of LED light sources, used in optoelectronics, LCD, connectors, plastics, metals, etc. Electronics industry, semiconductors, personal computers

Linearity



Note : The test product is PC24R1C-24W1G

Model Description



Specification

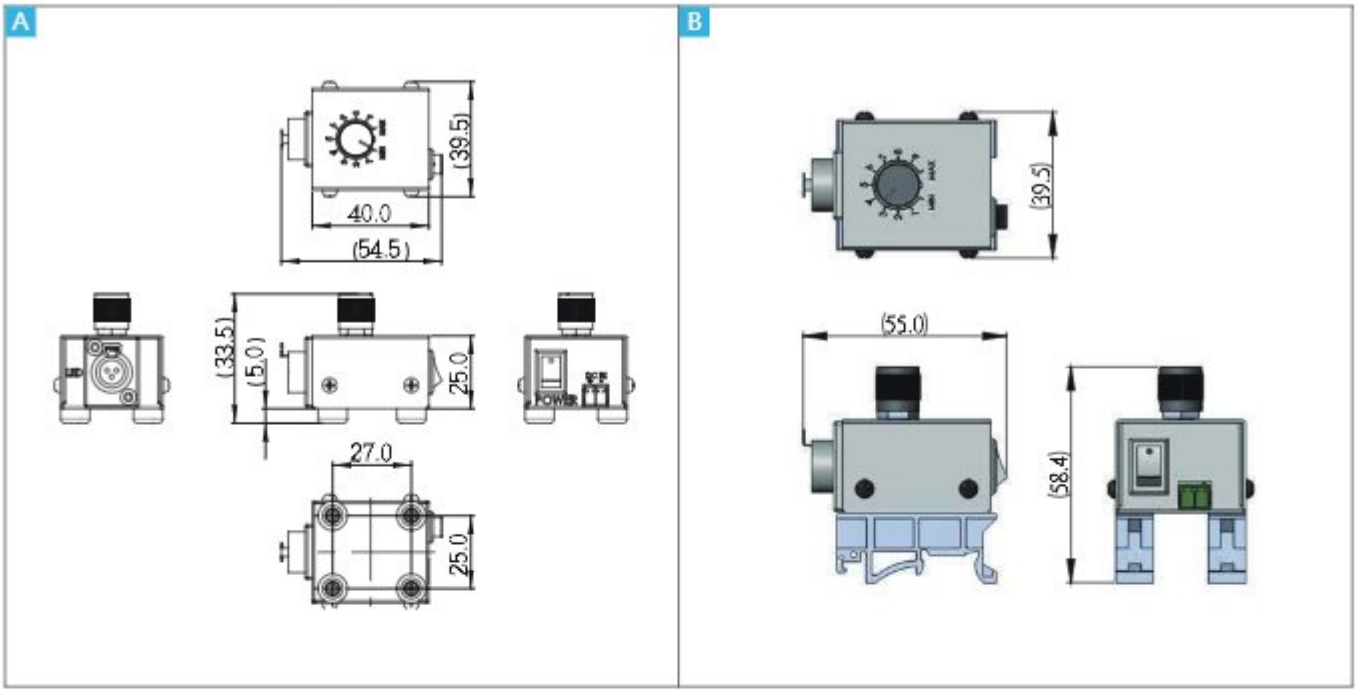
Mini manual constant current dimmer

(Model)	PC6M1C-6W2G	PC24M1C-24W2G	(Output Current)	0.7A/CH
(Channel)	1		(Humidity)	20%~80% RH
(Input Voltage)	DC 6V	DC 21V	(Temperature)	0°C~50°C
(Output Voltage)	DC 4V MAX	DC 19V MAX	(Control)	Manual VR adjustments
(Output Power)	6W	24W	(Dimension)	A

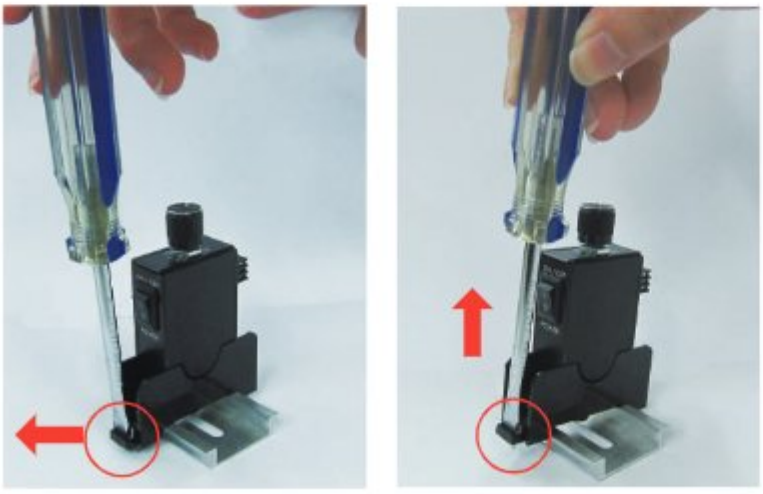
Mini track type manual constant current dimmer

(Model)	PC24M1C-19WT	(Output Current)	0.7A/CH
(Channel)	1	(Humidity)	20%~80% RH
(Input Voltage)	DC 21V	(Temperature)	0°C~50°C
(Output Voltage)	DC 19V MAX	(Control)	Manual VR adjustments
(Output Power)	18.9W	(Dimension)	B

Dimensional drawings



Mini track constant current controller manual dimmer removal method



Use a screwdriver to insert the cassette (red circled part) and pull it up to remove it.

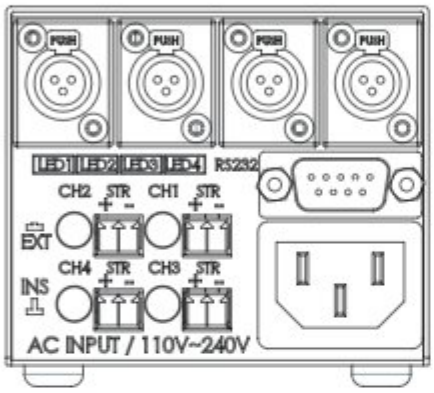
10bit RS232 Constant Current Controllers Instructions

Operational Precautions

- Manual knob control (INS) or external RS232 program control (EXT) can be switched through the switch on the LED dimmer control panel
- In order to avoid "overlap" in RS232 character data transmission, after transmitting a set of control codes, you should wait for the controller to reply with a handshake code before transmitting the next set of control codes. Code making

RS232 terminal pin description

- Connector Type：
  LED Controller：SUB 9 pin connector (female)
  RS232 cable：SUB 9 pin connector (male)
- Pinout Description：
  Please note that the controller and the computer between the RS232 signal transmission line does not require jumper, please point to point connection can be directly

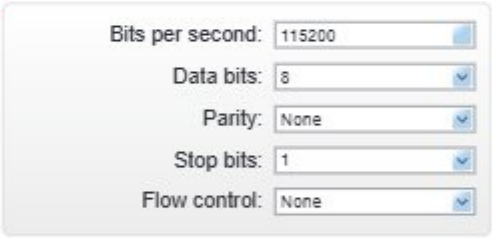


Pin	Controller side	Computer side
1	None	None
2	Data reception	Data reception
3	Data transmission	Data transmission
4	None	None
5	GND	GND
6-9	None	None

Code writing instructions

※ Device administrator and AccessPort：10bit Baud Rate 115200bps

- Communication protocol：
  Buad Rate：115200bps
  Data bits：8
  Parity check：None
  Stop bits：1
  Flow Control：None



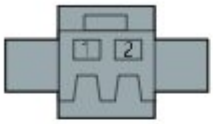
- The format of the data transferred from the computer to the controller is as follows：
  Controller to string mode control channel + " , " + brightness value + newline symbol
  PS：Note that the brightness value range is 0 ~ 1023, input greater than 1023 will be regarded as 1023
  (a).When the controller receives the first character, the user must send the next character within 0.2 seconds, otherwise it will return E[0x0d][0x0a]
  (b).When the controller receives the end character[0x0a]
  If the instruction is correct, the controller will return the user into the string, for example：
  Set the CH1 LED to the brightest and the command in RS232
  [Computer -> Controller]:1,1023[0x0d][0x0a]
  [Controller -> Computer]:1,1023[0x0d][0x0a]
  The CH1 LED to the darkest, the command in the RS232
  [Computer -> Controller]:1,0[0x0d][0x0a]
  [Controller -> Computer]:1,0[0x0d][0x0a]
  Set CH1 to 100, CH2 to 150, CH3 to 200, and CH4 to 255
  [Computer -> Controller]:1,100,2,150,3,200,4,255[0x0d][0x0a]
  [Controller -> Computer]:1,100,2,150,3,200,4,255[0x0d][0x0a]
  The CH10 LED to the darkest, the command in the RS232
  [Computer -> Controller]:10,0[0x0d][0x0a]
  [Controller -> Computer]:CH not Available![0x0d][0x0a]
  Communication error or character timeout
  [Computer -> Controller]:10[0x0d]0x0a]
  [Controller -> Computer]:E[0x0d][0x0a]

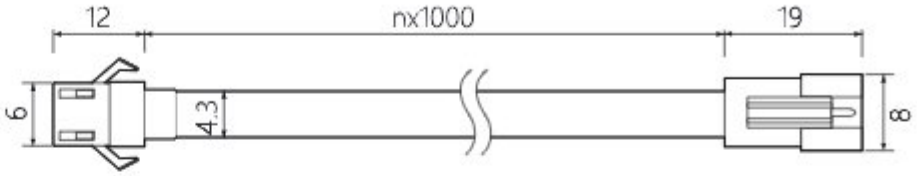
Accessory

2 Pin Aerial Connector

2 Pin Constant Voltage extension line supply (n=3、5、10)

Terminal pin description
(light source end)



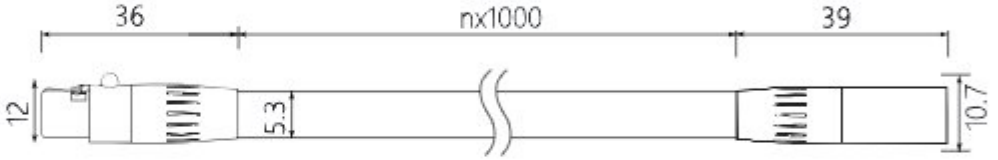


Pin	1	2
Pin definition	LED+	LED-

3 Pin Aero metal connector

Terminal pin description
(light source end)

3 Pin Constant current extension line supply(n=3、5、10)

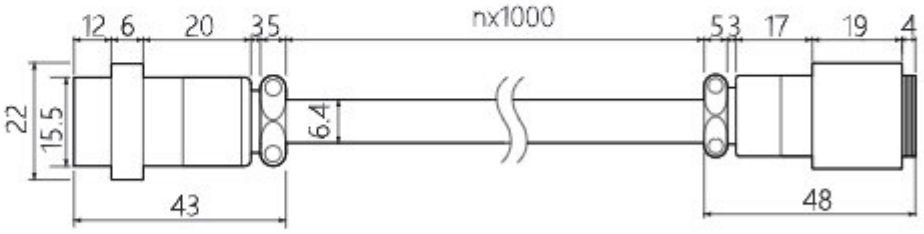


Pin	1	2	3
Pin definition	LED+	Current identification	LED-

4 Pin Aero metal connector

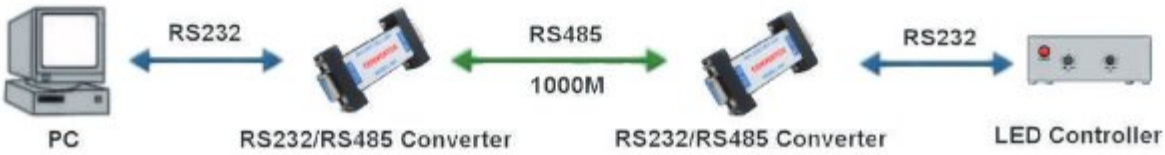
Terminal pin description
(light source end)

4 Pin Constant current extension line supply(n=3、5、10)



Pin	1	2	3	4
Pin definition	LED+	LED-	FAN+	N/A

The RS232 program control line can be up to 10 meters long.
Please use the RS485 adapter for 10 meters
(the longest length can be up to 1000 meters).

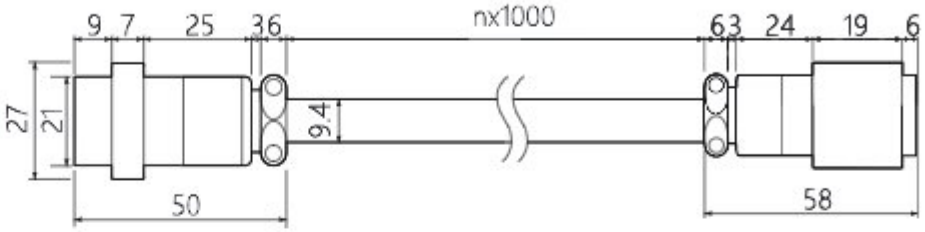


Accessory

5 Pin Aero metal Connector

Terminal pin description
(light source end)

5 Pin Constant current extension line supply(n=3、5、10、15、20)

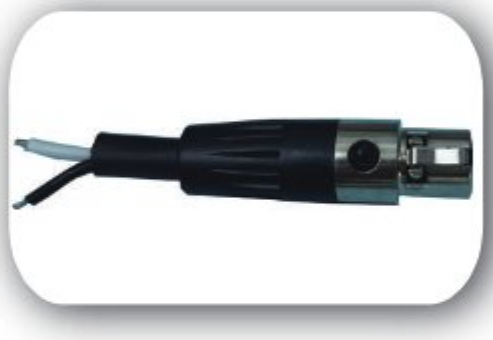


Pin	1	2	3	4	5
Pin definition	LED+	LED+	FAN+	LED-	LED-

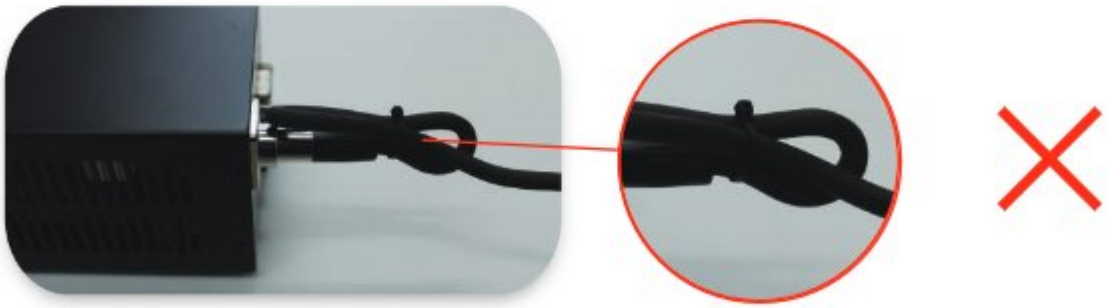
Bare wire (light source end)

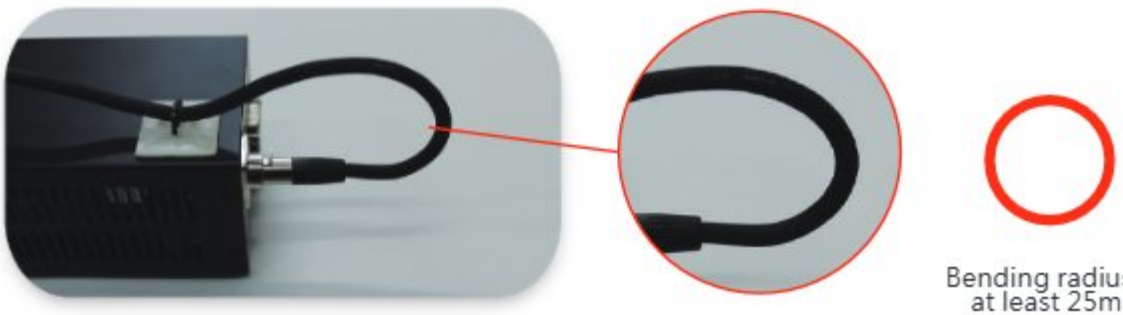
3Pin air connector male to 2Pin bare wire
(black positive, white negative)

3Pin aerospace metal connector male to 2Pin bare wire
(black positive, white negative)



Fixed wiring diagram

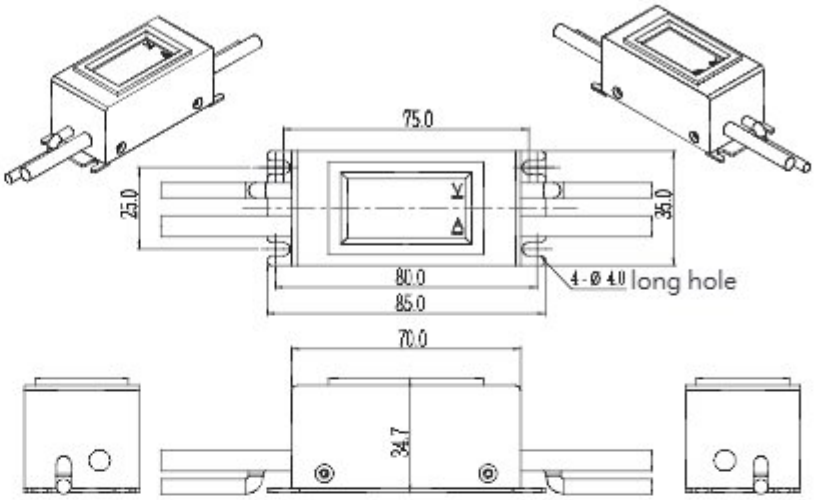




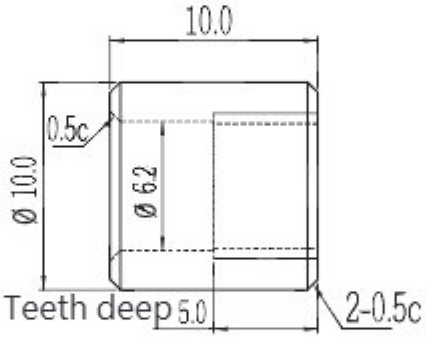
Bending radius of
at least 25mm

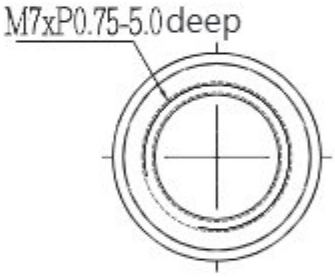
Accessory

Digital display voltage and ammeter



Prevent personnel from manually adjusting the brightness of the light source nut





Different wire diameter / line length pressure drop table

(The voltage drop of the wire should not exceed 2V to avoid the insufficient working voltage of the light source.)

*1A

Wire diameter / Line length	3M	5M	10M	20M
AWG24	0.25V	0.42V	0.83V	1.66V
AWG22	0.16V	0.27V	0.53V	1.06V
AWG20	0.1V	0.16V	0.33V	0.67V

*5A

Wire diameter / Line length	3M	5M	10M	20M
AWG24	1.25V	2.1V	4.15V	8.3V
AWG22	0.8V	1.35V	2.65V	5.3V
AWG20	0.5V	0.8V	1.65V	3.3V

*10A

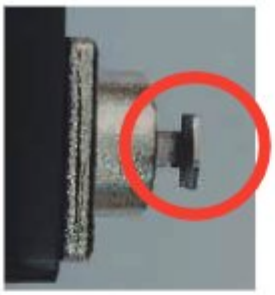
Wire diameter / Line length	3M	5M	10M	20M
AWG24	N/A	N/A	N/A	N/A
AWG22	1.6V	2.7V	5.3V	10.6V
AWG20	1V	1.6V	3.3V	6.7V

Taking the above figure as an example, if the light source current is 10A,
The wire length is 20M and at least 4 cores of AWG20 wire are required to reduce the voltage to within 2V!
(6.7V/4=1.67V)

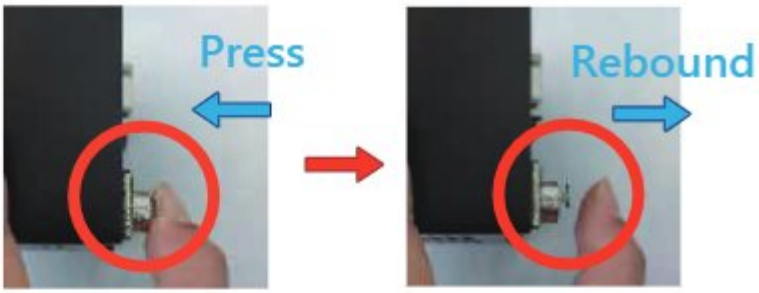
*Note 1: The greater the current, the larger the required wire diameter or the greater the number of cores.

*Note 2: The longer the wire, the thicker the required wire diameter or the greater the number of cores.

Dimmer Metal Connector Plug and Unplug Guide



Step 1 Make sure there are no rough edges on the socket button



Step 2 Before use, press the socket button and it will spring back normally as shown on the right!

The gap is consistent

Step 3

Make sure that the notches on the connector and plug are in the same direction.

Pull without loosening

Step 4

The socket matches the light s ource connector.
The connector can just snap in and won't move
and won't fall off when pulled.

Correct pressing method

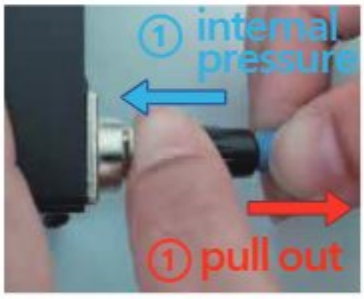
Step 5

When pulling out the connector, press it to the end in parallel with your fingers.

※Error demonstration

Step 6 Error demonstration

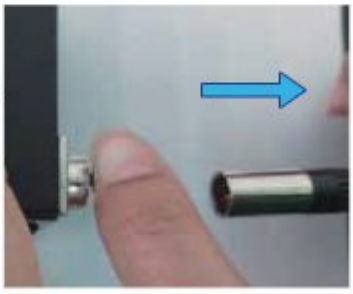
Don't put your fingers above it, as it may cause cuts if you apply improper force!



Step 7

Dimmer socket button press Press all the way → light source connector

Insert inward→ then outward Pull out.

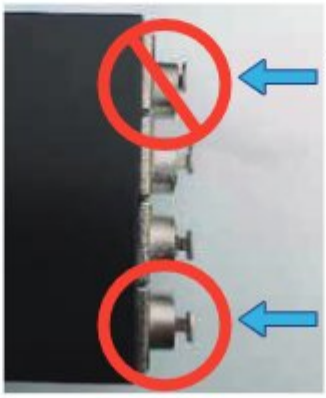


Step 8

The light source connector can be pulled out.

Step 9

After the light source connector is pulled out, the socket button will still rebound.



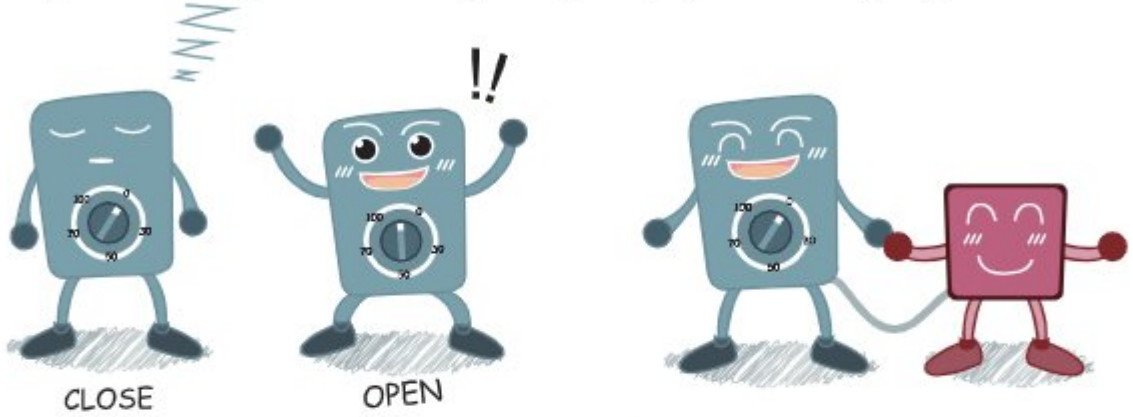
Socket button does not spring back → NG

Socket button rebounds normally → OK

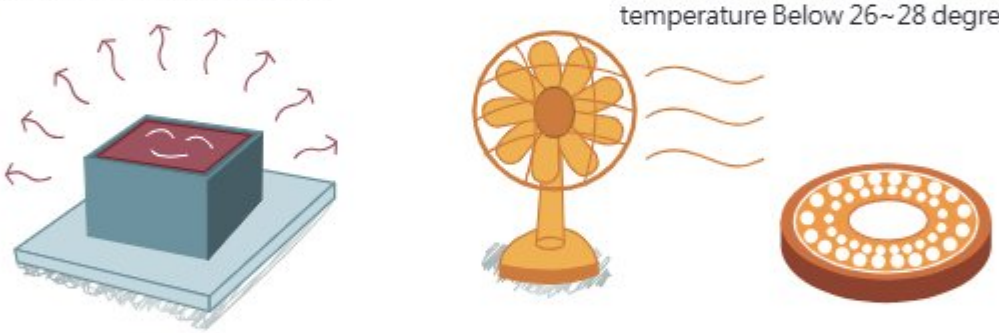
Wait until the button rebounds normally before reinserting the light source!

Use LED lighting correctly

- Avoid using LED lighting in high-temperature environments, which will cause the LED to gradually age and weaken its brightness, resulting in a shortened lifespan.
- LEDs are prone to aging and brightness weakening due to their own heat. It is recommended to install LEDs on metal or brackets with strong heat conductivity and install fans.
  Or try to lower the brightness when using it and light it up again when taking images to avoid overheating.



- It is recommended to turn on the LED light source when taking images. Avoid overheating caused by turning it on for a long time.
- Installed on metal or bracket with strong heat conductivity, additional installation fan, and try to control the ambient temperature to room temperature Below 26~28 degrees.



- When using it with a dimmer, keep the brightness as low as possible
  Turn it down to avoid turning it to the maximum brightness and affecting the LED due to excessive Heat causes brightness attenuation and lifespan to be shortened.

The name of units

Color temperature

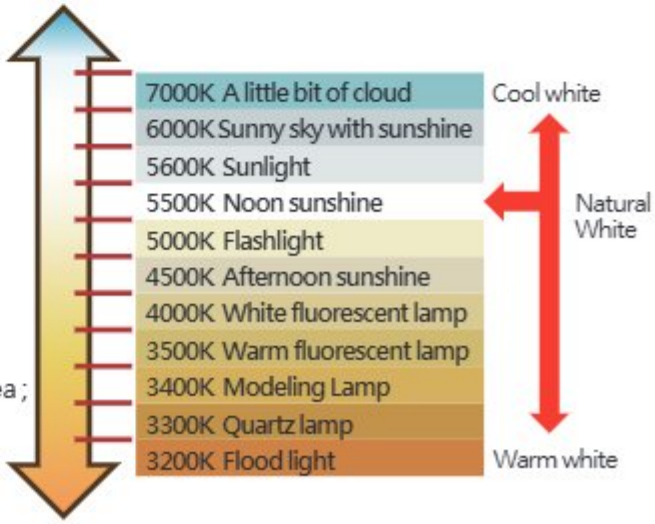
Units - Absolute temperature (K) refers to light waves at different energies, The color change experienced by human eyes, the color temperature of the light source is determined by
Than its color and theoretical thermal blackbody, radiator to determine.

Luminousflux

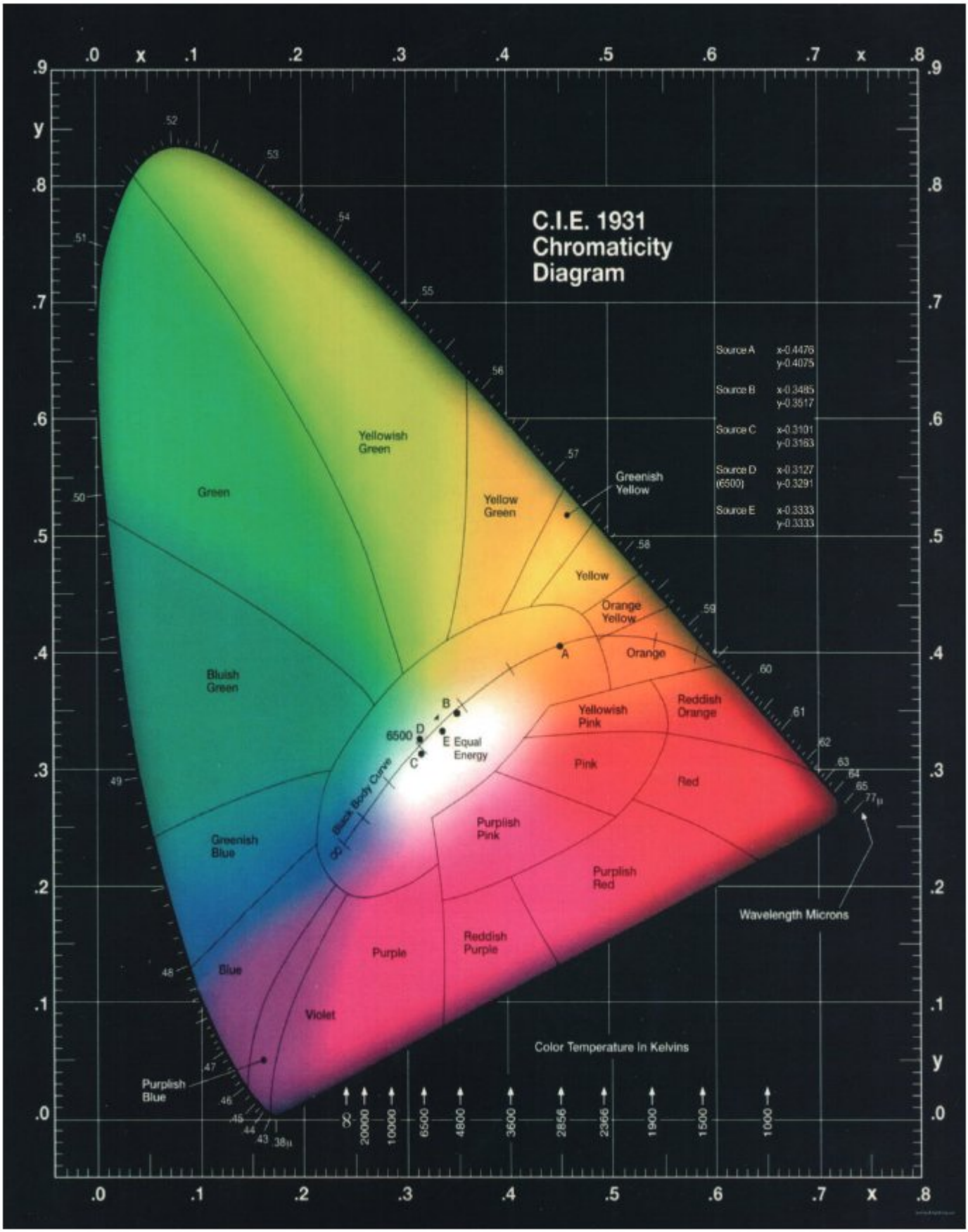
The total amount of light emitted by the LED ;
unit : Lumen (lm).

Illuminance

The luminous flux of visible light received per unit area ;
Unit : Lux / lx
lx = lm/m2 (1 lux = 1 lumen/square meter).

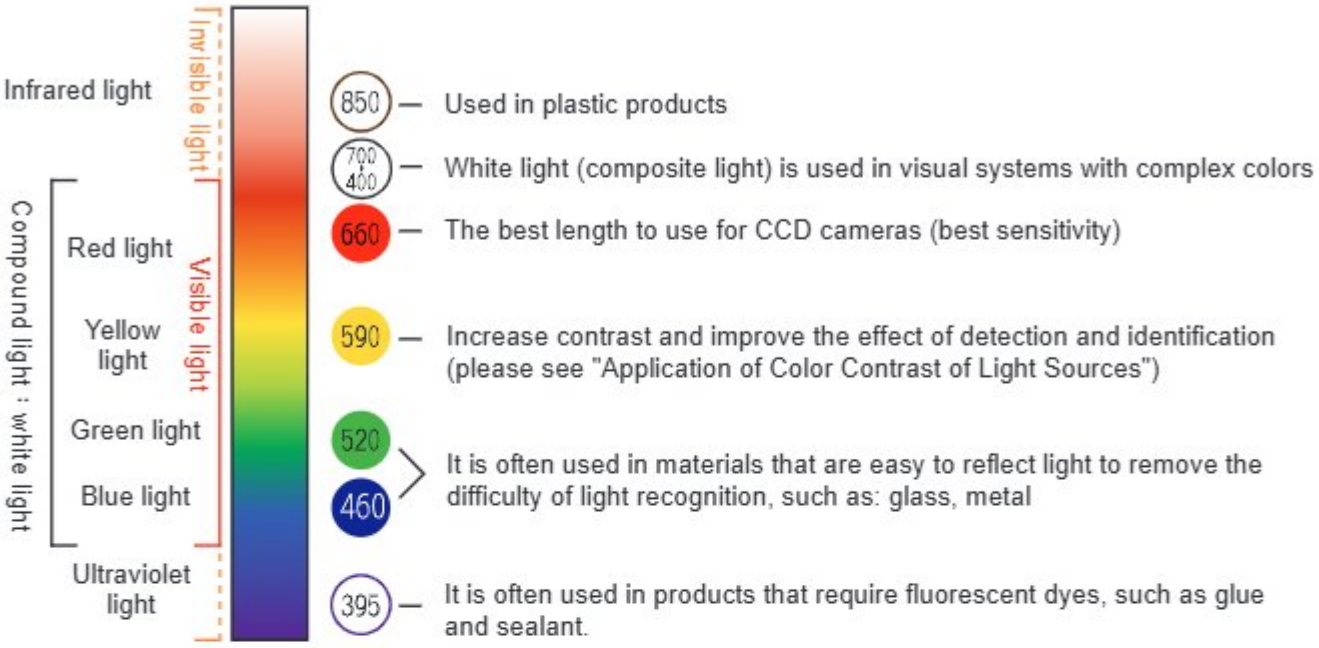


LED Color Temperature

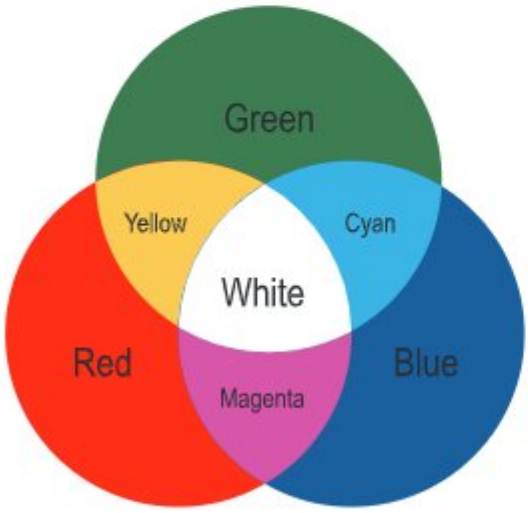


LED light source color application

Wavelength of light



RGB color model

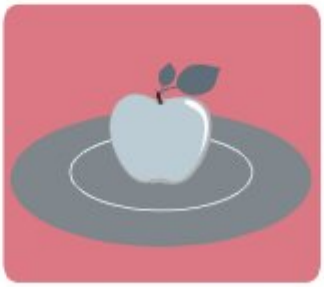


Using the three primary colors of color light - red light, green light and blue light, it can provide
Test results other than standard products. By adjusting the intensity of each color Degree can create different color and light performances. In addition, through
The light source controller adjusts the intensity of the light source to create different The detection effect is applied to machine vision light sources.

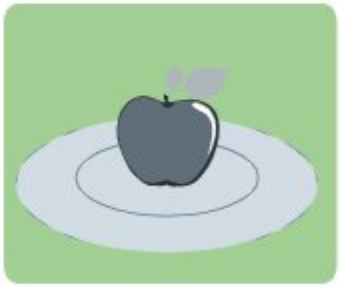
Light source color contrast application

Apple under normal indoor lighting

Apple under white LED



Apple under red LED



Apple under green LED

The color of the light source is an important key to detecting increased or decreased contrast in vision.
Using a light source color that is contrasted with the object to be measured can make an obvious contrast ; If similar colors are used, similar ones can be eliminated in the detection vision.
Test object color. Sometimes you can create higher quality images with a black and white camera and the right color light source. degree of contrast.

About LED light source module

The wavelength emitted by the LED can be matched with the wavelength of the CCD Camera. Moreover, the LED's high stability and high reactivity can be used for inspections in high-speed movements. According to the test, its appearance can also be flexibly changed according to the application. At present, LED is a globally recognized green product. It can not only help the earth save energy and carbon, but also The service life is dozens of times longer than traditional halogen lamps.

Actual lifespan of LED

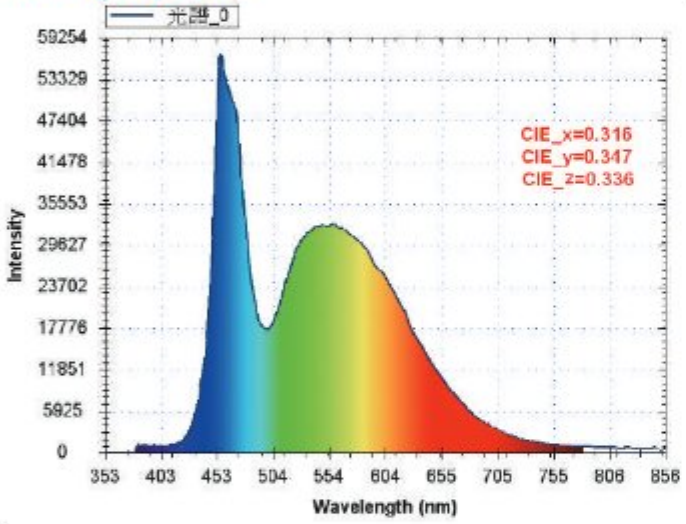
The life of the LED itself is about 100,000 hours, but the actual life depends on the ambient temperature, brightness adjustment, and voltage and current used.
stability and other factors.

Programming language for remote control of dimmers

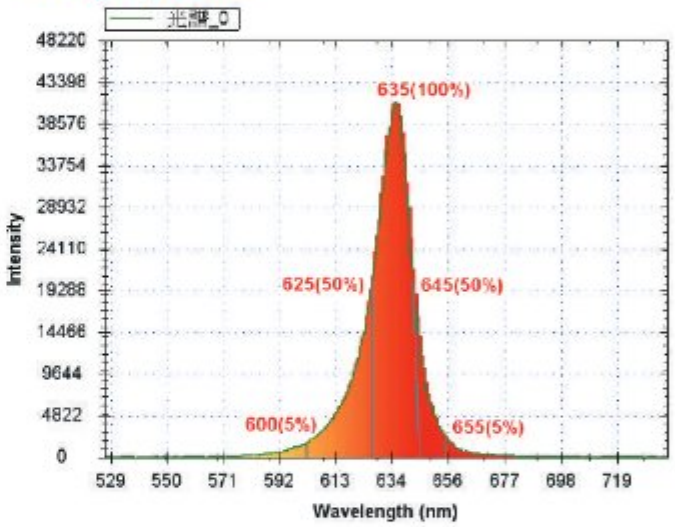
The Viswell team has helped you write the sample. Provides a variety of SDK Toolkits to support VC++ / BCB / VB / LabVIEW editing.

Professional spectrum

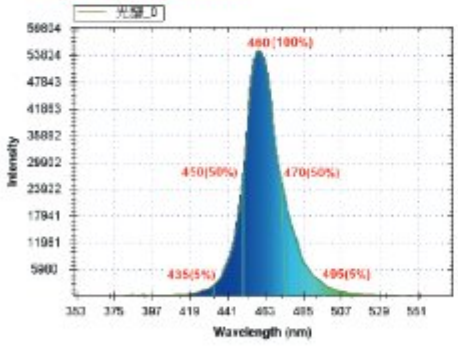
White light spectrum



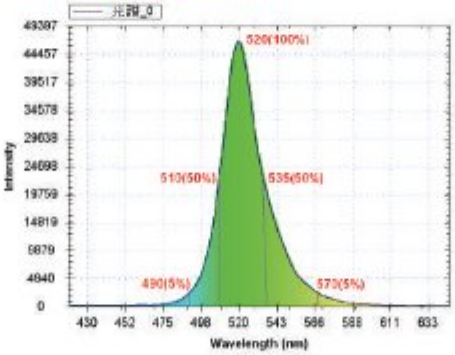
Red light spectrum



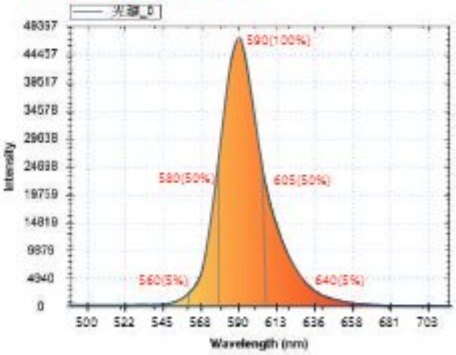
Blue light spectrum



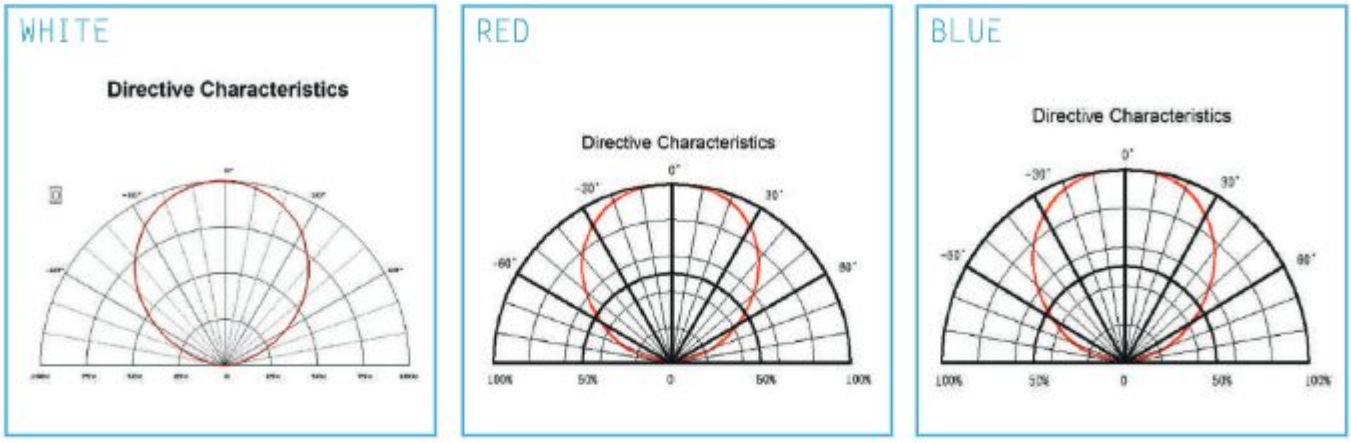
Green light spectrum



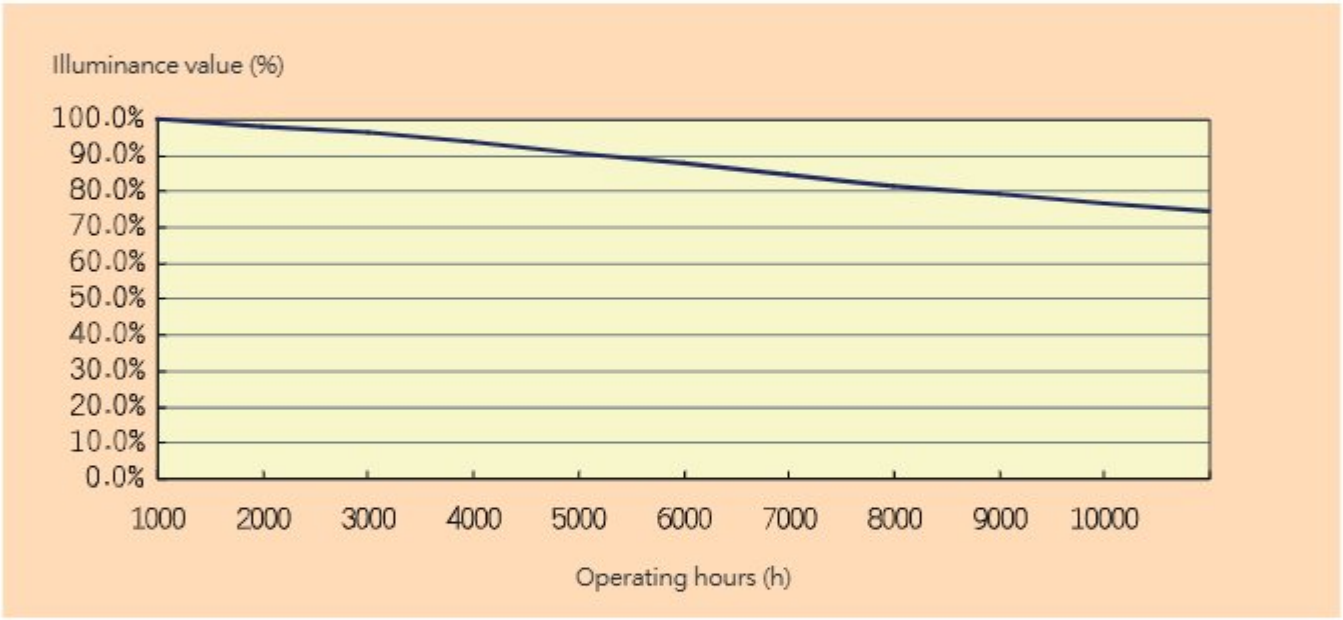
Amber light spectrum



LED emission angle diagram

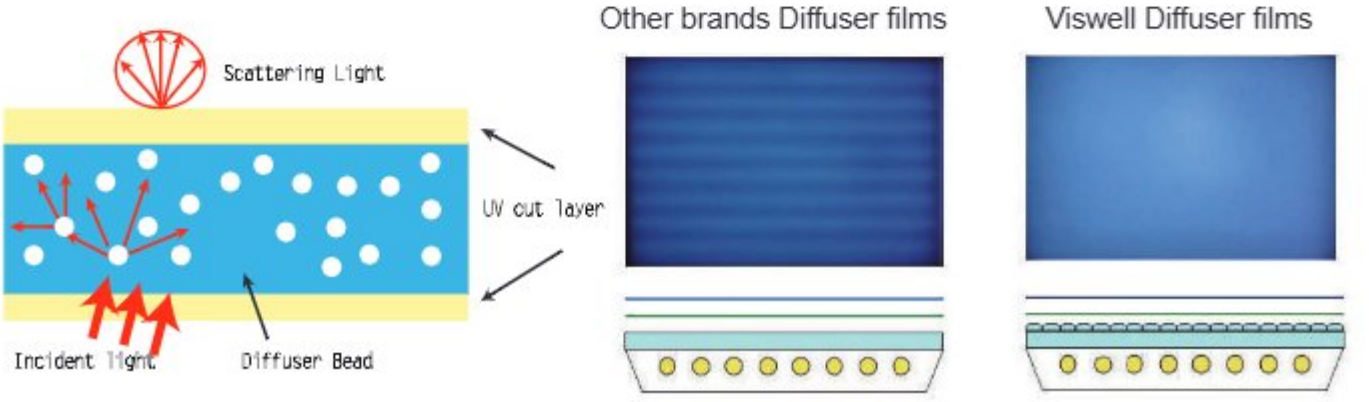


Light source attenuation trend chart



Note：The external coaxial CL-2525 is used as an example, the ambient temperature is 28 °C

Diffuser structure



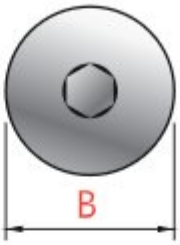
Achieve a more even light effect while maintaining high brightness

Light source instructions

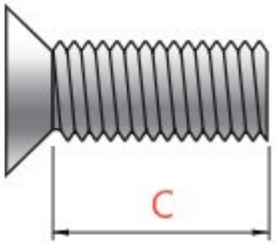
Sticker instructions

A

Caution Hot



Screw head type



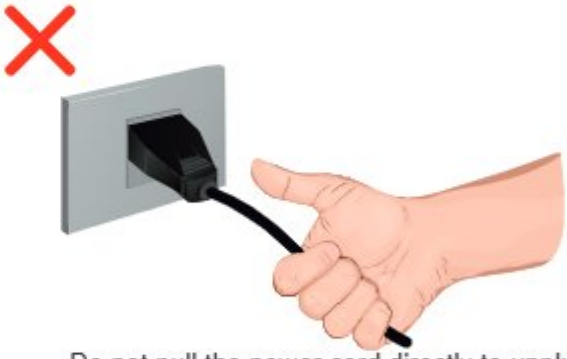
Limit keyhole depth

Sticker type	Detail
CAUTION HOT M2.5 MAX3mm	M2.5 screw, maximum keyhole depth 3mm
CAUTION HOT M3 MAX4mm	M3 screws, maximum keyhole depth 4mm
CAUTION HOT M4 MAX4mm	M4 screws, maximum hole depth 4mm
CAUTION HOT M5 MAX5mm	M5 screws, pole lock hole depth 5mm

Sticker type	Detail
CAUTION HOT M8 MAX6mm	M8 screws, maximum keyhole depth 6mm
UV LIGHT	Prevent UV light eye damage warning signs
借 測 品	When borrowing test items, please do not scratch the warning label.
QC OK	Quality Control Tested Stickers

Power cable instructions

Please make sure to plug and unplug from the connector



Do not pull the power cord directly to unplug it

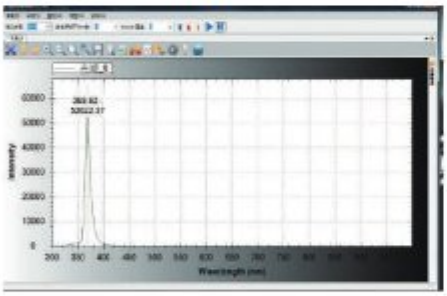
Do not bundle or coil the power cord

Do not stress the power cord

Viswell Lighting Laboratory

We provide a professional light source laboratory to allow you to quickly find the best visual lighting effect for the object under test !

Equipment provided on site



▲ Professional spectrometer

▲ Illuminance meter

▲ Infrared Thermometer

Viswell responds to the future trend that automated equipment will gradually replace manual inspection one by one. Before each customer checks the product in their hand, we have
We have gone through many inspections, and even the most stringent quality control for customers from the source when incoming materials.

Viswell Light Source Laboratory provides customers with the best solutions is not just a slogan, but can put themselves into the customer's work reality.Field, sincerely stand in the other party's position and situation to solve related light source issues. In addition, the Viswell Light Source Laboratory has been open to the public since 2016.Open, as long as customers make an appointment in advance, they can bring the items to be inspected to the site for lighting testing by themselves. We not only provide a complete variety of light sources for Testing, and setting up relevant cameras and testing software on site, can quickly solve lighting-related problems more efficiently than borrowing for testing.

Reservation process

Fill in customer information and appointment date → Viswell Approval → Go to Viswell lab → Make some tests → Finding out the solution!

Certificate

This is to certify that

VISWELL TECHNOLOGY CO., LTD.

No.139, Jiafeng 7th St., Jhubei City, Hsinchu County 302,Taiwan

applicable to

The Development, Manufacture and Sale of LED Lighting applied to Automatic Optical Inspection System

IAF codes: 19

has been assessed the Quality Management System and complied with the requirements

ISO 9001 : 2015

This registration is subject to the organization implementing and maintaining the management system to the above standard, which will be monitored by Best ISO

Unique Identification Code (UIC)

MSCB-166-124062

Certificate No: **Q 2 4 0 3 6 4**

Initial issued: **2024/01/31**

Last issued: **2024/01/31**

Valid Until: **2027/01/30**

IAS ACCREDITED Management Systems Certification Body MSCB-166

Shu-Ling Yang, President
Best ISO Certification Co., Ltd.

Ver.05-2023

Vision Intelligent

Viswell

宇創視覺科技股份有限公司

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LOCAL CONTACTS

■ Product specifications listed in this catalogue are subject to change without notice

2024.10