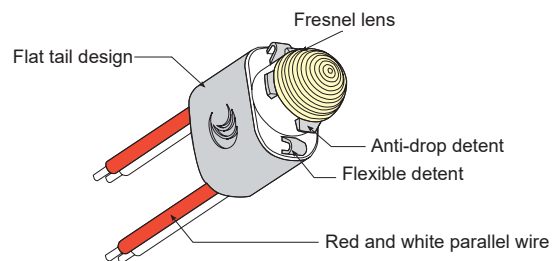


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Features

- Adopt Fresnel lens, more uniform and soft light
- Can be installed in the board thickness 1-3mm light box with flexible detent.
- Flat tail design, easy installing
- Patented products, counterfeiting will be held accountable
- Support PWM, 0-10V, DALI and DMX dimming
- 5years warranty: red, green, blue, and white light colors
- 3years warranty: yellow, orange, pink, ice blue, and rose red light colors



Application

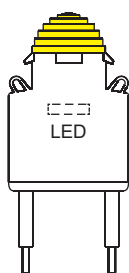
- Applied for large advertising signage lighting, logo, building decoration, signage etc.

Installation

- Through hole installation

Lens Contrast

Fresnel lens



CS1

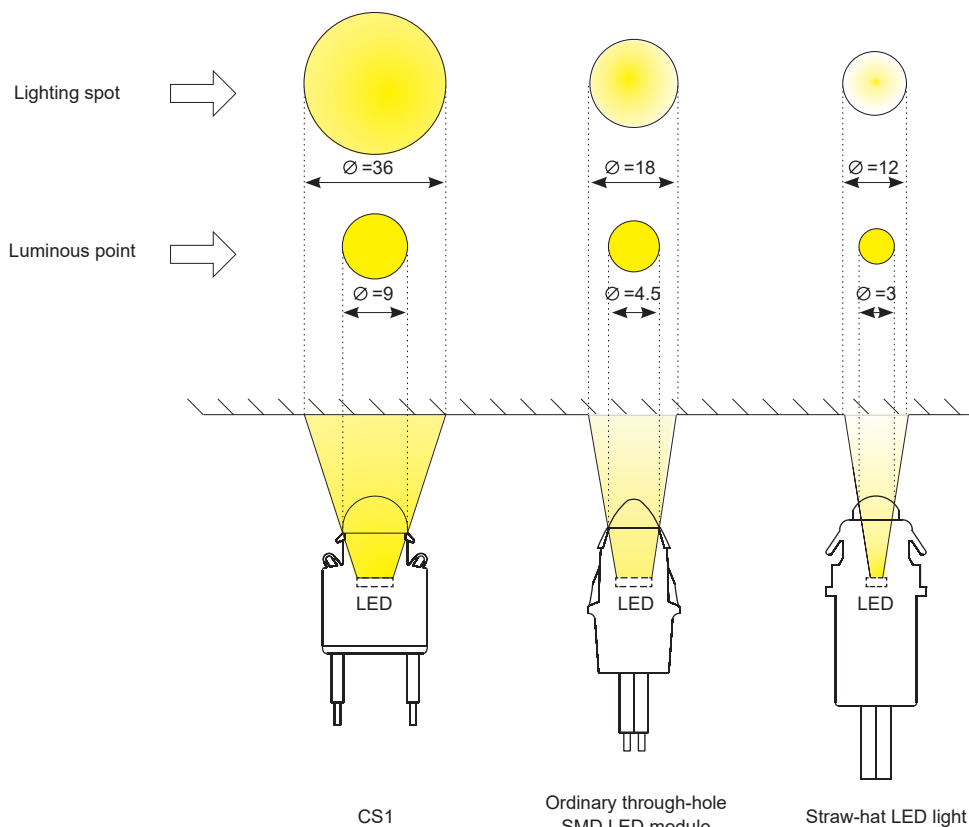
Ordinary lens



Ordinary through-hole SMD LED module

Luminous point VS Lighting spot

Unit:mm



Note:

Luminous point: observe the size of the luminous part of the light source with naked eyes.

Lighting spot: the size of the light projection after the light source shines on a wall at a certain distance.



Optical & Electrical Parameters

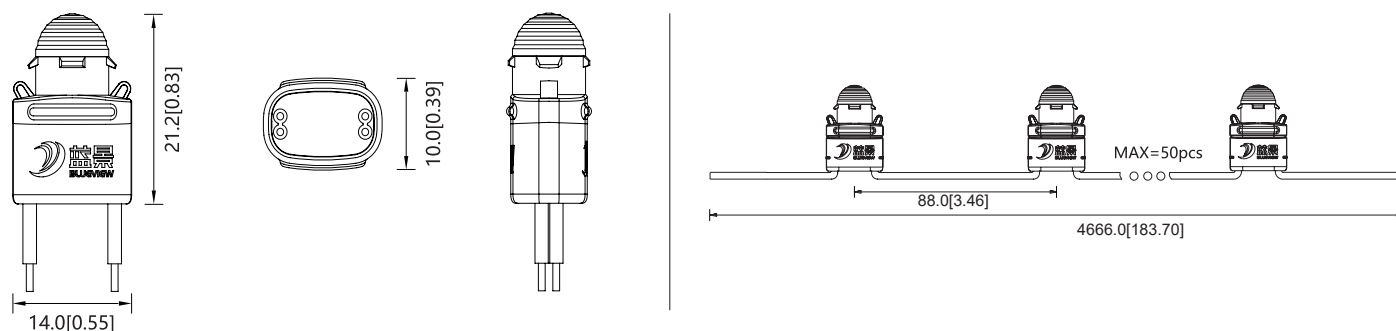
Model No.	Light Color	CCT/Color Available (K/nm)	Beam Angle	Typical Luminous Flux value (lm/pcs)	Efficacy (lm/W)	CRI	Voltage (DC)	Power (W/pcs)
CS1-12V	□ W	2800-3100	130°	11	95	80+	12V	0.12
		3800-4250		12	100			
		4750-5300		12	100			
		6000-7000		12	100			
		9000-12000		12	98			
		12000-15000		12	97			
		15000-20000		11	95			
		≥ 100000		11	93			
	■ R	620-625	130°	1.2	8	\	12V	0.12
	■ G	520-525		1.6	11			
	■ B	460-465		1.2	8			
	■ Y	570-575		11	75			
	■ O	600-610		3.9	28			
	■ P	\		5.1	39			
	■ IB	475-485		7.3	53			
	■ F	\		1.2	8			
CS1-48V	□ W	6000-6500	130°	15	79	80+	48V	0.19

Other Parameters

Model No.	LED Qty/pc	Product Size	Max Run	Working Temperature	Storage Temperature
CS1	1	21.2*14*10mm	50pcs	-20~+60℃	-20~+70℃

Profile Drawings

Unit:mm[inch]



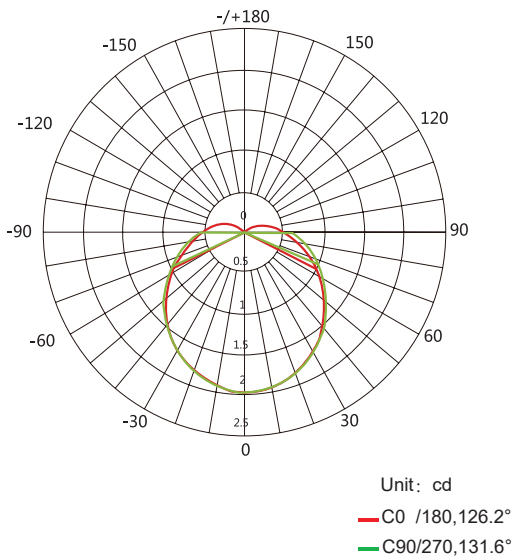
Note:
Dimension tolerance: length ± 0.2 mm; width ± 0.2 mm; height ± 0.2 mm.
For detail drawing, please consult sales rep.



Reliability Test

Type	Name	Standard	Condition	Result
IP Test	IP6X	IEC60529	1 meter deep water/1h	IP68
Environmental Test	High temperature Shock Test	IEC68-2-1&IEC68-2-2	high temperature 80°C 4H/low temperature -40°C 4H continuous cycle and power on	Pass
	High Temperature & Humidity Test	Blueview standard	T=60°C/RH=90%,720h	
	Room Temperature Aging Test	Blueview standard	T=25°C ,continuous power on,720h	
	PTC Test	Blueview standard	Test temperature: -40°C— 60°C,2h one cycle(constant temperature: 15 minutes,heating and cooling: 45 minutes)	
	Anti-UV Test	ISO 4892-2	0.76w/m2;UVA340nm;65°C	
Flame Retardant test	Flame Retardant Test	GB/T5169.16-2008	Place the sample vertically on the open flame	
Plug-in&off Test	Plug-in&off Test	Blueview standard	Plug-in and off 100 times by hand	

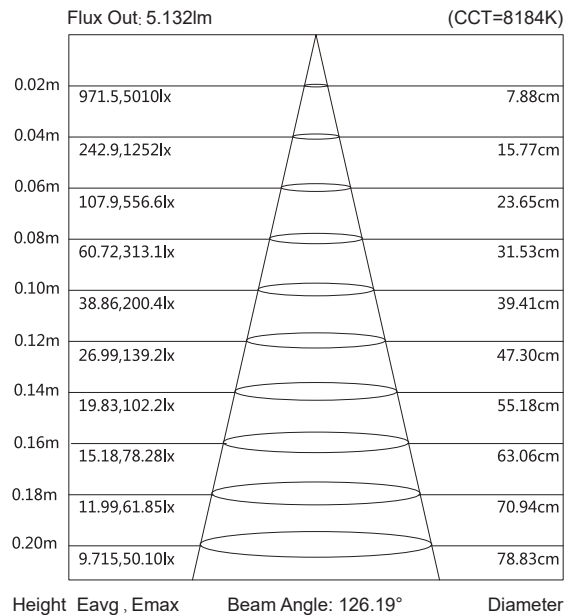
Luminous Intensity Distribution Diagram



AVERAGE BEAM ANGLE(50%): 128.9°

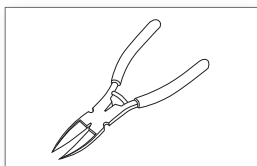
Note: for other data please consult sales rep.

Average Illumination

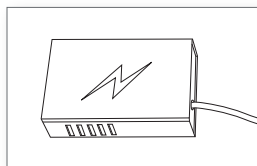


Installation

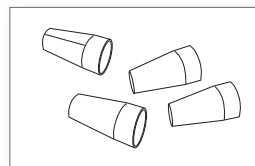
Accessories & Tools



Diagonal Pliers

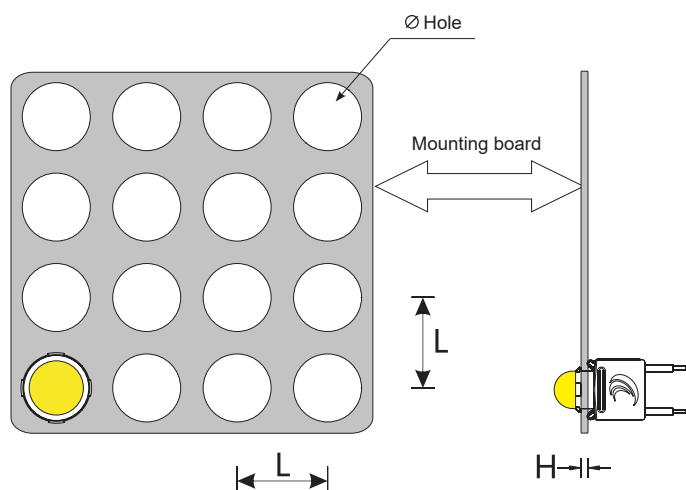


LED Power Supply



Connection terminal

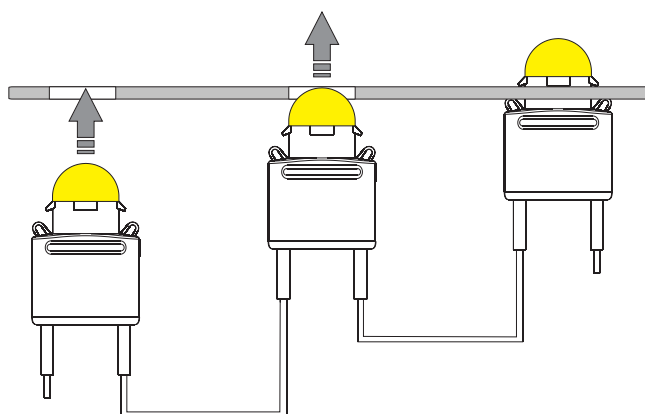
Mounting board thickness and hole size



Model No.	CS1
" Ø "Hole size(mm)	9
"L" Distance(mm)	20-60
"H" Board thickness(mm)	1-3
	2-4

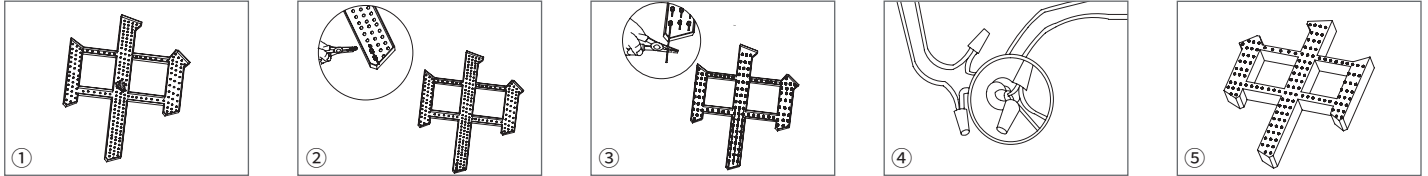
Installation Steps

Through-hole installation





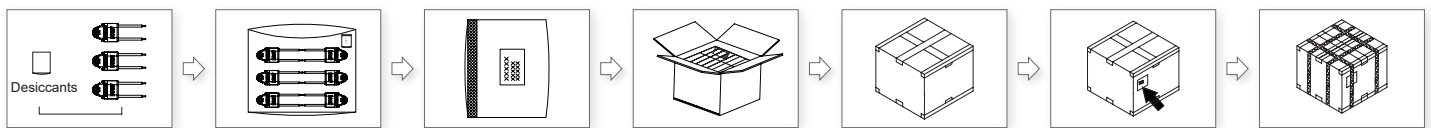
Exposed channel letters installation



1. Clean the mounting surface.
2. Put the through-hole LED module into the reserved hole.
3. Cut the modules according to the requirements and treat the cut place with insulation and waterproof arrangement.
4. If the product needs to be connected, it is better to fix with connection ends.
5. After that, light on for test.

Note: Treat the wire end with insulation, waterproof, and anti-corrosion measure, until it cannot pull out by hands.

packing



1. Prepare the desiccant and bind the product.
2. Put the product and desiccant into static shielding bag.
3. Seal and label the static shielding bag.
4. Put the static shielding bag side by side into carton box.
5. Seal the box.
6. Label the box.
7. Use packing belt to pack after adding the edge protectors.

Packaging information

Model No.	Product Size (mm)	Carton Size(mm)	PCS/Bag	Bag/Carton Box	Gross Weight(kg)
CS1	21.2*14*10	380*380*325	300	16	15.75(1±10%)

Note:
Packing materials: static shielding bag and carton box.
The above quantity and weight are only for the illustrated packaging method. There will be differences in the quantity and weight with other packaging methods.

Attentions before installation

- Before installation, check that the product parameters are consistent with the requirements (Seeing product specifications or product labels)
- Load voltage, current, power and power supply should be matched with the product.
- Follow the instructions of wiring diagram (first connect the load and then the power supply) to avoid short circuit.
- Make sure the correct connection of positive and negative poles between products and power supply. Otherwise, the light will not be on.
- Make sure the power cord firmly screwed into the terminal and it should not be pulled out by hands.
- The terminal should have insulation, waterproof and anti-corrosive treatment.



Common Faults and Troubleshoot

Quick Guide		
Problems	Reasons	Solutions
All LEDs can not light on.	No electric supply.	Fix the short circuit problem.
	Automatic power protection from the open or short circuit in output of the power supply.	
	Wrong connection of power supply.	
LEDs can not light on partly	Some switching mode power supplies are not powered.	Correctly connection.
	Power supply line error.	
	Mistaken wire connection of some of products.	
Brightness of LED is inconsistent or insufficient.	Power overloaded.	Replace with more powerful power.
	Power supply circuit excessive consumption.	Make sure the working voltage of the product within $\pm 5\%$ of standard voltage, or keep balance by circuit power consumption.
	Excessive quantities in series connection of the product	Reduce the quantities of the product in series connection to meet requirement.
LED flicker.	Connection point fault.	Remove bad connection point.
	Switching power supply failure.	Replace a new power supply.
	Wrong Installation or use of products	Please follow the instructions

Warning

- Do not disassemble or retrofit the light. Do not touch the surface of the light with a sharp object.
- Do not do live-line working during installation, especially for high voltage product.
- Do not use any organic chemical solvents.
- Use neutral glass adhesive to fix this product and it needs to be dried 24 hours in the open environment after operation.
- Treat the ends and the circuit connection points that are not connected to the main line with insulation, waterproof, and anti-corrosion in the installation.
- Use 18AWG (0.75mm² cross-sectional area) or thicker core wire to avoid adverse consequences caused by overheating, if the power cable need to lengthen.
- Make sure the input voltage meets the requirements and lines are connected correctly before lighting on.
- This product is for signage, and do not use as general lighting.
- Series connection within the max run.
- The length of the power cable between the power supply and the led strip should not exceed 2 meters. Otherwise, large circuit loss will lead to inconsistent brightness.
- Installation, maintenance and repair should be operated by a qualified technician.

Statements and Recycling

Statements:

- Repair should be operated by a qualified technician, if the external circuit or main line of this product is damaged.
- The parameters given in this manual are typical values and for reference only.
- All illustrations and drawings in this manual are for reference.
- This product is subject to change without notice.

Recycling:

- LED lighting products belongs to electronic products, please do recycling treatment according to the relevant WEEE directives.

Version	Content	Date
A2.2	Update: Basic Parameters	2024-9-10