

PT9-2



PT9-3



PT9-4

Version: A1.4

Features

Adopt integrated optical lens, exquisite appearance, super cost-effective;
Using ultrasonic waterproof technology;
A single module can be cut, easy to install;
Support customization;

Application

Suitable for advertising letters with depth more than 4.5cm and different widths;
PT9-4 suitable for light box with depth more than 8cm

Installation

Fix by adhesive tape or screws



Specification

Model No.	Light Color	Color Temperature(K)	Beam Angle	Typical Luminous Flux value(lm/pcs)	Ra	Efficacy (lm/W)	Voltage (V DC)	Power (W/pcs)
PT9-2	W	2800-3200	165°	64	80+	97	12	0.66
		3800-4200		66		100		
		6000-6500		66		100		
		9000-11000		66		100		
PT9-3	W	2800-3200	165°	98	80+	98	12	1.0
		3800-4200		100		100		
		6000-6500		100		100		
		9000-11000		100		100		
PT9-4	W	2800-3200	165°	129	80+	98	12	1.32
		3800-4200		132		100		
		6000-6500		132		100		
		9000-11000		132		100		

Other Parameters

Model No.	Quantity (LED Qty/pc)	Product Size L*W*H(mm)	Standard Run (pcs)	Max Run(single feed) (pcs)	Working Temperature	Storage Temperature
PT9-2	2	38.7*15.7*9.9	60	60	-20~+60℃	-20~+70℃
PT9-3	3	58.5*15.7*9.9	50	50		
PT9-4	4	38.8*33.6*9.9	40	40		

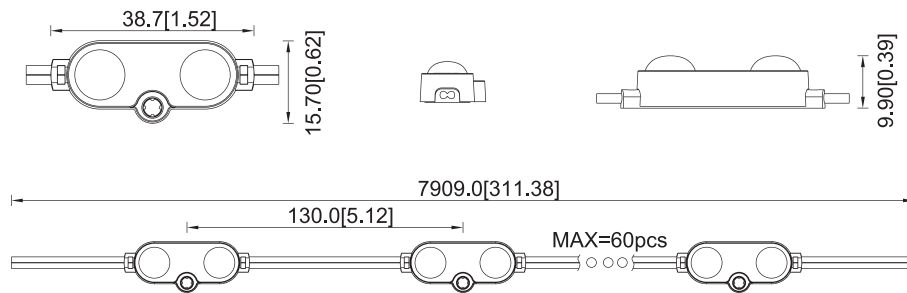
NOTE:

1. Test environment temperature : 25±2℃.
2. Figures above are typical figures. Actual figures could be different with typical figures, and the data is subject to change without notice.
3. Different color temperature will make luminous flux different.
4. Power tolerance within ±10%.
5. The "Quantity"above means the LED quantity of single module

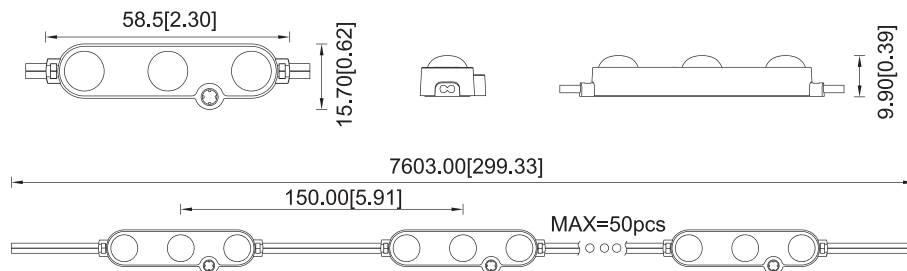
Profile Drawings

Unit:mm[inch]

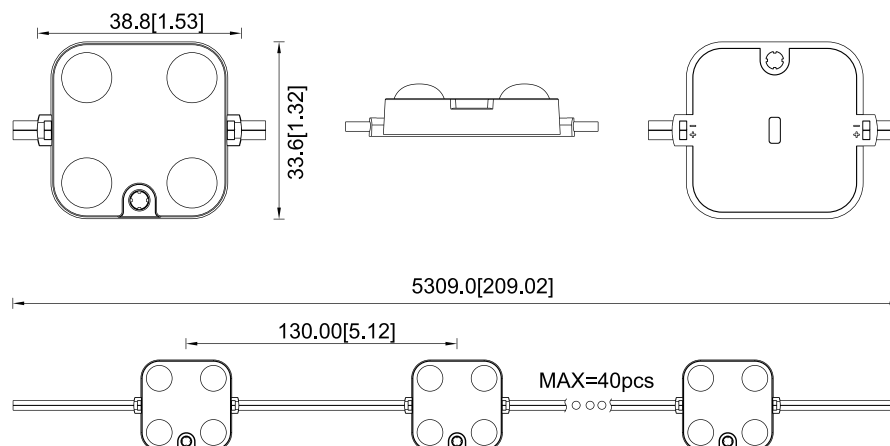
PT9-2



PT9-3



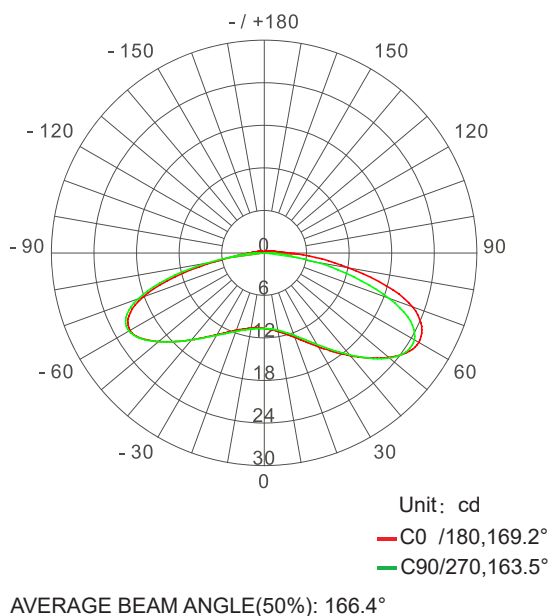
PT9-4



Note: For detail drawing, please consult sale rep.



Luminous Intensity Distribution Diagram



Average Illumination

Flux Out: 95.75lm		11000K
Height	Eavg, Emax	Diameter
0.02m	583.2,27031lx	38.46cm
0.04m	145.8,6758lx	76.93cm
0.06m	64.80,3003lx	115.39cm
0.08m	36.45,1689lx	153.86cm
0.10m	23.33,1081lx	192.32cm
0.12m	16.20,750.9lx	230.79cm
0.14m	11.90,551.7lx	269.25cm
0.16m	9.112,422.4lx	307.71cm
0.18m	7.200,333.7lx	346.18cm
0.20m	5.832,270.3lx	384.64cm
Beam Angle: 168.13°		

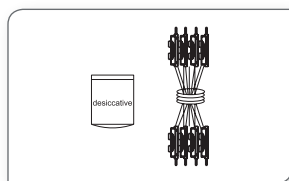
Note: the above data is tested with PT9-3 at 11000K. For other data, please consult sales rep.



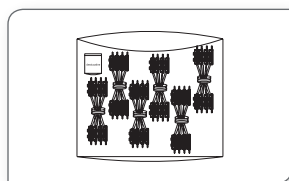
Reliability Test

Type	Name	Standard	Condition	Result
Environmental test	PTC test	Blueview standard	Test temperature: -40°C— 60°C, 2h one cycle (constant temperature: 15 minutes, heating and cooling: 45 minutes)	Pass
	High temperature resistance test		TH=60/80°C, continuous power on	
	Anti-UV test		TH=50°C, UVB: 315~400nm	
	Room temperature aging test		Ta=25°C, continuous power on	
	Water-spray test		Water spray pressure 0.02MPa, volume 0.75m³/h, diameter, Ø12.5mm, lasts 3min	
Other tests	Flame Retardant test		Placed the sample vertically in the needle flame tester, the flame lasted for 10s and then observe the self-extinguishing time of the sample.	
	Back glue adhesion test		Stick to three kinds of clean carrier plates (stainless steel, acrylic, aluminum plastic plate). After 24h, test the peeling force from the vertical direction of the module	

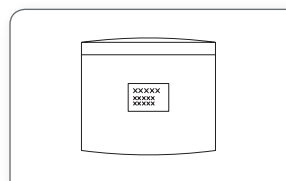
Packing



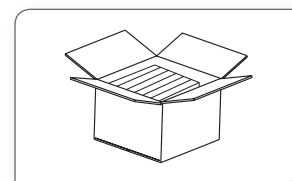
Prepare the desiccant and bind the product.



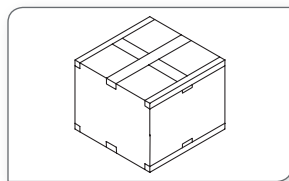
Put the product and desiccant into static shielding bag.



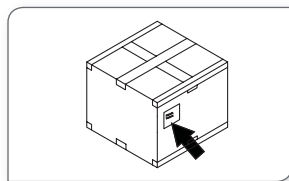
Seal and label the static shielding bag.



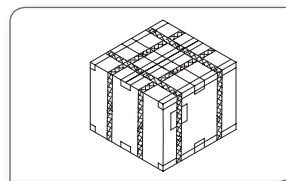
Put the static shielding bag side by side into carton box.



Seal the box.



Label the box;



Use packing belt to pack after adding the edge protectors.

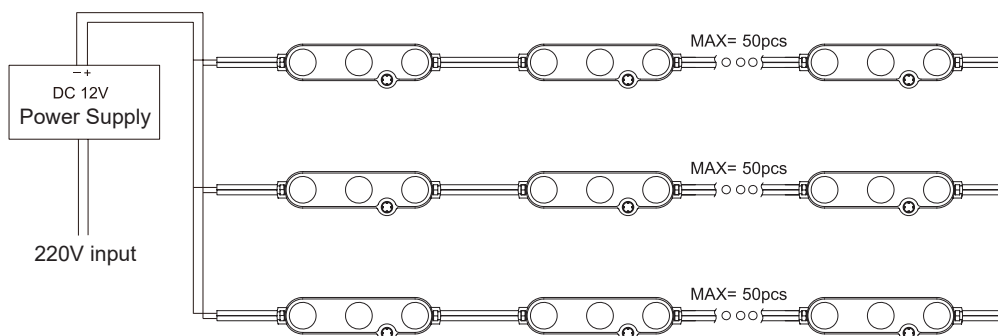
Packaging information

Model No.	Product Size L*W*H(mm)	Carton Size(mm)	PCS/Bag	Bag/Carton Box	Net Weight(kg)	Gross Weight(kg)
PT9-2	38.7*15.7*9.9	390*390*325	120	30	12.17(1±10%)	13.57(1±10%)
PT9-3	58.5*15.7*9.9		100	20	12.48(1±10%)	13.85(1±10%)
PT9-4	38.8*33.6*9.9		80	20	15.61(1±10%)	16.91(1±10%)

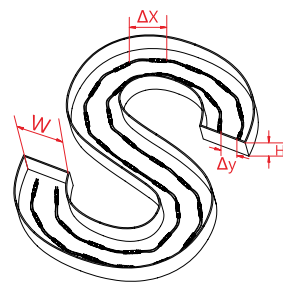
Note: the above quantity and weight are only for the illustrated packaging method. there will be differences in the quantity and weight with other packaging methods.

Installation

Connection Diagram



Irregular light box (Font logo, etc)



Test Data

PT9-2 / Single-row

Depth (H)cm	Illumination (lux)	Font width (W)	Spacing (Δ X)	Spacing (Δ Y)	Visual Effects
4.5	8600-10300	6cm	5cm	5cm	OK
6	3830-4720	11cm	5.5cm	10cm	
7	3010-3570	11cm	5.5cm	13cm	
8	2730-3140	11cm	5.5cm	13cm	
10	1540-1820	16cm	8cm	13cm	

PT9-2 / Double-row

Depth(H) cm	Illumination (lux)	Font width (W)	Spacing (Δ X)	Spacing (Δ Y)	Visual Effects
4.5	/	/	/	/	OK
6	5900-6520	11cm	2.5cm	13cm	
7	4720-6730	11cm	2.5cm	13cm	
8	5390-6010	11cm	2.5cm	13cm	
10	2950-3380	16cm	4cm	13cm	

PT9-3 / Single-row

Depth(H) cm	Illumination (lux)	Font width (W)	Spacing (Δ X)	Visual Effects
4.5	15750-18340	6cm	6cm	OK
6	4690-5600	11cm	12cm	
7	4270-5110	11cm	14cm	
8	3910-4480	11cm	14cm	
10	2200-2560	16cm	14cm	

PT9-3 / Double-row

Depth(H) cm	Illumination (lux)	Font width (W)	Spacing (Δ X)	Spacing (Δ Y)	Visual Effects
4.5	/	/	/	/	OK
6	9870-10860	11cm	14cm	2.5cm	
7	6320-9940	11cm	14cm	2.5cm	
8	7700-9140	11cm	14cm	2.5cm	
10	4210-4830	16cm	14cm	4cm	

Note:

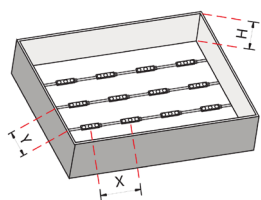
The above data are obtained when PT9-3 uses a white bottom material and a 3mm acrylic plate as the transparent material at the bottom of the lamp box;

For illuminance data of other depths or illuminance data of other models, please contact the salesperson for requirements

The above figure is only a schematic diagram. Please refer to the real object for detail



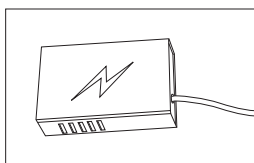
Model No	Surface Material	Depth(H) cm	Illumination (lux)	Evenness	Density (pcs/m ²)	Spacing (X*Y)cm	Power Density (W/m ²)	Visual Effects
PT9-4	White Soft Film	8	5060-6030	0.84	10*10	10*10	132	OK
		10	3380-4020	0.84	8*8	12*12	83	
		12	2900-3380	0.86	8*8	12*12	83	
		15	2300-2640	0.87	8*8	12*12	83	
		18	1980-2220	0.89	8*8	12*12	83	
		20	1720-1910	0.90	8*8	12*12	83	



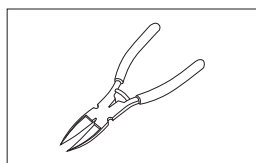
Note:

1. X indicates the horizontal center spacing between modules;
2. Y indicates the longitudinal center spacing between modules;
3. Single LED modules are arranged in a square, X=Y.
4. When the depth of lightbox H>20cm, use more products to satisfy Illumination demand.
5. The wire length can be customized.
6. Please ask the sales for more info.
7. The number can be increased to improve the density to meet higher lighting requirements

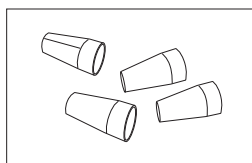
Accessories & Tools



LED power supply



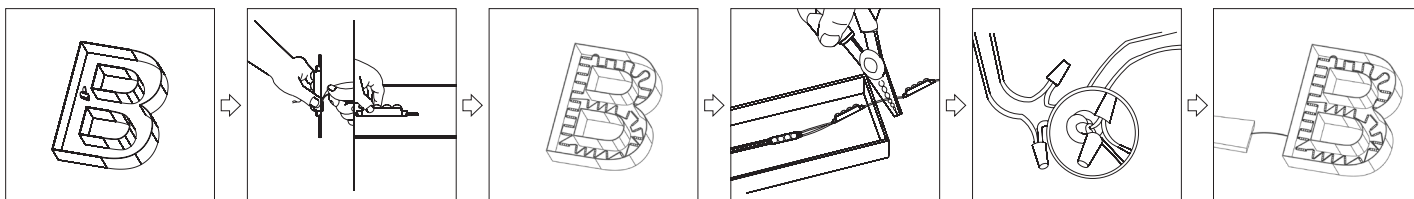
Diagonal pliers



Connection terminal

Installation steps

Installation steps



1. Clean the mounting surface.
2. Peel away the release paper on the back of led modules and stick them onto mounting surface.
3. Evenly arrange the led modules with appropriate space.
4. Cut the modules according to the requirements and treat the cut place with insulation and waterproof arrangement.
Note: Cut in the middle of the wire.
5. If the product needs to be connected, it is better to fix with connection ends.
Note: Treat the thread with insulation, waterproof, and anti-corrosion arrangement as it cannot pull out by hands.
6. Make sure the correct connection of positive and negative poles between led module and power supply.
Note: Treat the thread with insulation, waterproof, and anti-corrosion arrangement as it cannot pull out by hands.



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.
- After installing, the fabric light box must be covered with cloth within 48 hours and avoid long-term idle after installed.

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 tor 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.