

Technical data

CODE: UNIVERZAL, 551931 NEW GENERATION

PRODUCT: LED MODULE PB-1 - NEW GENERATION

NOTE: TECHNICAL DATA

IMAGE:



LAST UPDATE:

9/2021



LED MODULE PB-1



Model PB-1

9 x 6,8 x 4,8 - 1 LED, High efficiency 2835 SMD LED, transparent cover, injection series, 12 V DC; 0,13W; constant voltage, waterproof module

Features:

- 2835 SMD LED with low attenuation and long lifespan
- Standard cascade to 100 pcs
- Beam angle 120°
- Can be cut between every unit
- UL, CE, RoHS approved

Applications

Suitable for 3-10 cm depth letter
Resin letter, mini letter, small letter

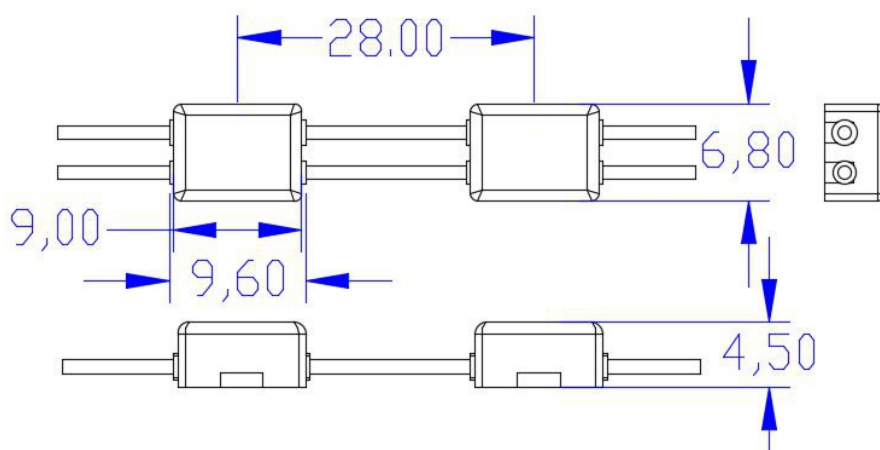
Warranty

Model	PB-1	PB-1 (551931)
LED color	White	White
CCT (K)	2700 - 12000 K	6800 K
CRI	≥ 75	≥ 75
Beam angle	≥ 120°	≥ 120°
Luminous flux	22 - 25 lm	24 lm
Luminous efficacy	150 lm/W	150 lm/W
Working voltage	12 VDC	12 VDC
Power	0,13 W/pcs	0,13 W/pcs
IP grade	IP67	IP67
Operating temperature °C	-25 ~ +60°C	-25 ~ +60°C
Storage temperature °C	-25 ~ +70°C	-25 ~ +70°C
Standard cascading qty	100 pcs	100 pcs
Single-ended max. cascading qty	100 pcs	100 pcs
Double-ended max. cascading qty	200 pcs	200 pcs
Weight (g/piece)	0,5 g/pcs	0,5 g/pcs

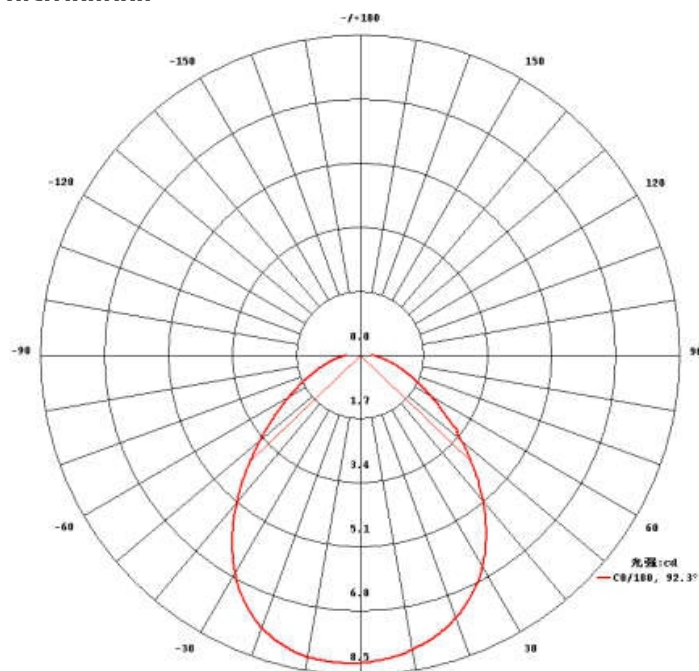
Notes:

- (1) Testing environment temperature: 25±2°C
(2) The above data is typical, the actual parametrs of the product may differ from the typical data; the data is subject to change without notice
(3) The above "--" means the parameters of this product are not required at the moment

Dimension



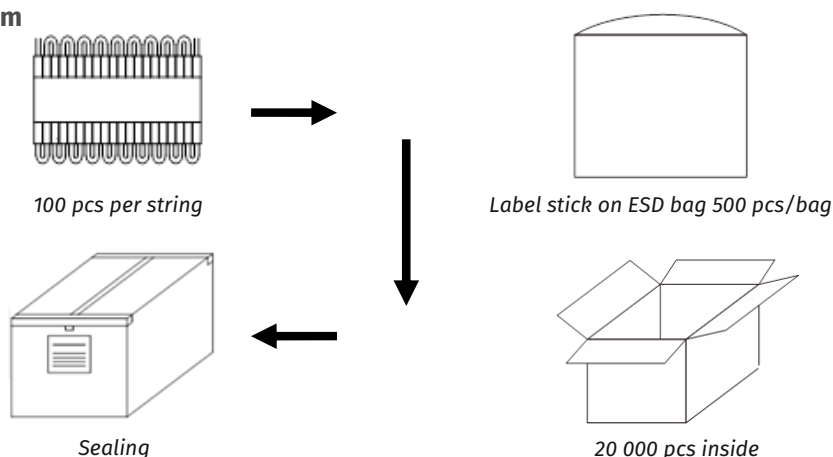
Light distribution



Packaging information

P/N	Qty (pcs/ bag)	Qty (bag/ carton)	Total qty (pcs)	Total weight kg	Length mm	Outer carton Width mm	Height mm
PB-1	500	40	20 000	10,5	520	300	280

Packaging diagram

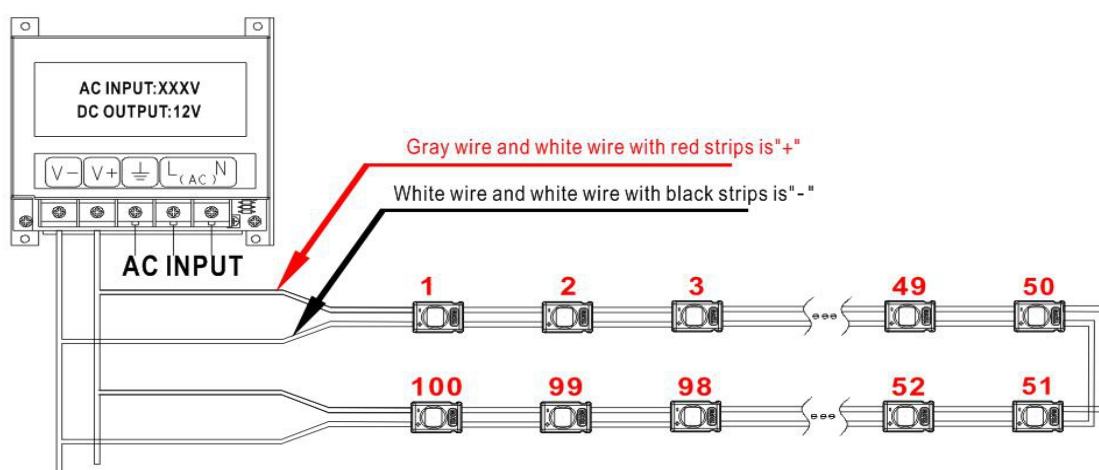


Remark: The above packing quantity and weight only refer to the packing method as shown in the diagram. When other packing methods are adopted, there will differences in the packing quantity and weight. Please subject to the actual product.

1. Installation

Wiring instructions (connection 1, double-sided power connection, the longest cascade is 100 pcs) as shown in the figure below:

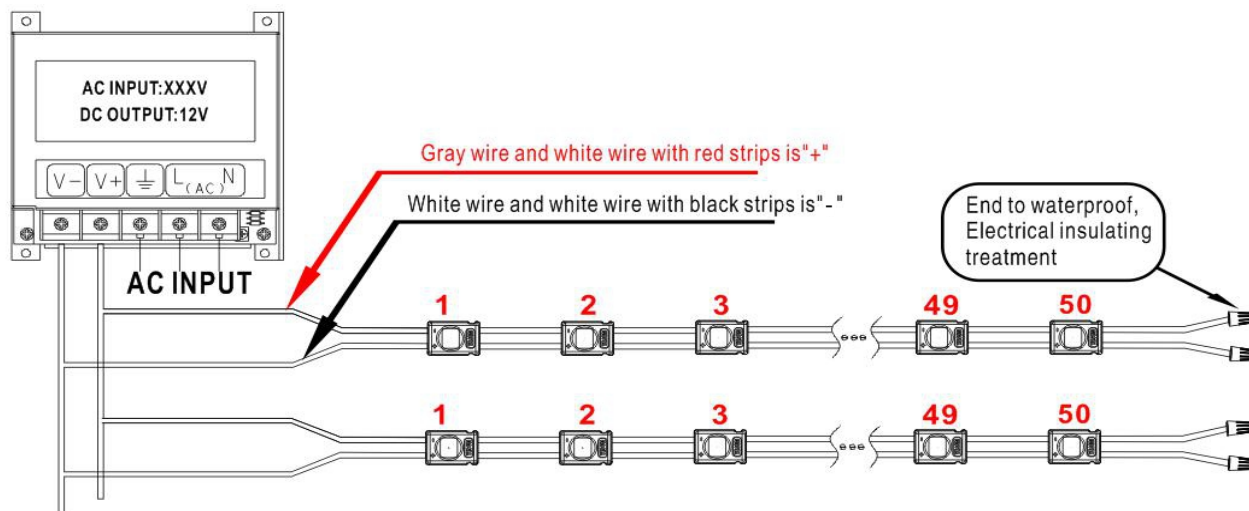
Remark: The positive and negative wire need to be correctly connected to the positive and negative terminals of the power supply output.



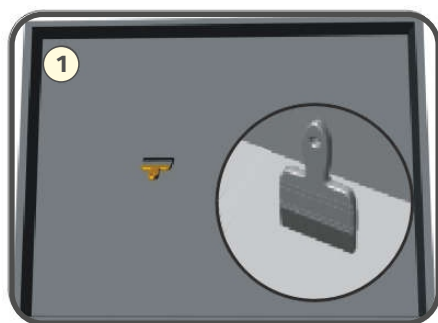
1. Installation

Wiring instructions (connection 2, single-sided power connection, maximum cascading is 50 pcs) as shown in the figure below:

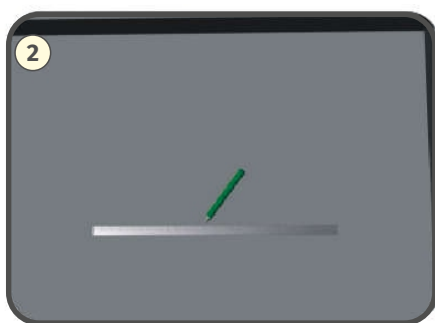
Note: When the module power is 0,13W, single-sided power supply (connection2) is 100 pcs, double-sided power supply (connection 1) is 200 pcs.



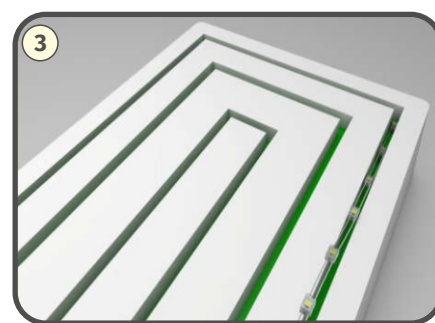
Installation steps



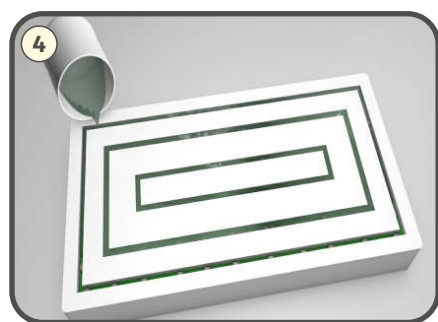
Clean up debris on the mounting surface to ensure surface cleaning



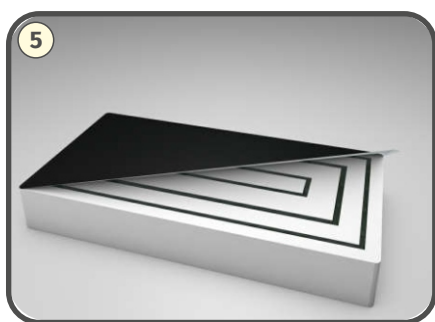
To ensure the module installation location and quantity. The installation location remains centered.



To peel off the adhesive fastape on the back of the module, and lightly stick to installation slot for initial positioning.



After the module is initially installed, it is sealed with epoxy glue.



After the epoxy glue is dried, then backlight shading treatment is performed with a reflector.

Correctly connect the positive and negative terminals of the module to the positive and negative terminals of the power supply output. And waterproof, insulation, short-circuit protection and anti-corrosion protection should be done.

Common faults of products and troubleshooting methods:

FAUL PHENOMENON	POTENTIAL CAUSES	SOLUTIONS
All LEDs are off	1. The power si off	Power transmission
	2. Automatic protection of the power supply after the output of the switching power supply is open or shorted.	Trouble shooting and recovering the power supply
	3. LED strip with power supply terminal polarity reverse.	Check the wire connection to ensure correct connection and positive and negative wire
Same of LEDs are off	1. Part of the switching power supply isn't powered	Check the power supply system and troubleshoot
	2. Part of the electricity supply line error	
	3. Partial led strips with reverse polarity connection	Correct connection
LED brightness is not the same or the brightness is not enough	1. Power overload	Replace it with higher power supply
	2. Switching power supply line or circuit loss is too large	Ensure that the operating voltage of the led strips is within $\pm 5\%$ of the rated voltage. 1. Cut the length of the wire between the strip and the power cord or use wires with larger diameter; 2. Ensure that the number of each led strip is less than or equal to the maximum allowable cascade; And make each strip with a similar connection
	3. Over ocnection of LED strips	Adjust the number of strips for each power supply and to meet the maximum connection requirements for each power supply.
LED flashing	1. Poor contact at the wiring point	Find out the bad points and troubleshoot
	2. Switching power supply failure	Replace the switching power supply

Statement

- If the external cord of the product is damaged, it should be replaced by the manufacturer or its service agent or a similarly qualified person to avoid danger.
- For the specific installation and precautions of the product, please refer to the product manual.
- The data above in this specification is based on standard products. Actual shipments may be a little difference. Please refer to the actual product.
- All product drawings in this specification are schematic diagrams, and actual shipments may be a little difference. Please refer to the actual product.
- This product is subject to change without notice.

Precaution

- Primarily designed for illuminated 3D plexiglass blocks and for outdoor installation it is necessary to pour gel (Wepuran) in the groove of the led modules.
- The modules are not designed for humid or wet environments.
- When the module is fixed, glue (silica gel, glass glue, hot melt glue) will be needed, but acid glass glue cannot be used.
- Due to the small size of the module, the injection part of the module cable and the module shell is only 1-1.5mm, so the module cable cannot be bent forcefully.
- The outlets at both ends of the module should be waterproofed, and electrostatic touch and live work are strictly prohibited.
- It is recommended to use a qualified switching power supply (with short-circuit overvoltage, overload protection, and safety certification).
- The switching power supply generally only uses 80% to 90% of the power. The power supply and the controller must work in a ventilated, dry environment.
- Please connect according to the positive and negative poles marked on the shell, the gray wire is connected to the positive pole of the power supply, and the white wire is connected to the negative pole of the power supply.