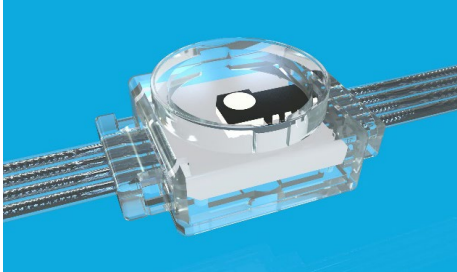


# SPB018 Pixel light

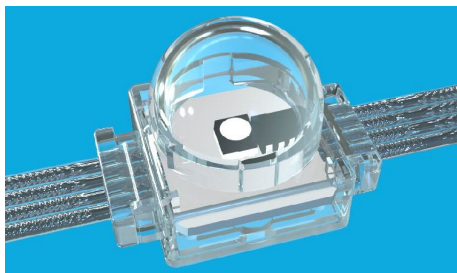
## Description



The **SPB018 pixel light** is a low power LED string product designed for outdoor landscape lighting. It adopts engineering grade flame-retardant plastic PC shell, which is sealed and waterproof by high thermal conductivity and weather-resistant PU glue; the lamp point is small in size and exquisite in appearance; the light string is connected by the national standard flexible cable, which can be bent and deformed at will, and supports the installation of special-shaped façade; The product spacing and color can be customized; it is suitable for large-area display or lighting of building facades, bridges and skylights.

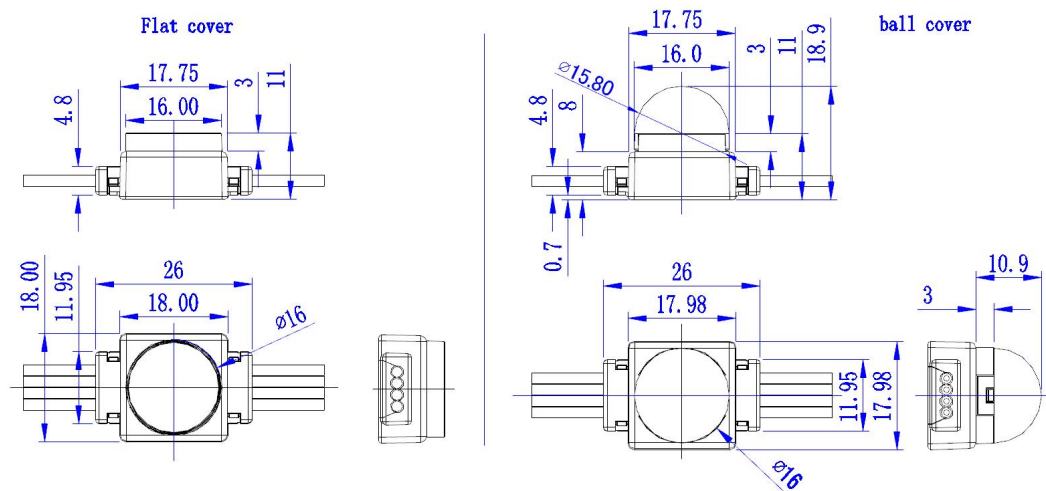
### Features:

- ★ A new generation of TTL serial technology design
- ★ Standard DMX512 Control Protocol
- ★ Industry-leading wireless button-type anti-smash connection design
- ★ High thermal conductivity glue full potting waterproof design
- ★ Outdoor lightning protection and Electrostatic (ESD) special protection design
- ★ Flexible, flexible application, multiple mounting methods
- ★ Grid installation, strip installation transmittance of up to 94%
- ★ Innovative high voltage work, support longer power supply distance
- ★ Support RGB/W current separately adjustable (low light and high gray)



Application environment: indoor, outdoor

## Measurement (Unit:mm)



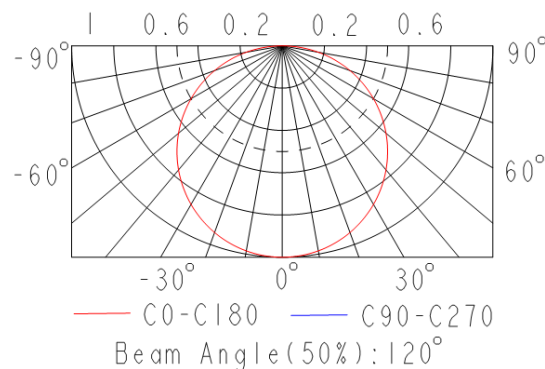
Flat cover measurement

Ball cover measurement

## Technical Parameters:

Basic parameters			
Color/gray	RGB/W each 4096 grayscale; RGB/W each 256 grayscale		
Light source	3535 / 5050 / 2835	LED quantities	1pcs
Material	Flame retardant PC	Cover material	Flame retardant PC
Lifespan	50,000h	Weight	5g
Optical parameters			
Operating Voltage	DC5V / 12V	Maximum power	0.3W / 0.5W
RGB Light intensity	2.5cd	White light	6cd
Beam angle	Flat cover 120° / Ball cover 160°	Electric grade	Class III
Other parameters			
Operating temperature	-20° C to 50° C	Storage temperature	-40° C to 70° C
Protection level	IP66		

## Light distribution curve

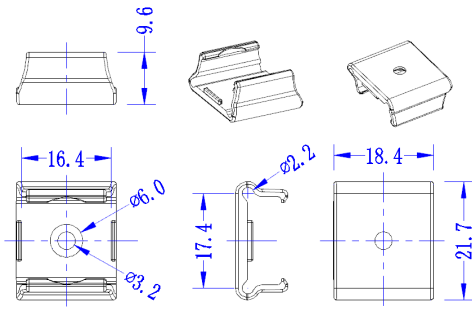


## Product selection table

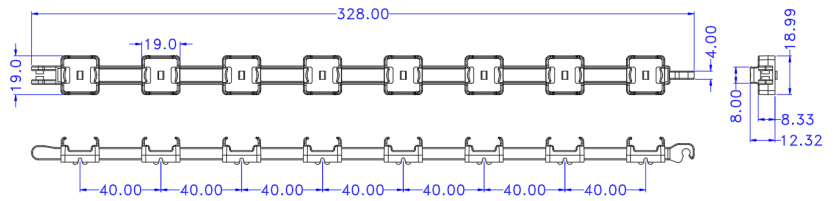
Model	Light source quantities	Light source	Color	Control	DC Operating Voltage	Power	White light light intensity
SPB018-01AU-01	1 PCS	3535	RGB/W	Dual channel Real-time backup TTL	12V	0.3W	2.5cd
SPB018-01AU-02	1 PCS	3535	RGB/W	Dual channel Real-time backup TTL	5V	0.5W	3.5cd
SPB018-01AE-01	1 PCS	3535	RGB/W	DMX512	12V	0.3W	2.5cd
SPB018-01AE-02	1 PCS	3535	RGB/W	DMX512	5V	0.3W	2.5cd
SPB018-01XT-01	1 PCS	5050	RGBW	Single line serial TTL	5V	0.4W	4cd

## Mounting parts dimensions

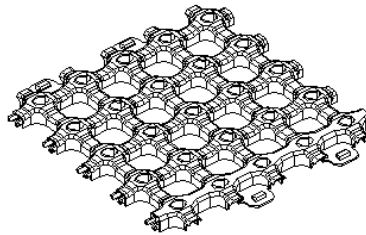
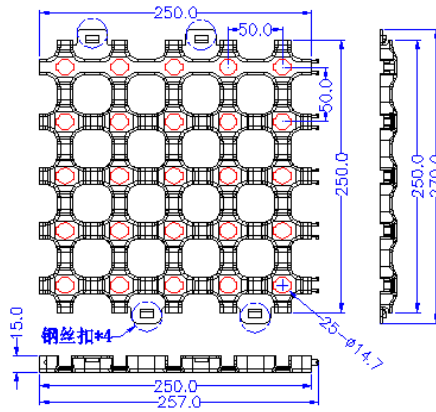
Supports a single mounting piece to be fixed by screws and wire, and supports a single mounting piece to be fixed by wire. The grid mounting piece is fixed by wire and supports profile mounting.



PC single mounting base size drawing (unit: mm)



PC strip mount dimension drawing (unit: mm)



PC grid mount dimension drawing (unit: mm)

## Commonly used wire accessories:



Hanging hook



Clip head



Steel wire loop



Hanging head 1

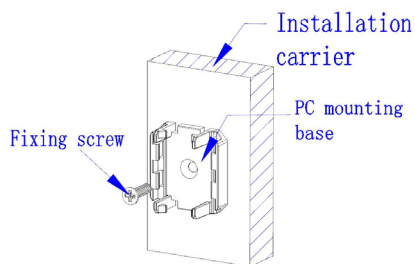


Hanging head 2



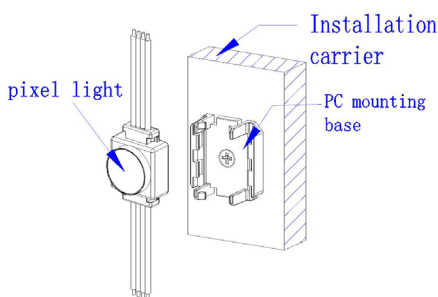
Hang head 3

## PC single base installation method 1:



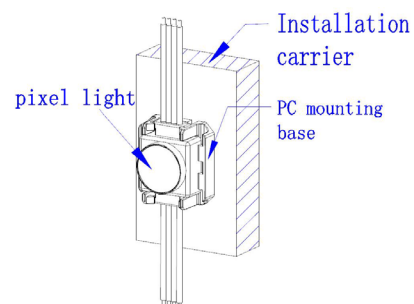
### ①PC installation base installation:

Use a suitable self-tapping screw to secure the PC mounting base to the desired position, with the spacing required by the string spacing of the project order.



### ②pixel light installation:

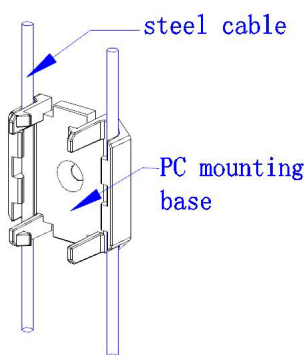
After the PC mounting base is firmly installed, the point light source is stuck into the PC mounting base;



### ③installation is completed:

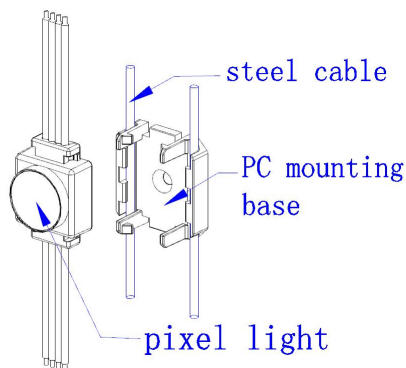
Schematic diagram after installation is complete.

## PC single base installation method 2:



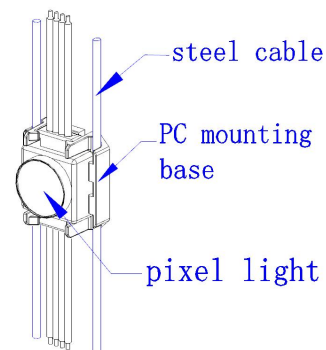
### ① wire fixing and PC base installation:

Fix the two ends of the wire to the mounting base, and then fix the PC mounting base to the wire. The spacing is required according to the order spacing of the project order lights!



### ②Pixel light installation:

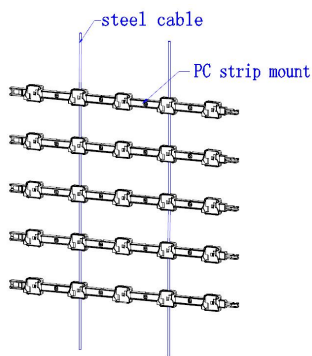
After the PC mounting base is fixed, the point light source is stuck into the PC mounting base;



### ③adjustment pitch :

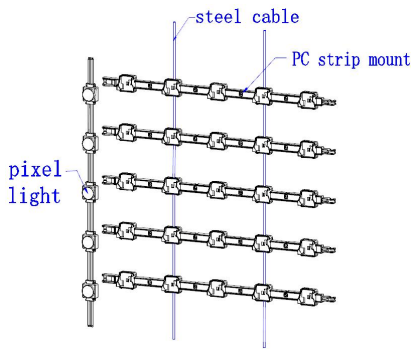
After the installation is completed, the pixel light pitch can be fine-tuned to ensure that the point source is installed neatly! (schematic diagram after installation)

## PC strip mounting method:



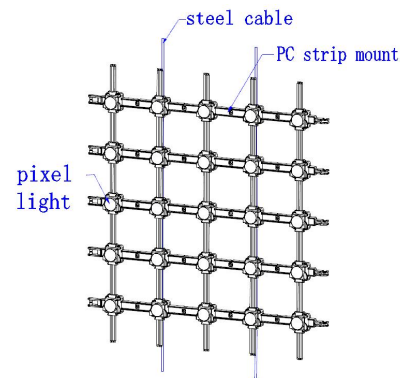
### ① wire fixing and strip mounting:

Fixing both ends of the wire on the strip mounting module to the mounting base;



### ② pixel light installation:

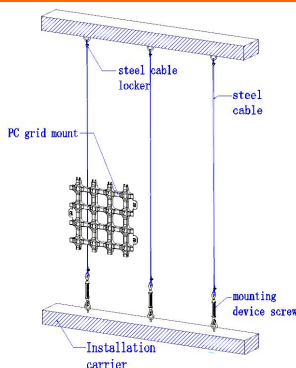
After the strip-shaped mounting module is fixed, the point light source is stuck into the strip-shaped mounting member;



### ③ adjust the point spacing and flatness:

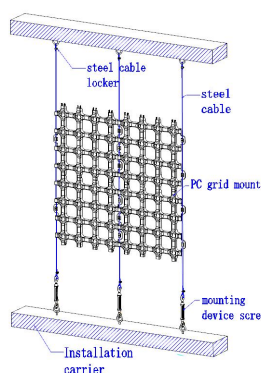
After the installation is completed, the spacing of the strip mounts can be fine-tuned to ensure that the installation is neat! (schematic diagram after installation).

## PC grid installation method:



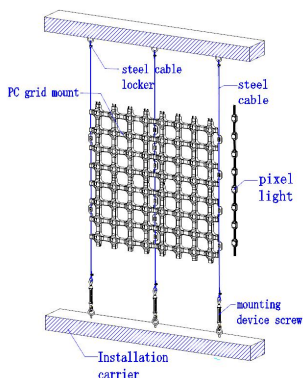
### ① wire and grid mounting parts installation:

Fix the two ends of the wire to the mounting base, install the grid mounting on the wire, and install the wire into the wire buckle.



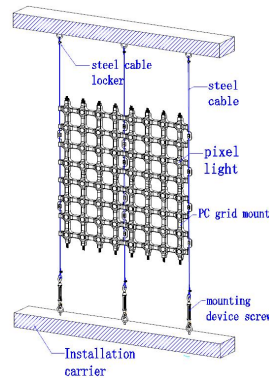
### ② grid mount stitching:

The grid mounting pieces are spliced one by one and fastened and adjusted.



### ③ installation point light source:

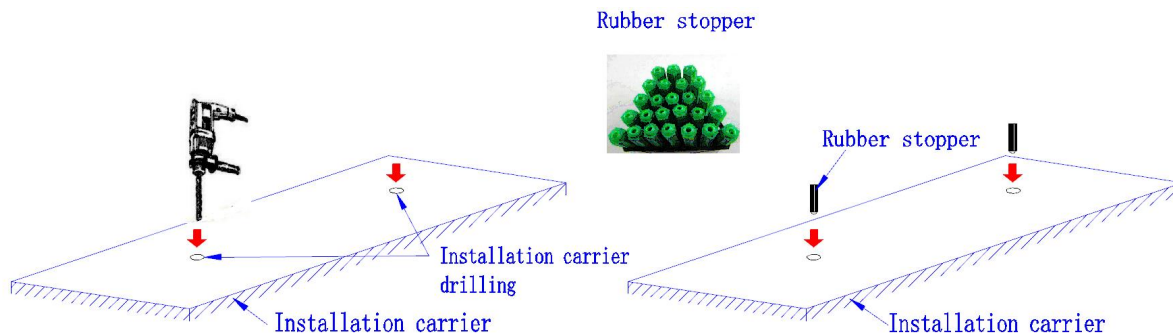
Take the light source light string and press the point light source into the grid mounting piece one by one from the back of the grid mounting piece to the front according to the requirements of the cloth light. Do not loosen.



### ④ Pixel light is installed:

The pixel light installation is completed, and the system is connected.

## Frame installation method:

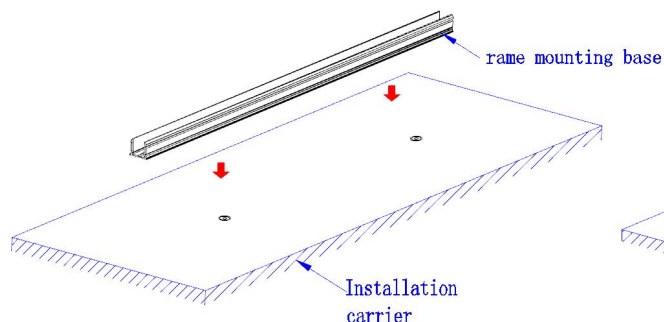


### ① installation carrier drilling:

Drill a hole in the position where the carrier is required to be drilled by selecting a suitable drill bit;

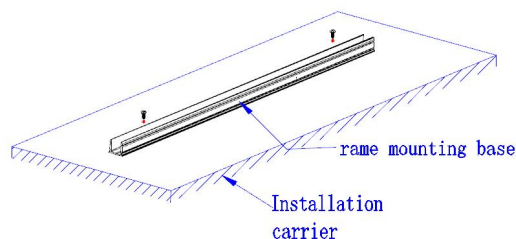
### ② installation rubber plug:

Use a suitable rubber plug and hammer the rubber plug into the hole drilled by the mounting carrier; (Note: the rubber plug should not be loose)



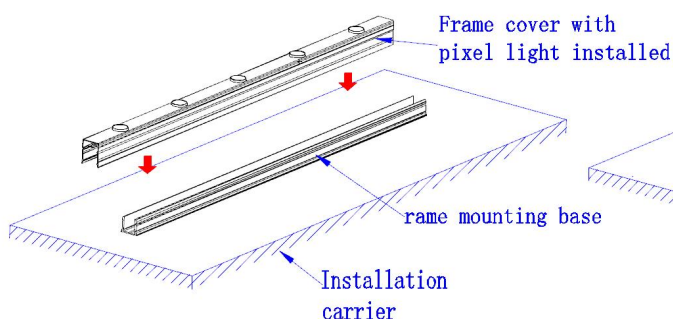
### ③ mounting frame mounting base:

Align the hole of the frame mounting base with the rubber plug hole and mount it on the mounting carrier;



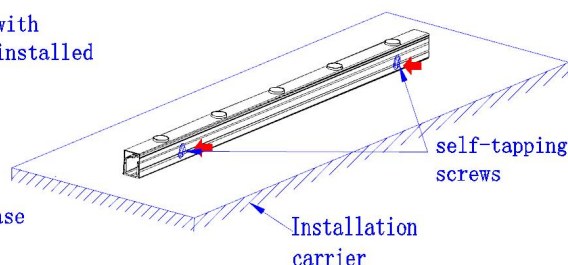
### ④ fixed frame mounting base:

After installing the frame base, lock the mounting base with screws and do not loosen it;



### ⑤ mounting profile cover:

The top cover of the profile with the point source is installed, aligned with the mounting base, and fastened to the profile mounting base;



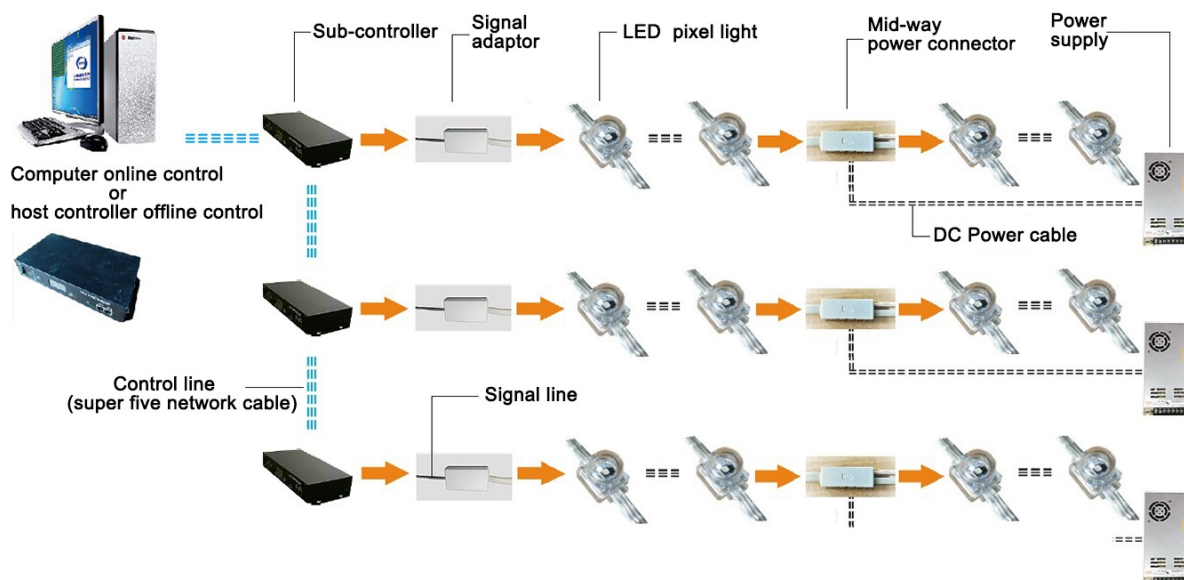
### ⑥ mounting profile reinforcement screws:

After installing the profile, use two self-tapping screws from the lower side to fix the profile cover and the profile mounting base to prevent the profile cover from falling.

## System connection

- 1、 The main controller is equipped with sub-controller and signal adaptor. The main control and sub-control working voltage is AC220V. The working voltage of the signal adaptor is the same as the working voltage of the pixel light.
- 2、 Each sub-controller has 8 ports. The TTL sub-controller can carry 512 (RGB) pixels per port. The DMX sub-controller can carry 170 (RGB) pixels per port. It is used with the signal adaptor and supports 200 meters long distance transmission.
- 3、 The main control and sub-control, sub-control and sub-control are connected by CAT5 twisted cables, the maximum distance of each section is less than 120 meters; the maximum transmission distance between the sub-controller and the signal adaptor is less than 120 meters. In this case, the maximum distance from the signal adaptor to the first pixel light is no more than 2 meters.
- 4、 It is recommended that the maximum point spacing should not exceed 2.5 meters, and each intermediate power supply can support the power supply distance of 6 meters left and right (can be adjusted according to the project conditions).

### System schematic



Control system	TTL Dual channel real-time back up	DMX512
Main controller		
Sub controller	MR-218A	MR-218DW
Signal adaptor		
Signal adaptor	AD-001Differential Signal adaptor	AD-002Differential Signal adaptor
Signal cable	Two-core shielded wire	Two-core shielded wire, Three-core shielded wire

## Notes:

1. Please read the installation manual carefully before using the product.
2. The product is handled gently and gently to avoid damage to the product. Installation, maintenance and maintenance must be handled by professionals;
3. The external power supply must be cut off during wiring to prevent people from getting an electric shock or amaging the lamp;
4. When the external power cord is connected, the corresponding measures of waterproofing and water leakage must be taken;
5. The male and female waterproof protective covers for the products shall not be removed before the products are installed and connected;
6. Quality Assurance: Under normal conditions of use, quality assurance is based on the proper storage, installation, use and maintenance of the product.

**(Note: Product damage caused by improper installation and use, in violation of product operating procedures, is not within the scope of product quality assurance.)**