

Version: A1.0

Features

- Adopt auto integer forwarding technology, long distance signal transmission without signal distortion or weakness.
- Single-wire zeroing, zero-code serial cascading interface protocol.
- Signal never rip even foregoing led error.
- Support multiple controllers to realize various light effects.
- Controller must be used to lit the product.

Application

- Suitable for outdoor architectural decoration like big logo, amusement park, hotel, curtain wall, sign, stage, etc.

Installation

- Fix by self-adhesive tape
- Fix by screws

Optical & Electrical Parameters

Model No.	Light Color	CCT/Color Available (K/nm)	Beam Angle	Typical Luminous Flux value (lm/pcs)	Efficacy (lm/W)	Ra	Voltage (DC)	Power (W/pcs)
PQ5-Q	W	6000-7000	110°	16	60	90+	12V	0.28
	R	620-630		4	20			0.24
	G	515-530		12	53			0.24
	B	460-470		3	13			0.24
	RGBW	--		36	44			0.82

Other Parameters

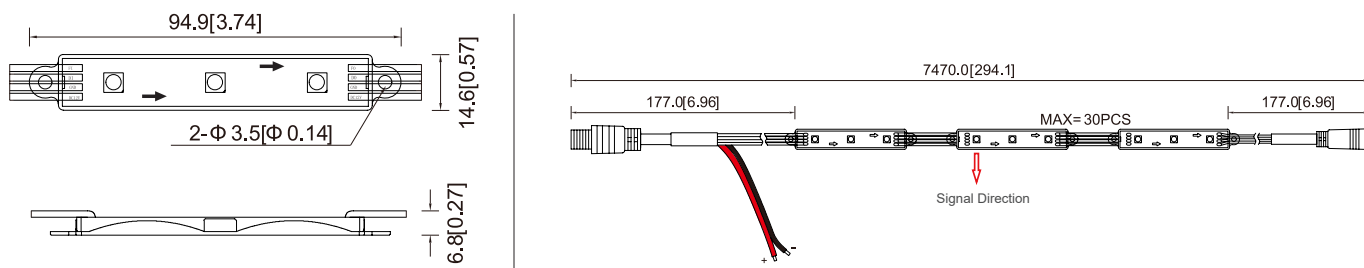
Model No.	LED Qty/pc	Standard Run (pcs)	Max Run (pcs)	Working Temperature	Storage Temperature
PQ5-Q	3	30	30	-20~+60°C	-20~+70°C

NOTE:

1. Test environment temperature : 25±2°C.
2. The above data is typical values. The actual data of each single product may differ from the typical values. The data is subject to change without notice.
3. Luminous flux is tested when lighting on with the single color.
4. Different color temperature will make luminous flux different.
5. "-" means no data for now.
6. Power and luminous flux tolerance within ±10%.
7. Max run is based on one end power feeding.

Profile Drawings

Unit:mm[inch]

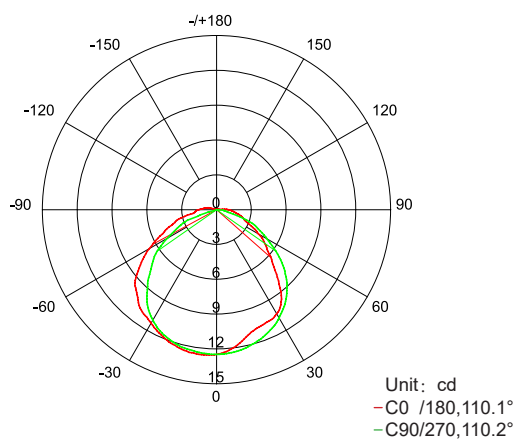


Note:

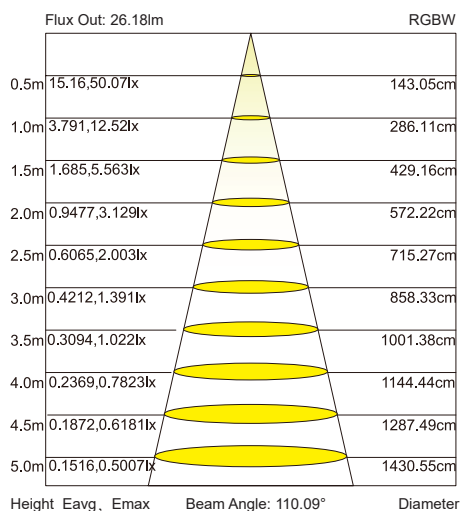
Controller must be used to lit the product. Please contact the sales for detail size.
The signal direction is from controller to outside.

Luminous Intensity Distribution Diagram

Average Illumination



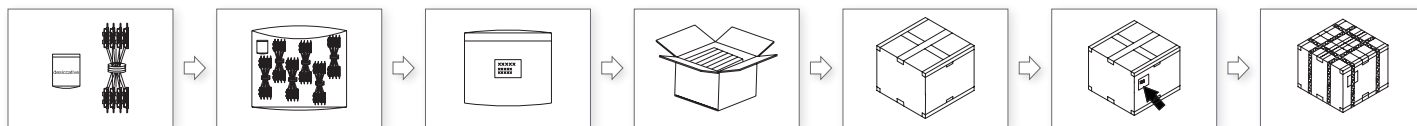
AVERAGE BEAM ANGLE(50%): 110.2°



Note: the above two figures are tested with the sample PQ5-Q-RGBW,for other data,please consult sale rep.



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 L*W*H(mm)	Carton Size(mm)	PCS/Bag	Bag/Carton Box	Net Weight(kg)	Gross Weight(kg)
PQ5-Q	94.9*14.6*6.8	380*380*345	90	16	15.55(1±10%)	16.35(1±10%)

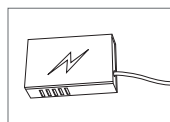
Note:

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.

Installation

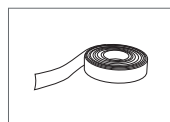
Accessories & Tools



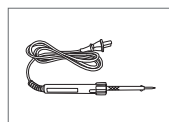
LED power supply



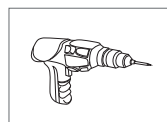
Controller



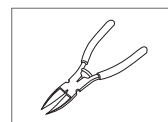
Insulation Tape



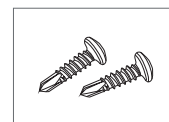
Electric iron



Electric drill



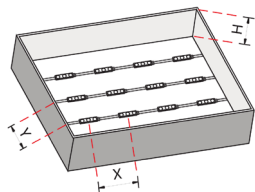
Diagonal pliers



Screws

Installation Reference

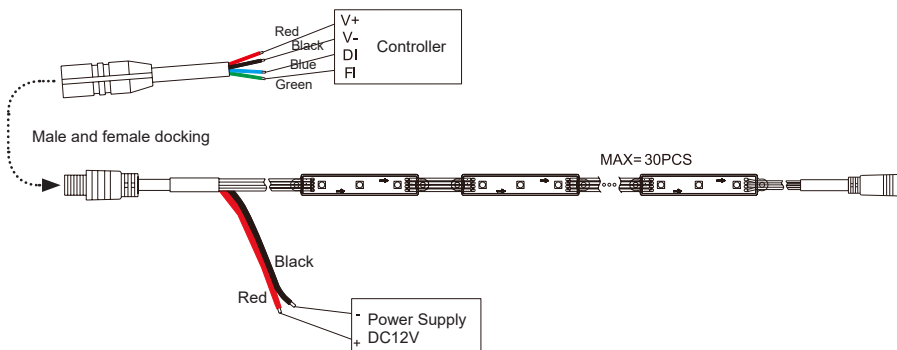
Model No	Surface Material	Depth (H)	Illumination (lux)	Evenness	Density (pcs/m ²)	Spacing (X*Y)	Power Density (W/m ²)	Visual Effects
PQ5-Q	White Soft Film	10cm	1055-1261	0.84	10*10	10*10cm	82	OK
		12cm	584-687	0.85	7*8	14*12cm	46	
		15cm	474-551	0.86	6*6	16*16cm	30	
		18cm	363-412	0.88	5*5	20*18cm	21	



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>18cm, use more products to satisfy Illumination demand.
5. Please ask the sales for other data.
6. Wire length supports customization.
7. Can increase installation density for actual needs.

Wiring Method



Power Supply & Controller Connection

Power Supply Wiring Diagram

Power Supply Rated Power(W):P

Module Rated Power(W):P_{Module}

Controller Load:M(pcs)

Product Max Run: MAX=30PCS

Power Supply LED Loading: N

$$N = \frac{P \times 0.8}{P_{Module}}$$

Eg: Use 0.82W PQ5-Q, 400W power supply and 8 ways output controller

$$N = \frac{P \times 0.8}{P_{Module}} = \frac{400 \times 0.8}{0.82} \div 390(\text{pcs})$$

Note:

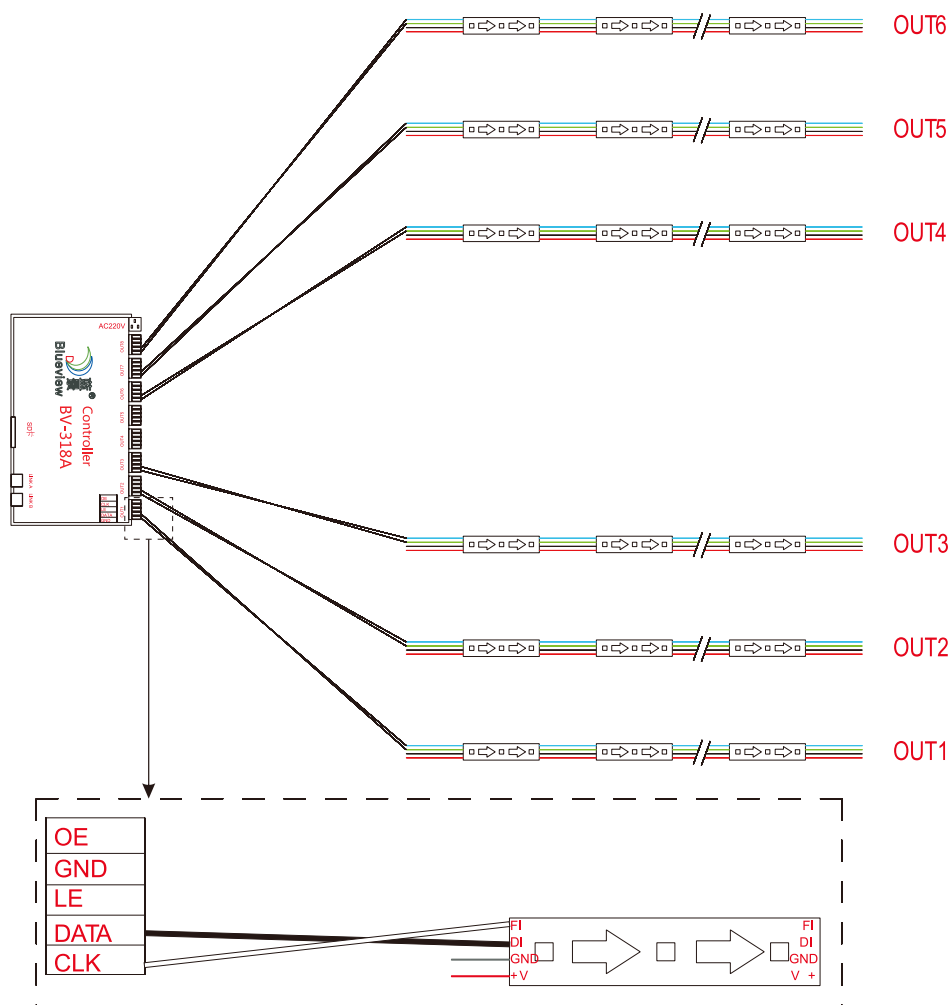
1. The value of N is taken as an integer.
2. Try to use same amount of products in each output way.
3. The working voltage of module must be matched with power supply and controller.



$$2 \times M \times \text{MAX} \leq 2 \times 6 \times 30 = 360 < N = 390 \text{ PCS}$$

Controller Wiring Diagram(M=6)

Connection of Controller BV-318A



Note:

If the controller is too far from the product, or the signal is too weak, an amplifier must be added.

Common market controller: MR-218A, MR-512, T1000, T8000, SP105E, BV-318A etc.



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 installation, the fabric light box must be covered with cloth within 48 hours. Please avoid leaving the light box idle for a long time.

Common Faults and Troubleshoot

Quick Guide		
Problems	Reasons	Solutions
	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.

Version	Content	Date
A1.0	First release	2024-4-2