



# Specification

Prepared	Checked	Approved	Accepted	Confirmed	Approved

<b>CE</b>	<b>RoHS</b>	<b>5050</b> SMD	<b>2</b> LEDS	PVC injection series	<b>DC</b> <b>12V</b>	<b>IP</b> <b>65</b>	<b>3</b> Years
-----------	-------------	--------------------	------------------	-------------------------	-------------------------	------------------------	-------------------



**Model:** ○ M902AQ

2pcs 5050 SMD LEDs, 49\*18.6\*10.4, white shell and equipped with optical cover, PVC injection series, 0.72W, 12Vdc, group control, RGB LED module

**Picture:**



**Features:**

- 5050 SMD LED with low attenuation and long life;
- Maximum cascading qty up to 25pcs;
- Homogeneity in lighting and stable performance;
- RGB group control and linear function control;
- CE, RoHS, compliant.

**Applications:**

- Suitable for 8~20cm[3.14~7.87in]depth signage and landscape lighting engineering

**Warranty:**

- 3 years or 13,000 hours, whichever comes first.

**Optical and Electrical Parameters:**

P/N	LED Color	CCT (K) WL (nm)	CRI	SDCM	Beam Angle (°)	Luminous Flux (lm)	Luminous Efficacy (lm/w)	Working voltage (V DC)	Working current (mA)	Power (w/piece)
M902AQ	Red	620-625	--	--	160	14	19.4	12	60	0.72
	Green	520-525	--	--						
	Blue	470-475	--	--						

**Others:**

P/N	IP Grade	Operating Temp (°C)	Storage Temp (°C)	Standard cascading qty (pcs)	Single-ended max. cascading qty (pcs)	Double-ended max. cascading qty (pcs)	Weight (g/piece)
M902AQ	IP65	-25~+60	-25~+70	25	25	50	13.5

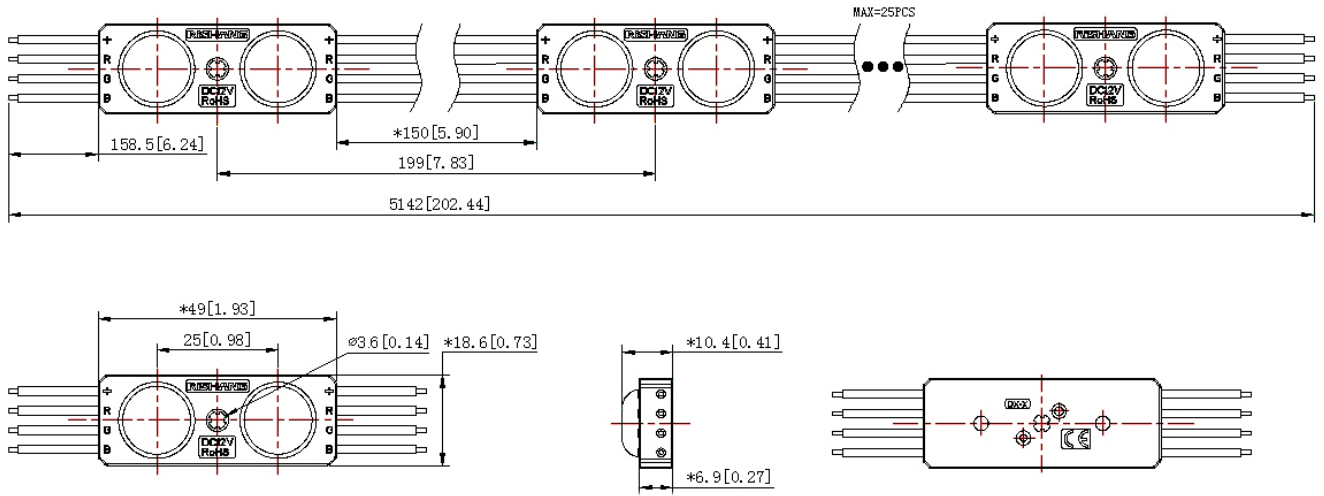
Notes:

- (1) Testing environment temperature: 25±2°C [77±3.6°F];
- (2) The actual data of each single product may differ from above typical data which are subject to change without prior notice;
- (3) The above “--” means the parameters are not required temporarily.

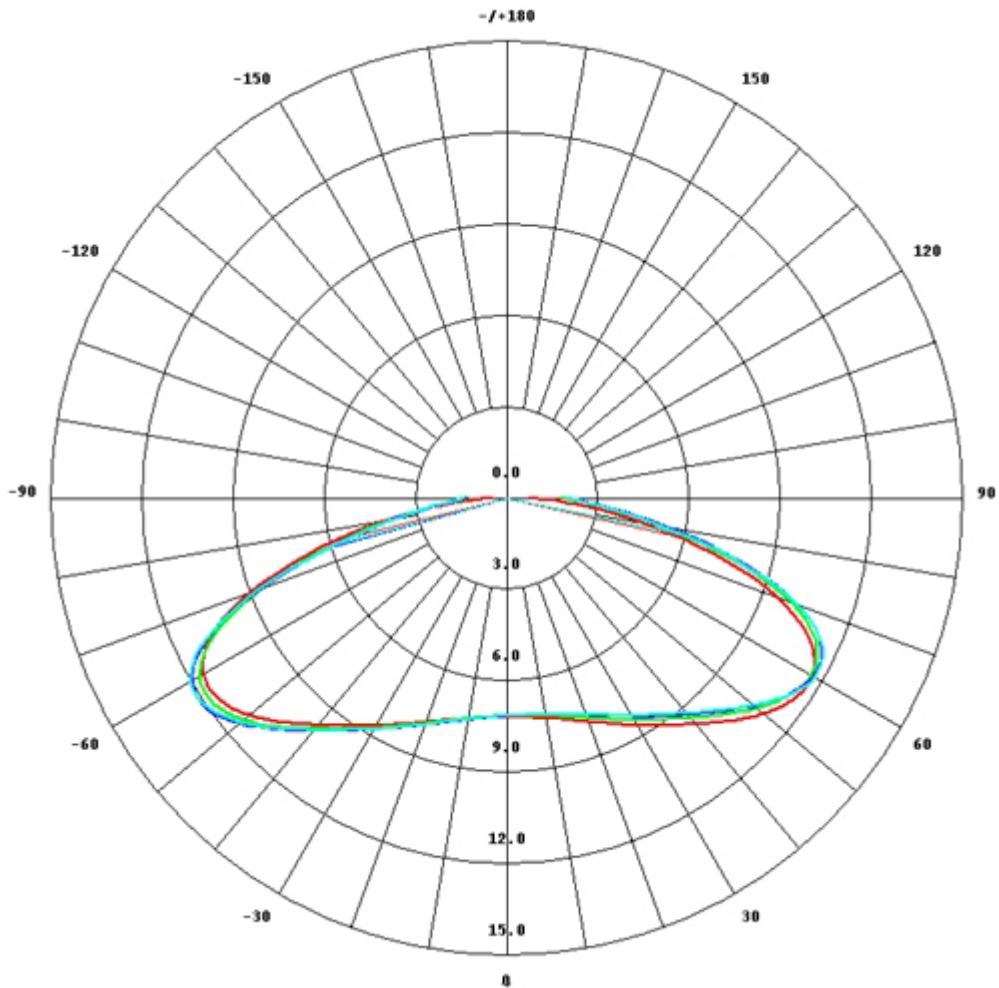


## Profile Drawings:

Unit: mm[inch]



## Light Distribution:



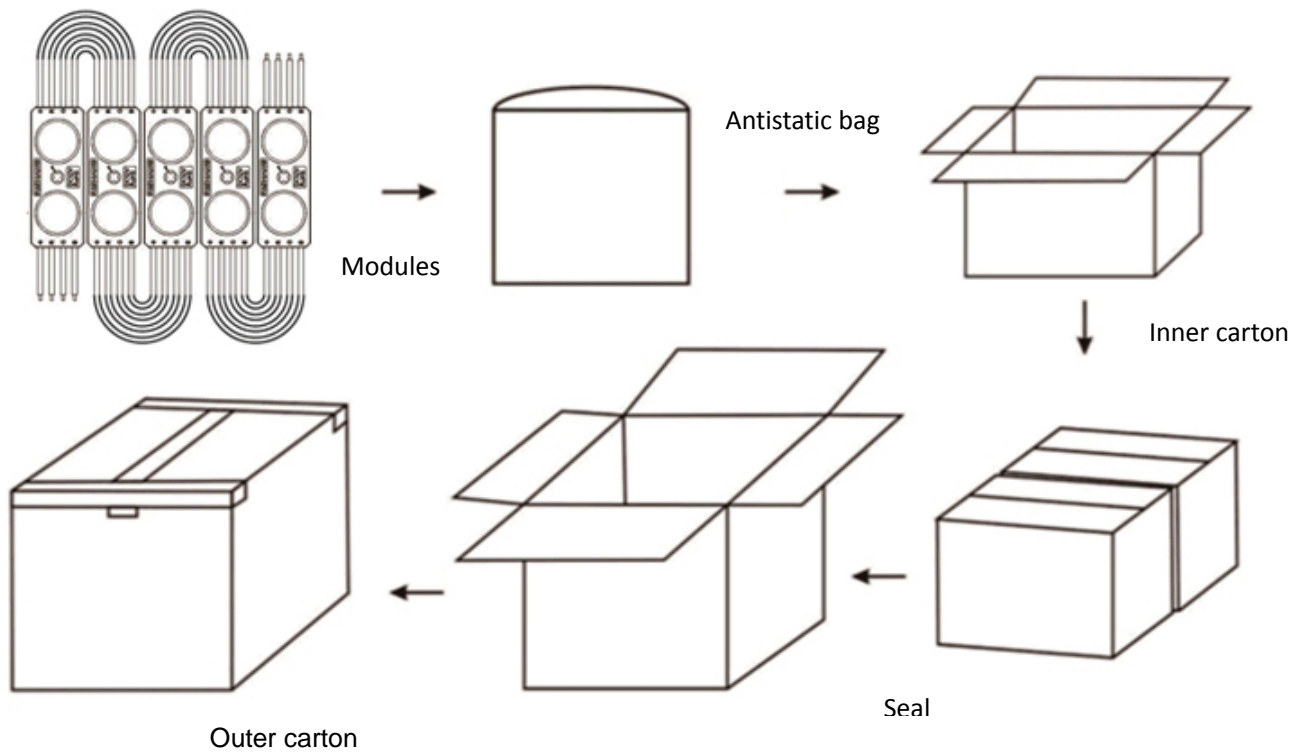


## Packaging Information:

P/N	Qty (PCS/bag)	Qty (bag/carton)	Total Qty (PCS)	Total weight		Outer carton size					
				(Kg)	(lb)	length		width		height	
				(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)
M902AQ	75	375	750	13.5	29.98	528	20.78	376	14.8	272	10.7

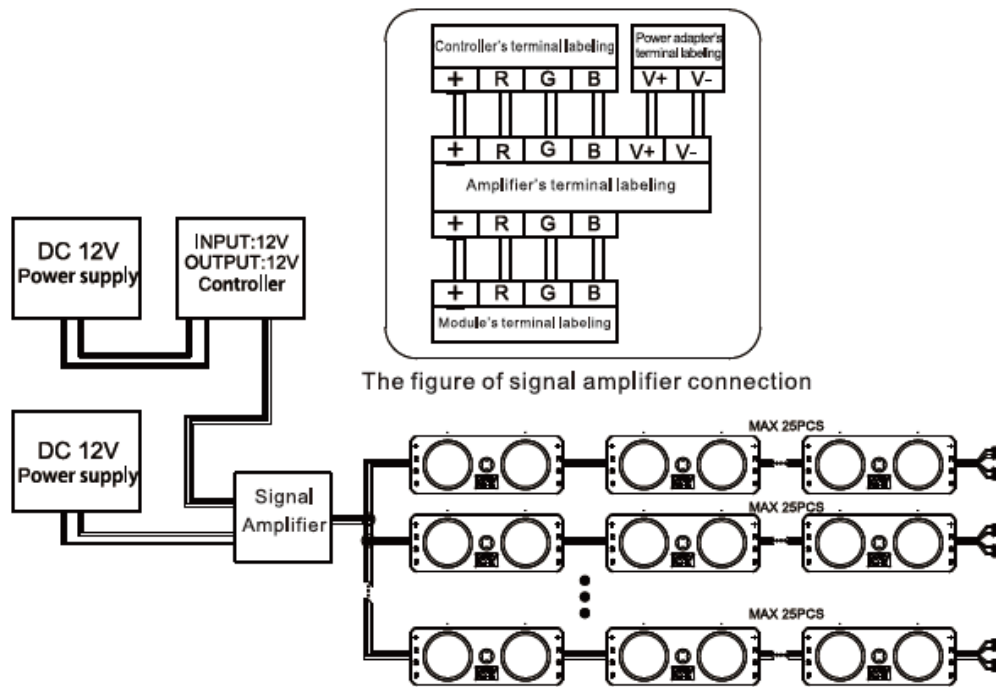
Notes: The actual packed quantity and weight might differ from the above data in other packaging ways. Thus please refer to the actual product for detailed information.

## Packaging Diagram:



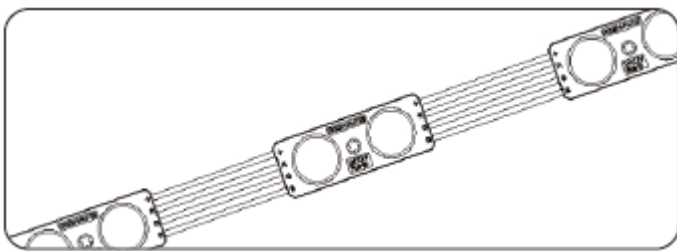


## Connection Instruction:



## Parts & Tools:

### Product Spare Parts



Modules

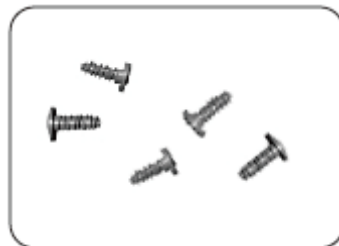


Terminals

### Self-provided Tools



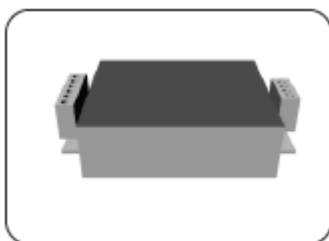
Cutting nipper, Electrical  
Drill & Drilling bit



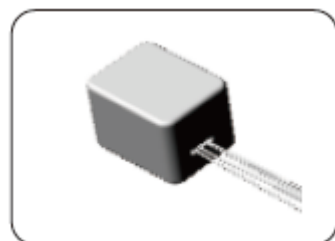
Self-tapping screws (ST2.9)



Natural glass glue + gun



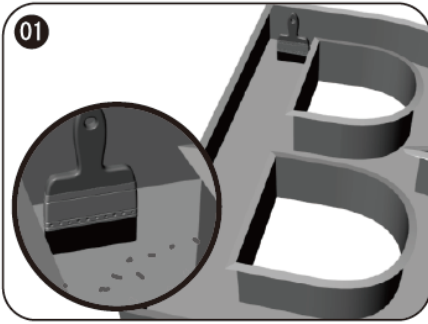
Signal amplifier



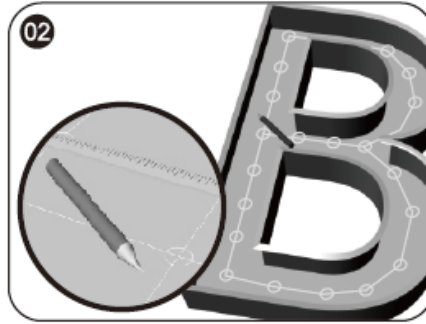
Controller



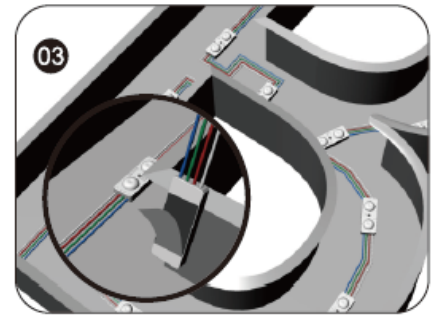
## Installation Steps:



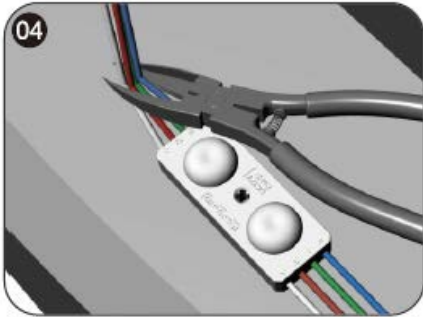
- ① Clean the installing surface



- ② Mark the installing position for modules and determine the needed qty..

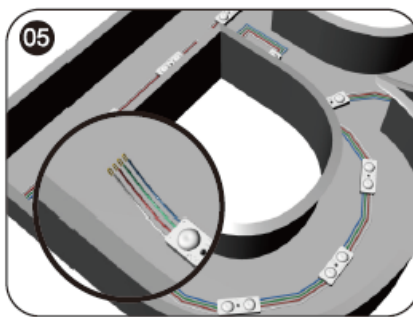


- ③ Peel off the release paper of double-sided adhesive tapes, then, stick modules on the installing surface for preliminary mounting.

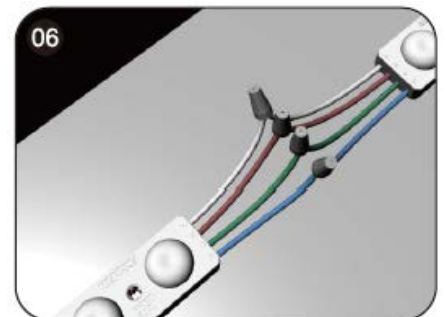


- ④ Cut off the modules to the desired qty, and peel off the insulation skin of wires about 10mm

[△Note: Please cut from the middle of wires between modules.](#)

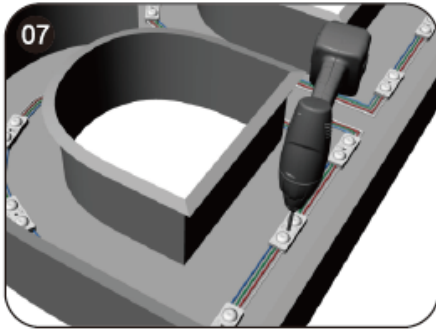


- ⑤ When the wires exposed in the last module, please peel off the insulation skin of wires about 10mm each, then, screw in terminals respectively, and dispose with waterproof, insulation protection.

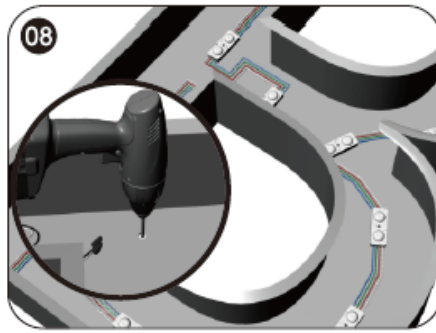


- ⑥ When the modules are connected in series, please peel off the insulation skin of wires about 10mm each, then, screw in terminal as demonstrated as figure 06 on the left, with full attention paid to wires' polarity, and dispose the joints with waterproof, insulation, short-circuit and anti-corrosion protection.

[△Note: The maximum cascading qty should be less than or equal to the standard cascading qty under single-ended power feed.](#)

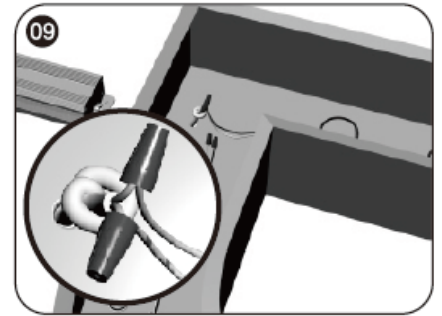


- Adjust and press the modules to the best position, then fixed by screws one by one.



- Drill a hole at an appropriate position with an electrical drill, pull the cable of power supply through the hole, then fix the cable and dispose with protection.

△Note: Drill a hole with proper force, otherwise, the panel of channel letter might be broken easily due to the big force.



- Correct connect the wires of the first module to power supply output with full attention paid to wires' polarity, and then dispose the joints with waterproof, insulation, short-circuit and anti-corrosion protection

### Troubleshooting:

Malfunctions	Possible Causes	Solutions
All LEDs don't work	1. The power supply did not connect to power grid.	Power on
	2. No electricity due to short-circuit of external power supply	Remove the malfunction caused by short-circuit, power on again
	3. The wires of module connect to power supply output reversely.	Check the connecting and ensure the wires are connected correctly.
Part of LEDs don't work	1. Part of power supplies do not have output.	Check the power supply system.
	2. Part of module wires have malfunction.	
	3. Particular module connected reversely.	Correct connection
Brightness of LEDs is weak or uneven	1. Overloaded power supply	Replace it with higher power supply
	2. The power loss of power circuit is huge or the power loss of each circuit existing big difference	Ensure working voltage of modules is within $\pm 5\%V$ of rated voltage. 1. Shorten the length of wires between the first module and power supply or replaced with wires with bigger diameter; 2. Ensure the cascading qty of string is less than or equal to the allowed maximum cascading qty, and each module cascading qty is well-balanced.
	3. Exceed in qty of modules in series.	Lessen the cascading qty for module and ensure the qty for each electrical circuit is within the maximum cascading qty.
LEDs are blinking	1. Poor contacted in the joints.	Find out and tackle malfunction immediately.
	2. Failures in power supply.	Replace power supply.



## Declaration:

---

- ⦿ If the external flexible cable of light box is damaged, please replace it by its manufacturer or its service agent or qualified person to avoid a hazard.
- ⦿ The specific installation and cautions please refer to the user manual.
- ⦿ The given data in this specification is based on our standard product. There may be existed slight difference compared with actual products.
- ⦿ All Illustrations in this specification are for reference only.
- ⦿ This product is subject to change or modify without prior notice.
- ⦿ RISHANG OPTOELECTRONICS CO., LTD reserves the right of final explanation for this specification.

<End>