

Specification

Prepared	Checked	Approved	Accepted	Confirmed	Approved

CE

RoHS

3535
SMD

3
LEDs

Injection
molding

DC
12V

IP
65

3
Years

Model: ☉MG903DB

3PCS 3535 SMD LED, 128*32.2*17.6mm, white shell with optical lens, injection series, 12Vdc, constant current, LED module/ (White light-5W)

Figure:

Features:

- ☉3535 SMD LED with low attenuation and long life;
- ☉Standard cascading qty up to 15pcs;
- ☉Beam angle: 8*18°;
- ☉Can be cut between every unit;
- ☉CE, RoHS compliant.

Applications:

- ☉ Suitable for 4-8cm [1.57-3.15in] thickness single-sided light box and 6-14cm [2.36-5.51in] thickness double-sided light box within the lighting distance of 1.5m.
- Applied to the single- and double-sided light box of shopping malls, airports, subway, bus stations, and other places.

Warranty:

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

Optical and Electrical Parameters:

P/N	LED Color	CT (K) WL(nm)	CRI	SDCM	Beam Angle (°)	lm	lm/W	V DC	mA	W/piece
MG903DB	Pure White	6400	≥74	--	8*18	400	79	12	417	5

Others:

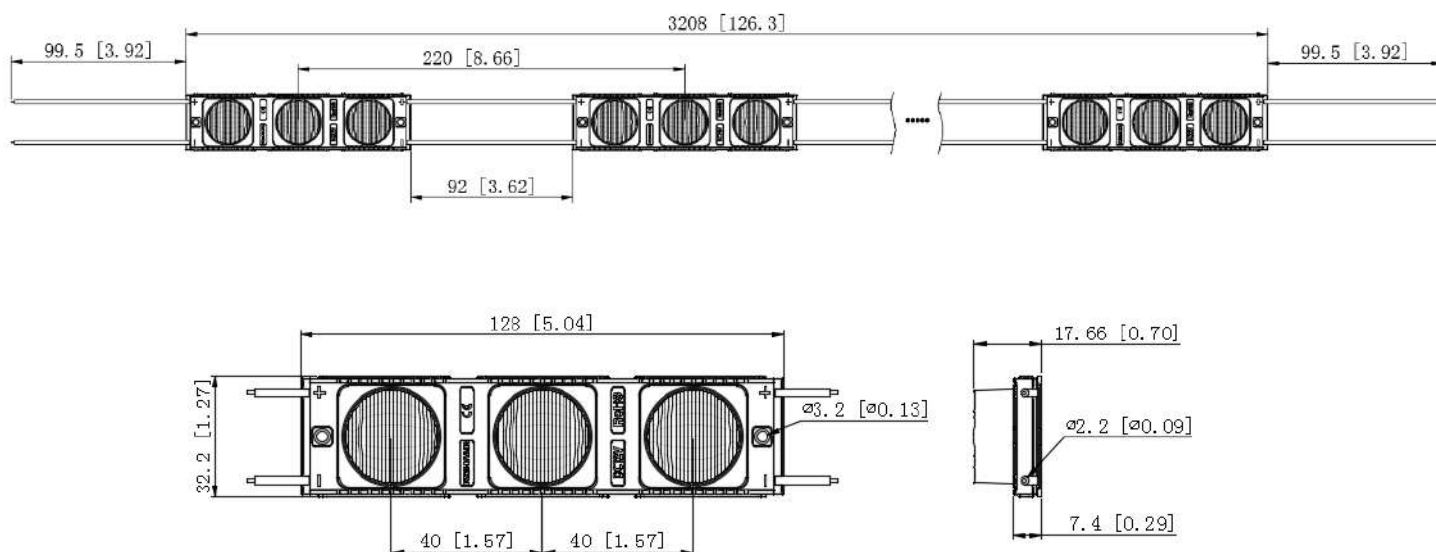
P/N	IP Grade	Operating Temp (°C)	Storage Temp (°C)	Standard Cascading qty (pcs)	Single-ended max. Cascading qty (pcs)	Double-ended max. Cascading qty (pcs)	Weight (g/piece)
MG903DB	IP65	-25~+60	-25~+70	15	15	30	55g

Notes:

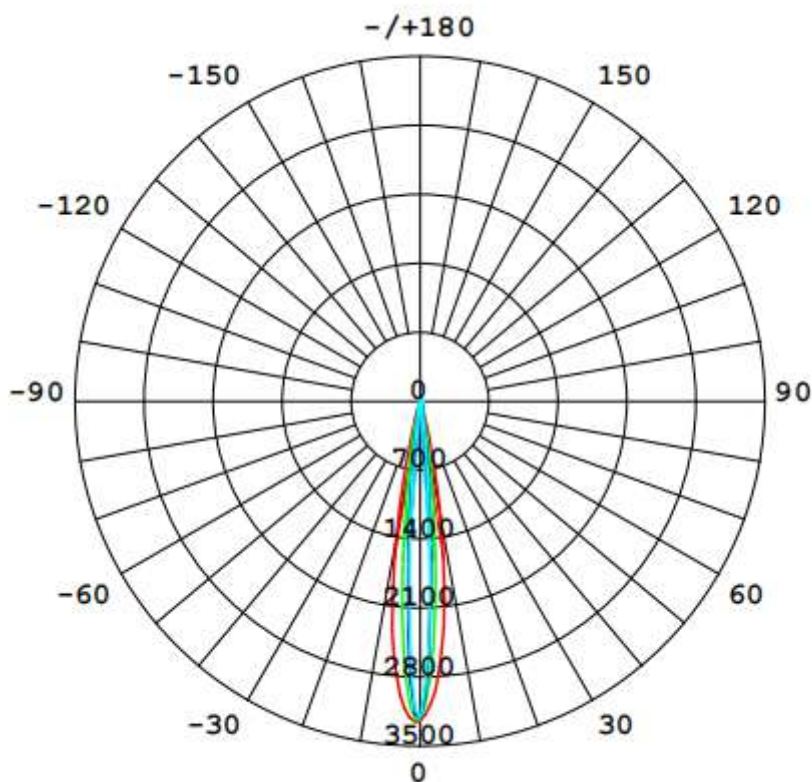
- (1) Testing environment temperature:25±2°C [77±3.6°F];
- (2) The actual data of each single product may differ from above typical data which are subject to change without prior notice ;
- (3) The above "--" means the parameters are not required temporarily.

Profile Drawings:

Unit: mm[inch]



Light Distribution:



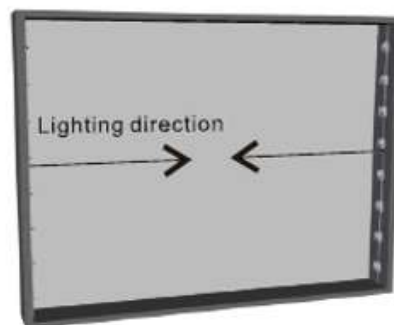
Layout Data:

Thickness of double-sided light box (mm)	Distance between adjacent modules (mm)	Installing density (PCS/m ²)	Surface illuminance range (lux)
dz=80	dx=1500 dy=130	52	1630-1920
dz=100	dx=1500 dy=130	52	1730-2000

Notes:

- (1) The above illuminance is the average value tested on the even surface.
- (2) The above data is tested from the modules with 6,400K color temperature.
- (3) "/" means uneven lighting.
- (4) This module is of high power so for better heat dissipation and effectively ensuring the working life span, it must be installed on a metal surface.
- (5) The above data is for reference only.

Module Layout:

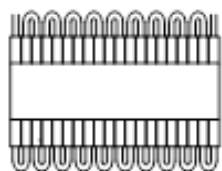


Lighting from left and right

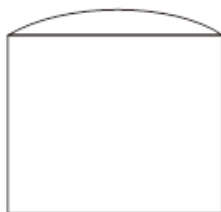
Packaging Information:

P/N	Qty (pcs/bag)	Qty (bag/carton)	Total Qty (pcs)	Total Weight (kg)	Outer Carton (mm)		
					Length	Width	Height
MG903DB	15	10	300	18.4	528	376	272

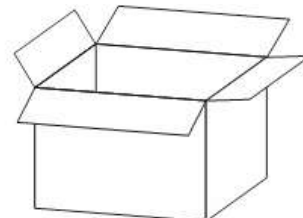
Packaging Diagram:



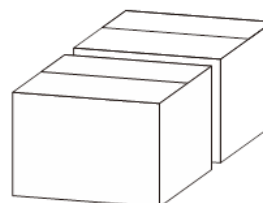
Stick modules, 15pcs per row



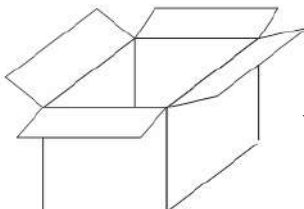
15pcs per antistatic bag



150pcs per inner box



Seal the inner box

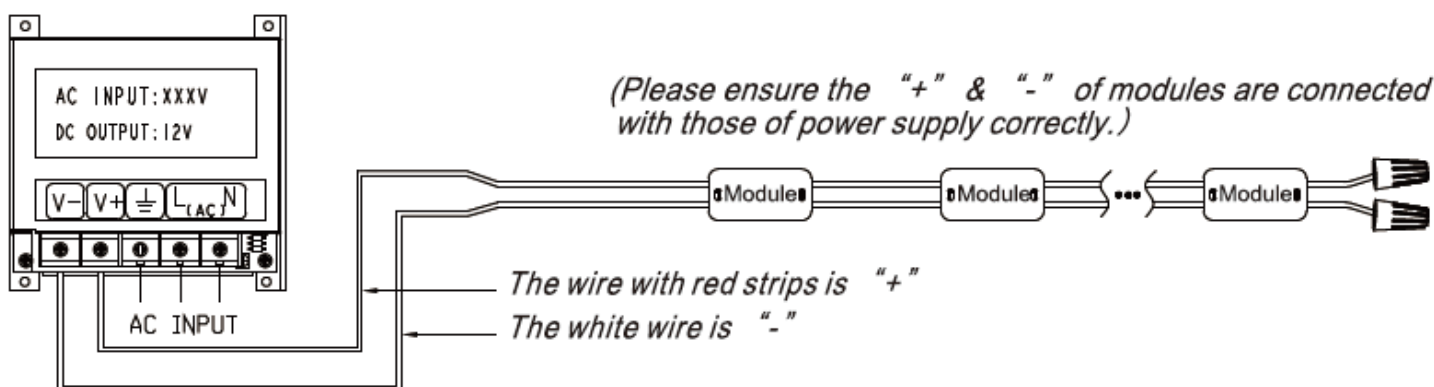


2 inner boxes per outer carton



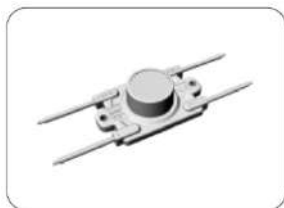
Seal the outer carton

Connection Instruction:



Parts & Tools :

Product Spare Parts



Modules

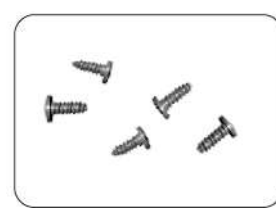


Wire connectors

Self-provided Tools

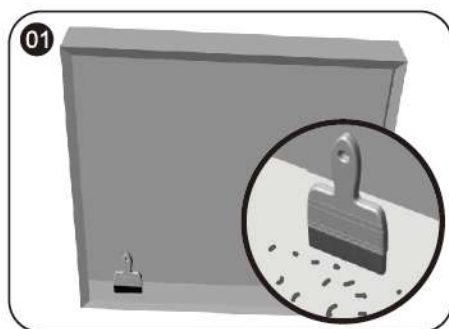


Cutting nipple, Electrical drill & Drilling bit



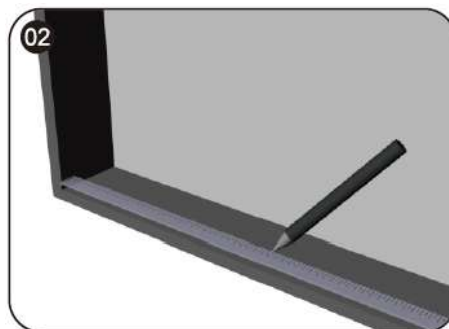
Self-tapping screws
(ST: Ø2.9*10mm)

Installation Steps:

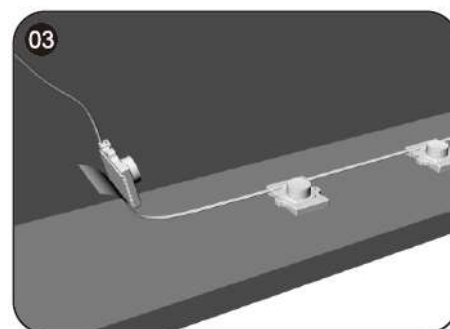


- Clean the mounting surface.

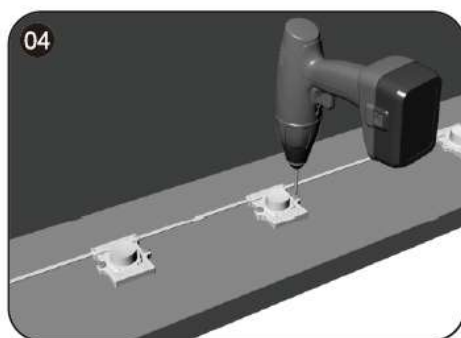
△Note: This high-power module must be installed on the metal surface to dissipate the heat.



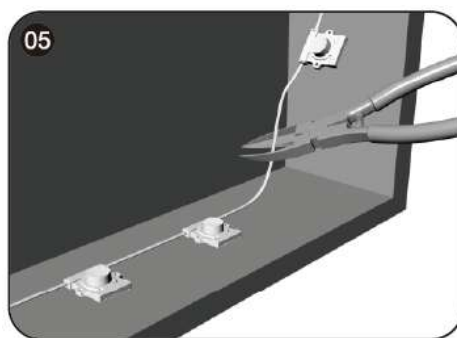
- Determine the installing position for modules and the needed qty. Make sure to install it in the middle.



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

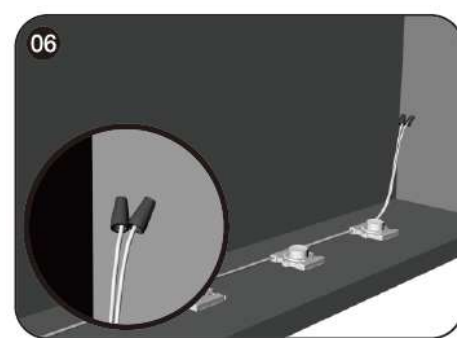


- Adjust the modules to the best position, press the double-sided tape tightly and then fix by screws.

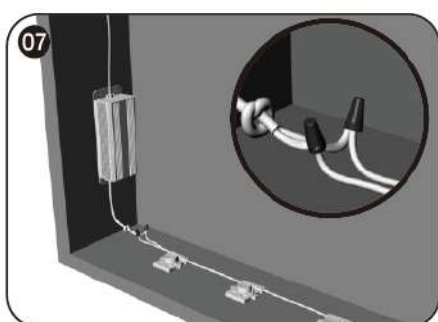


- Cut off the modules to the desired qty, and peel off the insulation skin of wires about 10mm.

△Note: Please cut from the middle of wires between modules.



- 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.



- Please ensure that the “+” & “-” of the wires of modules are connected with those of power supply correctly, and dispose with waterproof, insulation, anti- 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.

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Website



Official Account

