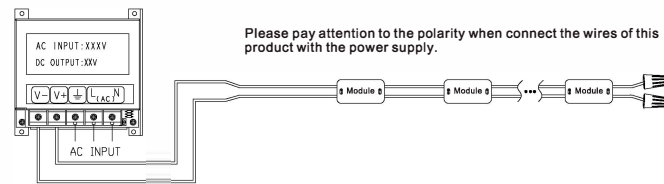


Brief description

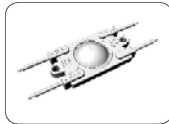
1. LED modules feature high brightness, long lifetime, energy conservation and environment protection, color consistency, low voltage and safe use.
2. Its application scope is in ad lamp box, channel letter, signs, and etc. as inner light.
3. It is suitable for as lamp box, channel letter, signs and etc. in indoor areas or in outdoor areas with good waterproof protection.
4. This is a general user manual. If you want to know about the relevant parameter of particular product, please refer to its specification or the information in our website.

Connecting Instruction



Parts & Tools

1.Product Spare Parts



Modules



Terminals

2.Self-provided Tools



Cutting nipper, Electrical Drill & Drilling bit



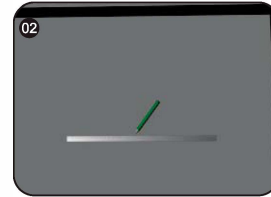
self-tapping screws

Installation Steps

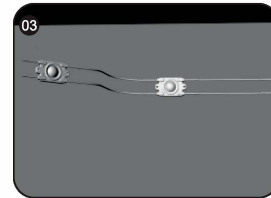
1.Light box layout



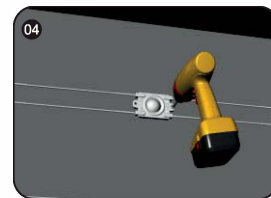
- Clean the installing surface.



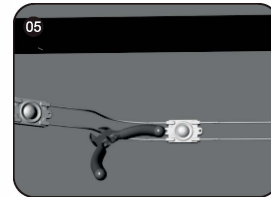
- Mark the installing position for modules and determine the needed qty. Make sure to install it in the middle.



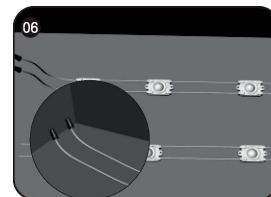
- Peel off the release paper of double-sided adhesive tapes on the back of modules, then, stick modules on the installing surface for preliminary mounting.



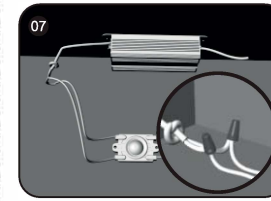
- Adjust the modules to the best position, press the double-sided tape tightly and then fixed by screws. The double-sided tape is for positioning the modules only. Always use secondary mechanical fixings or additional glue to permanently fix the modules.



- Cut off the modules to the desired qty. Note: Please cut from the middle of wires between modules.

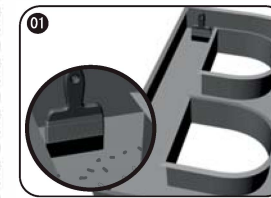


- When the wires are exposed in the last module, use 3M Skotchlok gel-filled connectors to insulate the ends. One connector (UY2) per wire.

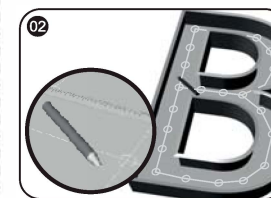


- Connect the wires to the power supply by using 3M Skotchlok gel-filled commectors. Connect +, red, to red and -, black, to black.

2.Channel letter layout



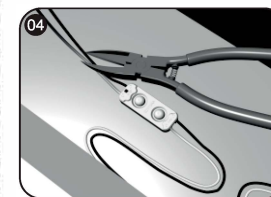
- Clean the installing surface.



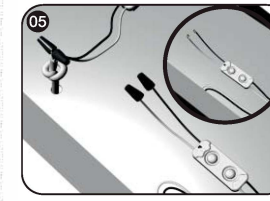
- Mark the installing position for modules and determine the needed qty.



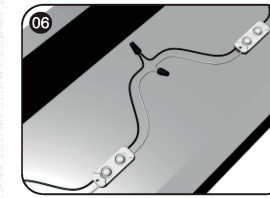
- Peel off the release paper of double-sided adhesive tapes on the back of modules, then, stick modules on the installing surface for preliminary mounting.



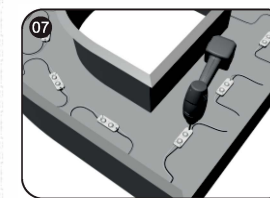
- Cut off the modules to the desired qty. Note: Please cut from the middle of wires between modules.



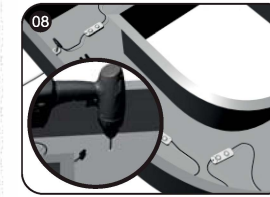
- When the wires are exposed in the last module, use 3M Skotchlok gel-filled connectors to insulate the ends. One connector (UY2) per wire.



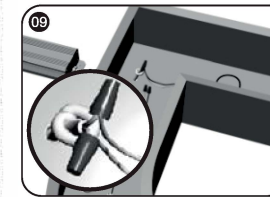
- When the modules are connected in series, please connect them by 3M Skotchlok gel-filled terminals. Note: The maximum cascading qty should be less than or equal to the standard cascading qty under single-ended power feed.



- Adjust the modules to the best position, press the double-sided tape tightly and then fixed by screws. The double-sided tape is for positioning the modules only. Always use secondary mechanical fixings or additional glue to permanently fix the modules.



- 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.



- Please ensure that the "+" & "-" of the wires of modules are connected with those of power supply correctly. Connect+, red, to red and -, black, to black.

Troubleshooting

Malfunction & Solution Table		
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

Cautions

1. Cautions for Installation and Using:

- 1.1 Prohibit to push against LED beads, no sharp stuff is allowed to hit LED surface;
- 1.2 Make sure the installing surface is clean and suitable for sticking prior to installation;
- 1.3 Inadequately connect the '+' and '-' of module to those of power supply output might ruin your product;
- 1.4 Full attention should be paid to wires' polarity when connect two or above strings of the product during installation;
- 1.5 Use screws for further fixing when modules are adjusted to the best position, otherwise, displacement or dropping might occur;
- 1.6 Please dispose the joints and the end of lead wires with waterproof, insulation, short-circuit proof and anti-corrosion protection;
- 1.7 Check the firmness of wiring which is required not to be pulled out by hand;
- 1.8 The standard cascade quantity, the maximum cascade qty under single-end power feed and that under double-end power feed can be seen in the specification. Prohibit to exceed this limitation in actual use;

- 1.9 When rework is necessary, please handle with care, not to damage this product; rough work is forbidden;
- 1.10 For on-site workers, please wear anti-static clothes or ESD wrist strap during installation;
- 1.11 Must make sure that the power supply has reliable grounding device.

2. Cautions for selection of other parts:

- 2.1 Please ensure that the output voltage of using power supply is DC ($12 \pm 5\%$)V, and the rated power supply must be reserved over 20% than the actual loading.
- 2.2 The using power supply must pass safety certification which has protection function in short-circuit, over-voltage and over-load.
- 2.3 During installing, please ask qualified person to count and select the suitable cable according to the diameter and length of wire when the connecting cable need to be extended, otherwise, low input voltage to product, fire hazard due to overheat at cable will be caused.
- 2.4 Prohibit to using any acid or alkaline glue to fix this product.
- 2.5 Considering this product will produce a certain amount of heat during working, please pick auxiliary material with good heat dissipation.
- 2.6 The cross section area (CSA) of the wires depends on the load power and the length of wires which is required to be equal to or less than 5m. See the table the CSA of wires according to different load power.

Power(W)	Current(A)	CSA of Copper Conductor (mm ²)
12	1	0.75
24	2	1
48	4	1.5
72	6	2
100	9	2.5

Warning

- Prohibit to replace LED beads privately, as well as disassemble or modify this product;
- Prohibit to install while power on;
- Prohibit to have any organic solvent contacts this product directly or indirectly;
- Prohibit to use any acid or alkaline glue to fix this product;
- Prohibit to less qualified workers to install, maintain or repair this product;
- Prohibit to light up this product prior to install all components in place;
- Before power on, make sure the range of supply voltage is proper and wire installation is correct;
- Suppose chosen neutral glass glue to fasten this product, leave the glue at spacious and ventilated area until the glue is completely solidified, be careful not to inject the glue on the surface of LED beads;
- Considering this product will produce a certain amount of heat during working, please pick auxiliary material with good heat dissipation;

- Please not to long time expose this product directly under the sun;
- Considering this product will generate heat during working, please ensure this product and its surrounding components have been cooled and will not hurt the hand to touch during and after its service; This product must be protected against water, and prohibit to soak in water without special instructions.;

Declaration

- If the external flexible cable is damaged, please replace it by its manufacturer or its service agent or qualified person to avoid a hazard.
- The given data in this manual is based on our standard product. There may be existed slight difference compared with actual products.
- This product is subject to change or modify without prior notice.
- About product warranty, please check specification.

LED Module (Backlighting)

User Manual

Please read carefully before use, thank you for your purchase!