

Single Color LED Dimmer

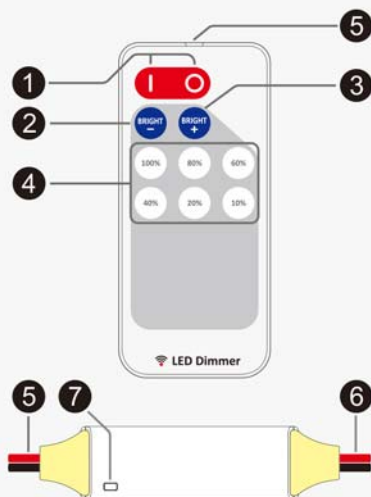
R207 / R207-W / R207-S

User's Manual

- Full Protection
- Waterproof Option
- Remote Operation
- RF Remote Controller
- Smooth Change Effect
- Easy Remote Pairing
- Flicker Free
- Brightness Shortcut Key

Introduction

Thank you for purchasing our product. R-207 series LED dimmer is designed to drive constant voltage LED products in voltage range of DC5V-24V. It contains a main control unit and a remote controller. User can adjust LED brightness conveniently via the remote controller.



Functions

1. Turn On/ Standby

Press 'I' key to turn on unit or press 'O' key to turn off. At power up moment, unit will automatically turn on and restore to previous status .

2/3. Brightness Adjust

Adjust LED brightness. Press BRIGHT+ to increase brightness and press BRIGHT- to decrease.

4. Dimmer Adjust Shortcuts

Shortcut key to 100%, 80%, 60%, 40%, 20% or 10% brightness.

5. Remote Controller Indicator

This blue indicator will blink when remote controller works. Hints: The remote controller works at radio frequency, the signal can pass through barrier, so it's not necessary to aim at the controller when operate the remote.

Installing

5. Power Supply

The controller unit can work from DC 5V to 24V. The red power cable should be connected to power positive and black to negative. Please make sure the power supply voltage is same as the LED load and the power is capable for the load wattage.

6. LED Output

The controller unit supports constant voltage driving LED products. The red cable should be connected to LED positive and black cable to negative. The red cable is internal connected to power supply positive in controller unit.

The controller unit has output overload protection function, please check whether the output is short circuit or over loaded if the controller stop working.

Operation

7. Status Indicator

This is a full color status indicator. It displays all working status of the controller. It indicates different events as following:

Blue: normal working.

Short single white flash: new command.

Long single yellow flash: reach brightness limit.

Red flash: overload protected.

Yellow flash: overheat protected.

13. Using Remote

Please pull out the battery insulating tape before using. The remote controller use CR2025 cell battery, it can last for 2 years for normal usage. For proper receiving remote signal, please do not install the controller in closed metal parts.

14. Pairing New Remote

The remote and main unit is 1 to 1 paired as default. Further more, one main unit can be paired to 3 remote controllers and every remote can be paired to any main unit.

Please do following steps to pair new remote:

- 1). Plug off the power of main unit and plug in again after 5 seconds.
- 2). Press remote '100%' and '60%' key together in 5 seconds after main unit power on.

After this operation, the indicator will flash white for 3 times to display the command is accepted, the main unit now will recognize the new remote. Only the latest paired 3 remote controllers can be recognized.

15. Free Remote Pairing Mode

In some specific cases, the controller unit may need to be controlled with any remote. Please do following steps for this free remote pairing mode:

- 1). Plug off the power of main unit and plug in again after 5 seconds.
- 2). Press 'ON' and 'BRIGHT+' key together in 5 seconds after main unit power on.

After this operation, the indicator will flash yellow for 3 times to display the command is accepted, the main unit now will recognize any remote. To pair the main unit back to

18. Protection

R207 series led dimmer has full protection function for output short circuit, overload, and overheat. The indicator will flash red at overload or short circuit protection and flash yellow at over heat. The controller will automatically recover from protection when working status is good.

Please ensure the LED load is in rated range, not shorted and the controller unit is in a good heat dissipation environment to avoid protection.

specific remote, please repeat the 'Pairing New Remote' operation.

Advanced Features

16. Waterproof

R207 is a standard version which can be used in dry environments. R207-W and R207-S is fully waterproof with IP68 standard, R207-W and R207-S can be used under water within depth of 30 meters.

Note: The remote receiving sensitivity will decrease when controller installed under water, please setup the controller before install it under water.

17. Flicker Free

Base on the PWM working mode, R207 series controllers switch LED on and off at high speed to achieve different brightness. At some moving application or video at slow motion, the on-off flicker might be visible. R207 and R207-W works at 1KHz switching frequency which is already non-flicker at most application. For more strict requirements, R207-S works at 8KHz frequency and is fully flicker free even at fast moving application or slow motion video.

R207 can absorb most unwanted switching interference, but please do not drive strong inductive effect loads, this might lead to improper protection or even damage to the controller. Especially for R207-S, please avoid to wire the LEDs in multi turn coil shape or connect it to inductive load.

Specification

Model	R207	R207-W	R207-S
Brightness Grade	256 levels		
Brightness Shortcut	6 levels		
Overload protection	Yes		
Overheat protection	Yes		
Working Voltage	DC 5-24V		
Remote frequency	433.92MHz		
Remote distance	>15 meters at open area		
Working Temperature	-30°C to +80°C		
Rated Output Current	10A	15A	
PWM Frequency	1KHz		8KHz
IP Grade	IP-63	IP-68	