

OPTONICA

User Guide

RGB/CCT/Dimming

3 Channel LED RF Controller

The LED controller is a mini size constant voltage RF receiver with 3 channel output, which can be compatible with a variety of remotes to switch and dim RGB, dual color or single color LEDs. Multiple zones can be controlled separately or synchronously with endless receivers in each zone. Smooth dimming from 0.1% to 100% without any flickering can be very comfortable for human's eyes. Built-in 10 dynamic mode can create fancy lighting effects.

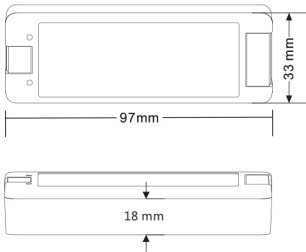
Feature

- Mini style controller with 3 channel constant voltage output.
- Default as RGB controller, need match RGB remote, create colorful static or dynamic effect.
- Can also be used as color temperature or dimming controller, good compatibility.
- Full compatibility with a variety of single color, dual color and RGB remote.
- Smooth dimming and switch without any flickering.
- When control RGB light, built in 10 dynamic mode, include jump or gradual change style.
- Adopt 2.4GHz wireless technology, can accept up to 10 remote control.
- Auto-transmitting function, one receiver can transmit the signal from the remote to another receiver within 15m, so the remote control distance can be beyond 100m.
- Auto-synchronization function, different receivers can work synchronously when they are controlled by the same remote, under same dynamic mode and same speed.
- Can be WiFi controlled by APP installed on IOS or Android mobile devices while working with WiFi-Relay controller.
- Can connect with unlimited number of 3CH CV or CC power repeaters in series or in parallel to expand output power.

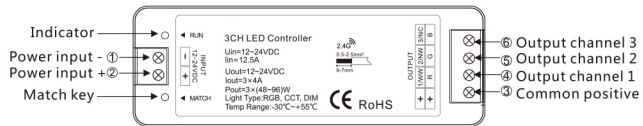
Technical parameters

- Input voltage: 12~24VDC
- Output type: PWM constant voltage
- Output current: 3CH, 4A/CH
- Output power: 144~288W
- Grey levels: 4096/CH
- Dimming range: 0~100%
- Remote distance: 30m
- Working temperature: -30°C~55°C
- Product size: L97×W33×H18mm
- Net weight: 38g

Dimension



Interface specification



Match guide

Receiver match with all kinds of single or multiple zone 2.4G RF remote controller. After match different color RF remote, the receiver become the same color controller.

• Use Match key

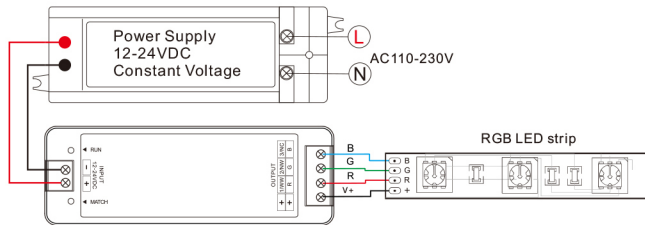
1. Match: Short press match key, then press on/off key or zone key of the remote within 5s.
2. Delete: Long press match key for 5s, delete all matched remote.
3. Multiple zone remote only use zone key to match each zone receiver.

• Use Power-up

1. Match: Switch off the power, then switch on power again, short press on/off key or zone key 3 times on the remote quickly within 5s after power on, the link is done once the light blinks 3 times.
2. Delete: Switch off the power, then switch on power again, short press on/off key or zone key 5 times on the remote quickly within 5s after power on, the unlink is done once the light blinks 5 times.
3. Multiple zone remote only use zone key to match each zone receiver.

Wiring diagram

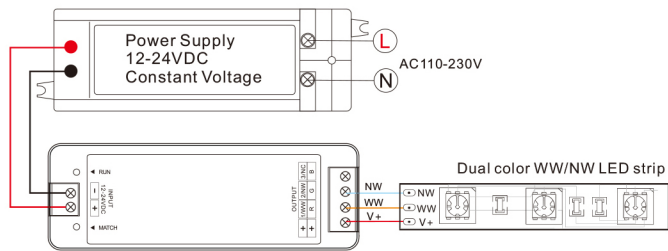
for RGB



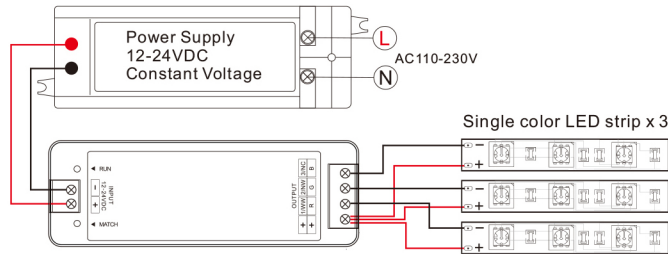
LED power supply voltage and power select:

12V lamp, Input 12V power supply, can load 0~144W,
24V lamp, Input 24V power supply, can load 0~288W,
Power supply power must larger than load power 20%.

for dual color



for single color



Dynamic mode list

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Yellow cyan purple smooth	10	White fade in and out

Malfunctions analysis & troubleshooting

Malfunctions	Causes	Troubleshooting
No light	1. No power. 2. Wrong connection or insecure.	1. Check the power. 2. Check the connection.
Wrong color	1. Wrong connection of R/G/B wires.	1. Reconnect R/G/B wires.
Uneven intensity between front and rear, with voltage drop	1. Output cable is too long. 2. Wire diameter is too small. 3. Overload beyond power supply capability. 4. Overload beyond controller capability.	1. Reduce cable or loop supply. 2. Change wider wire. 3. Replace higher power supply. 4. Add power repeater.
No response from the remote	1. The battery has no power. 2. Beyond controllable distance. 3. The controller did not match the remote.	1. Replace battery. 2. Reduce remote distance. 3. Re-match the remote.

Safety information

1. The product shall be installed and serviced by a qualified person.
2. This product is non-waterproof. Please avoid the sun and rain.
3. Good heat dissipation will prolong the working life of the controller, please ensure good ventilation.
4. Please check if the output voltage of any power supplies used comply with the working voltage of the product.
5. Ensure all wire connections and polarities are correct and secure before applying power to avoid any damages to the LED lights.
6. If a fault occurs please return the product to your supplier. Do not attempt to fix this product by yourself.

Warranty agreement

1. 5-year warranty:
 - The warranty is for free repair or replacement and covers manufacturing faults only.
 - Do not include fees of on site maintenance and consumable parts.
2. Limited Warranty
 - Artificial damage caused by improper use, such as use inappropriate power supply, improper accessories, improper installation, did not follow the instructions, error using or negligence.
 - Any damages caused by force majeure, such as natural disaster, abnormal voltage.
 - The normal use of products caused by aging, wear and tear, but it does not affect the normal use.

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