



LEDYi Lighting V5-L 5 Channel LED RF Controller Instruction Manual

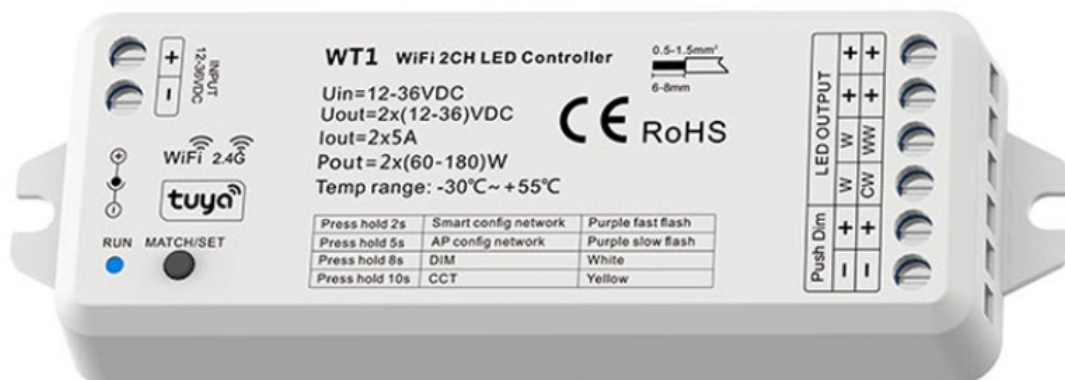
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V5-L 5 Channel LED RF Controller



Product Information: 5 Channel LED RF Controller Model No.:V5-L

The 5 Channel LED RF Controller Model No.: V5-L is a wireless remote-controlled device that allows you to control the color and brightness of your LED lights. It features five channels and can control up to five different colors, including red, green, blue, warm white, and cold white. The device has a wide input voltage range of 12-48VDC and can handle up to 30.5A of input current. It also has four PWM frequencies and a push dim feature for easy dimming.

Features:

- Five channels
- Can control up to five different colors: red, green, blue, warm white, and cold white
- Wide input voltage range of 12-48VDC
- Can handle up to 30.5A of input current
- Four PWM frequencies
- Push dim feature for easy dimming
- Wireless remote control

Technical Parameters

| Input and Output | Parameters |
|------------------|-------------------------------|
| Input voltage | 12-48VDC |
| Input current | 30.5A |
| Output voltage | 5 x (12-48)VDC |
| Output current | 6A/CH @ 12/24V 4A/CH @ 36/48V |
| Output type | Constant voltage |

| Environment | Parameters |
|-------------------------|---------------------|
| Operation temperature | Ta: -30 OC ~ +55 OC |
| Case temperature (Max.) | Tc: +85OC |
| IP rating | IP20 |

Warranty and Protection

- Warranty: 5 years
- Protection: Reverse polarity, short circuit, overheat

Safety and EMC:

- EMC standard (EMC): ETSI EN 301 489-1 V2.2.3

- Safety standard(LVD): ETSI EN 301 489-17 V3.2.4, EN 62368-1:2020+A11:2020
- Radio Equipment(RED) Certification: ETSI EN 300 328 V2.2.2 CE,EMC,LVD,RED

Mechanical Structures and Installations

The device has an installation rack with a power input, push switch, and common push switch. It also has a match key and LED indicator. The wiring diagram shows the different configurations for RGB+CCT, RGBW, RGB, dual color CCT, and single color LED strips.

Product Usage Instructions

- To use the device, connect the LED strip to the output terminals of the controller.
- Connect the power input to a constant voltage power supply with an input voltage of 12-48VDC.
- Use the wireless remote control to adjust the color and brightness of the LED lights.
- To dim the lights, use the push dim feature or adjust the PWM frequency.
- Press and hold the MATCH key for 10 seconds to switch the controller to DIM type. The light on/off time will also restore to 0.5s, and the output PWM frequency will restore to 2000Hz.
- Note that for RGB+CCT or CCT light types, continuous power on and off will change 3 levels of color temperature (WW, NW, and CW) in sequence.
- To match the remote control, there are two options: use the controller's Match key or use Power Restart. Follow the instructions provided in the manual for each option.
- To delete all matched remotes, press and hold the MATCH key for 5 seconds. The LED indicator will flash a few times to indicate that all matched remotes were deleted.

5 Channel LED RF Controller

Model No.: V5-L

5 Channels/1-5 color/DC12-48V/Four PWM frequency/Wireless remote control/Push Dim



Features

- 5 in 1 function, used for control RGB, RGBW, RGB+CCT, color temperature or single color LED strip.

- Match with RF 2.4G single zone or multiple zone remote control.
- One RF controller accept up to 10 remote control.
- 4096 levels 0-100% dimming smoothly without any flash.
- Built in 10 dynamic mode, include jump or gradual change style.
- Auto-transmitting function: Controller automatically transmit signal to another controller with 30m control distance.
- Synchronize on multiple number of controllers.
- PWM frequency 500Hz, 2000Hz, 8000Hz or 16000Hz selectable.
- Light on/off fade time 3s selectable.
- Connect with external push switch to achieve on/off and 0-100% dimming function.

Technical Parameters

| Input and Output | |
|------------------|----------------------------------|
| Input voltage | 12-48VDC |
| Input current | 30.5A |
| Output voltage | 5 x (12-48)VDC |
| Output current | 6A/CH @ 12/24V 4A/CH @ 36/48V |
| Output type | Constant voltage |

| Environment | |
|-------------------------|---------------------|
| Operation temperature | Ta: -30 OC ~ +55 OC |
| Case temperature (Max.) | T c: +85OC |
| IP rating | IP20 |

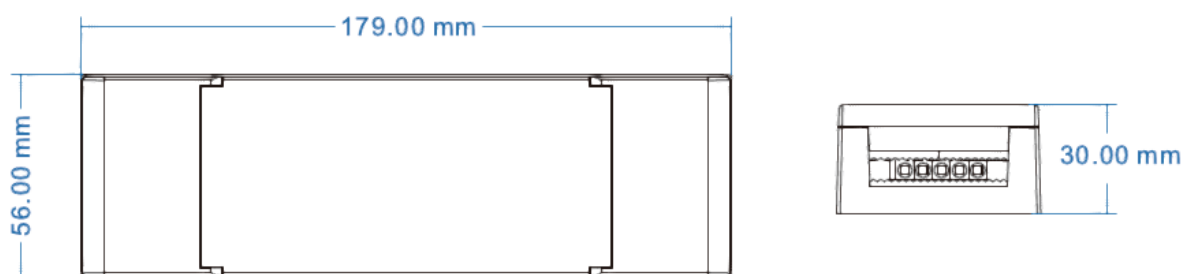
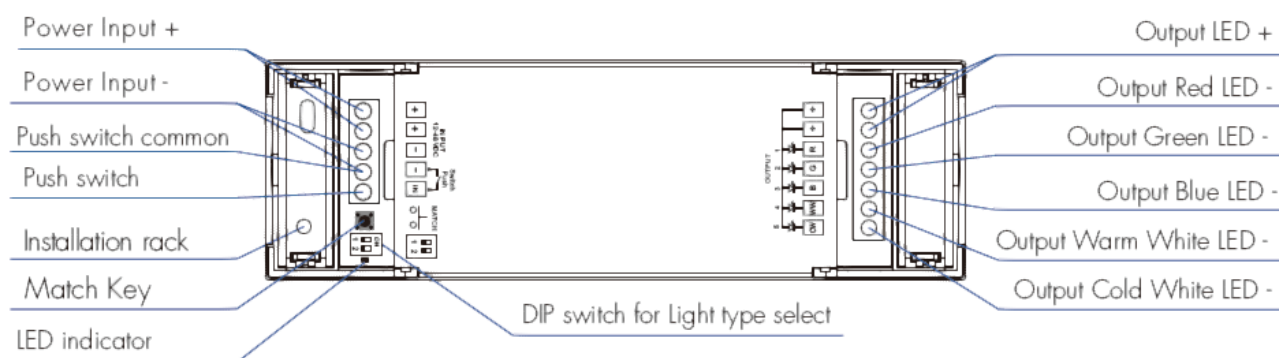
| Warranty and Protection | |
|-------------------------|--|
| Warranty | 5 years |
| Protection | Reverse polarity Short circuit Over heat |

| Dimming data | |
|--------------------|--------------------------------|
| Input signal | RF 2.4GHz + Push Dim |
| Control distance | 30m(Barrier-free space) |
| Dimming gray scale | 4096 (2 ¹²) levels |
| Dimming range | 0 -100% |
| Dimming curve | Logarithmic |
| PWM Frequency | 2000Hz (default) |

Safety and EMC

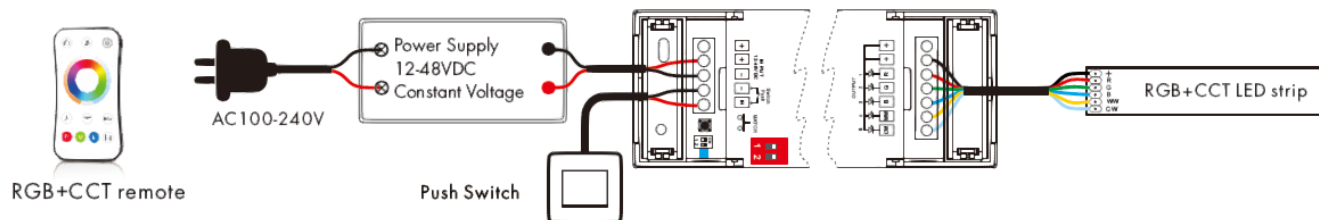
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- Safety standard(LVD) EN 62368-1:2020+A11:2020
- Radio Equipment(RED) ETSI EN 300 328 V2.2.2
- Certification CE,EMC,LVD,RED

Mechanical Structures and Installations

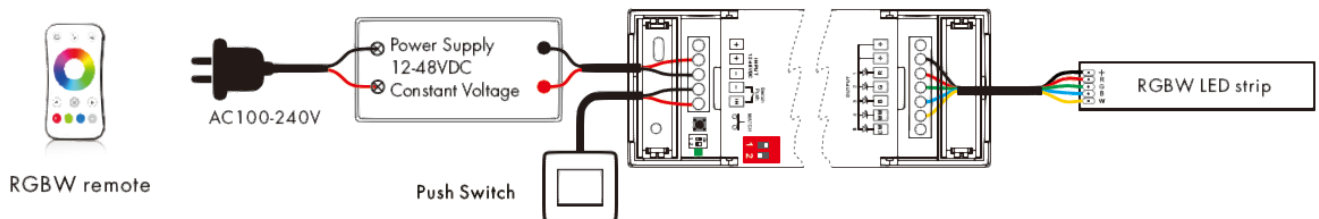


Wiring Diagram

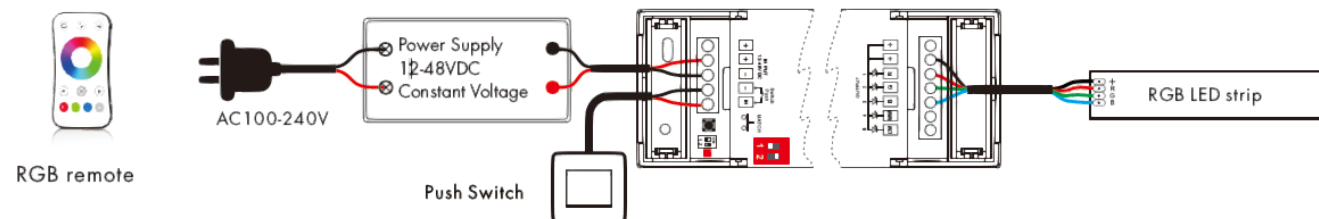
- For RGB+CCT
-



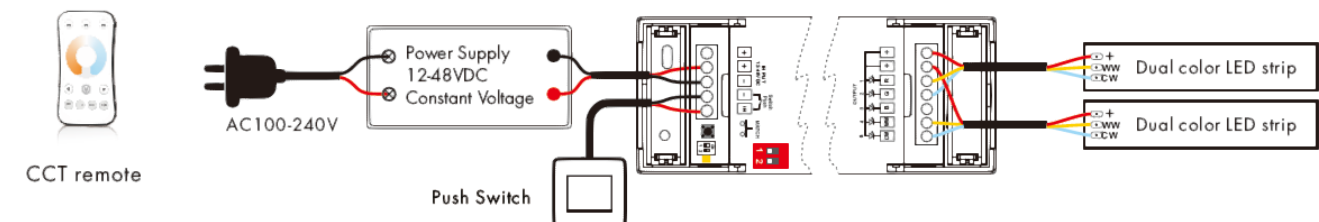
For RGBW



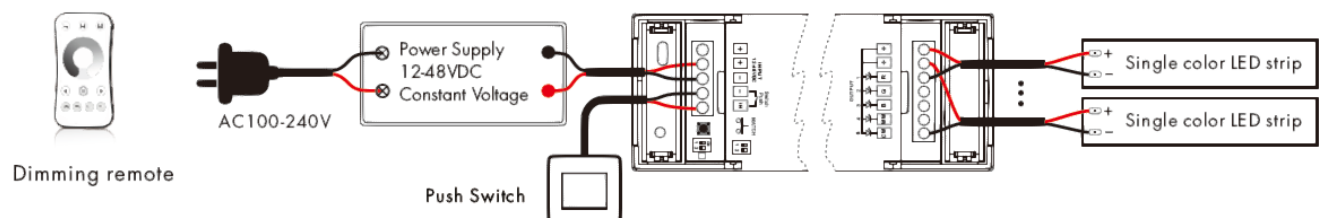
• For RGB



• For dual color CCT



• For single color



Press and hold MATCH key for 10s, until the RUN LED indicator turn white, then release, the controller will become DIM type, the light on/off time also restore to 0.5s, the output PWM frequency also restore to 2000Hz.

Note: For RGB+CCT or CCT light type, continuous power on and off will change 3 levels color temperature (WW, NW and CW) in sequence.

Match Remote Control (two match ways)

End user can choose the suitable match/delete ways. Two options are offered for selection:

Use the controller's Match key

• Match:

Short press match key, immediately press on/off key (single zone remote) or zone key (multiple zone remote) on the remote.

The LED indicator fast flash a few times means match is successful.

- **Delete:**

Press and hold match key for 5s to delete all match, The LED indicator fast flash a few times means all matched remotes were deleted.

Use Power Restart

- **Match:**

Switch off the power, then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 3 times on the remote. The light blinks 3 times means match is successful.

- **Delete:**

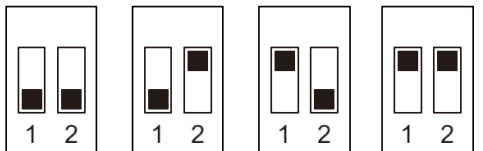
Switch off the power, then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 5 times on the remote. The light blinks 5 times means all matched remotes were deleted.

Light on/off fade time

Long press match key 5s, then short press match key 3 times, the light on/off time will be set to 3s, the indicator light blink 3 times.

Long press match key 10s, restore factory default parameter, the light on/off time also restore to 0.5s.

PWM frequency setting



500Hz 2000Hz 8000Hz 16000Hz

When power is off, select the DIP switch firstly, then press hold the MATCH key, and power up the controller in the same time, the RUN LED indicator will flash white color two times means PWM frequency setting is successful.

We can select four PWM frequency: 500Hz, 2000Hz, 8000Hz or 16000Hz. Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

Push Dim

| | | |
|--------------|---------------------------|--|
| Single color | Click | ON/OFF |
| | Double Click | Turn on at 100% or 10%(night light) and vice-versa |
| | Long press(>1s) from OF F | Dimming UP/DOWN |
| | Long press(>1s) from ON | Dimming UP/DOWN |
| | Click | ON/OFF |
| | Double Click | Turn on at 100% or 10%(night light) and vice-versa |

| | | |
|------------|--------------------------|--|
| Dual Color | Long press(>1s) from OFF | Color temperature UP/DOWN (turn off and turn on to return dimming) |
| | Long press(>1s) from ON | Dimming UP/DOWN |
| RGB | Click | ON/OFF |
| | Double Click | Change from color mode to white mode(RGB mixed) and vice-versa |
| | Long press(>1s) from OFF | If on color mode change rotation speed; If on white mode dimming UP/DOWN |
| | Long press(>1s) from ON | If on color mode start/stop color rotation; If on white mode dimming UP/DOWN |
| RGBW | Click | ON/OFF |
| | Double Click | Change between color mode, white mode(W channel) and color+W mode |
| | Long press(>1s) from OFF | If on color mode change rotation speed; If on white mode or color+W mode, W dimming UP/DOWN |
| | Long press(>1s) from ON | If on color mode start/stop color rotation; If on white mode or color+W mode, W dimming UP/DOWN |
| RGB+CCT | Click | ON/OFF |
| | Double Click | Change from color mode to tunable white mode and vice-versa |
| | Long press(>1s) from OFF | If on color mode change rotation speed; If on tunable white mode color temperature UP/DOWN (turn off and turn on to return dimming) |
| | Long press(>1s) from ON | If on color mode start/stop color rotation; If on tunable white mode dimming UP/DOWN |



Color rotation:

We can select 4 rotation speed:

- 10 flash/s means
- 6 seconds color rotation

- 5 flash/s means
- 30 seconds color rotation
- 2 flash/s means
- 1 minute color rotation
- 1 flash/s means
- 6 minutes color rotation

Dynamic mode list

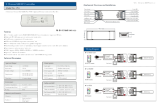
For RGB/RGBW:

| 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 |

For RGB+CCT:

| 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 | Color temperature smooth | 10 | White fade in and out |

Documents / Resources

| | |
|---|---|
|  | LEDYi Lighting V5-L 5 Channel LED RF Controller [pdf] Instruction Manual V5-L 5 Channel LED RF Controller, V5-L, 5 Channel LED RF Controller, LED RF Controller, RF Controller, Controller |
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