LDT-PUSH-RF-5CV-2A

Compact Five-Channel RF & Push-Dim RGB+DUO Controller

A 5-channel constant-voltage LED controller for DIM / DUO / RGB / RGBW / RGB+DUO lighting. Configure the lighting type, connect the corresponding LED load and pair a compatible RF control interface in the same mode.

Model specifications

Product function	Constant-voltage PWM LED controller
Lighting modes	DIM / DUO / RGB / RGBW / RGB+DUO
Input / output voltage	12-24 VDC
LED output channels	5
Maximum output current	2 A/channel
Control inputs	RF 2.4 GHz + momentary Push-Dim
Dimming	0-100%; 4096 levels
PWM frequency	2 kHz default
RF distance	Up to 30 m in unobstructed space
Paired remotes	Up to 10
Operating temperature	-20 to +55 °C
Maximum case temperature	+77 °C
IP rating	IP20
Body dimensions	42.5 x 38.5 x 18 mm; 56 mm with mounting ears
Protection	Reverse polarity and overheat

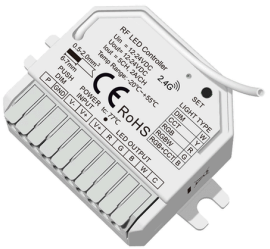
In RGBW mode, RGB and the white channel cannot be on simultaneously. In RGB+DUO mode, RGB and the DUO channels cannot be on simultaneously. Select the lighting type before pairing.

The following technical-reference pages retain the complete diagrams, dimensions, settings and installation instructions. Select the lighting variant stated on this cover; family diagrams may also illustrate other variants.

DIM / DUO / RGB / RGBW / RGB+DUO

RF 5 CH Constant Voltage LED Control

- 5-in-1 function, for single color or color temperature, RGB, RGBW, **RGB+DUO** LED strips.
- Match with RF 2.4G single zone or multiple zone single color, dual color, RGB, RGBW, **RGB+DUO** remote control.
- One RF controller accept up to 10 remote control.
- 4096 levels 0-100% dimming smoothly without any flash.
- When using with **RGB/RGBW/RGB+DUO** light, built in 10 dynamic mo include jump or gradual change style.
- Auto-transmitting function: Controller automatically transmit signal to another controller to extend the remote control distance exponentially.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off, and brightness, color temperature, RGB color adjustment function.
- Light on/off fade time 3s selectable.
- Reverse/Over-heat protection.

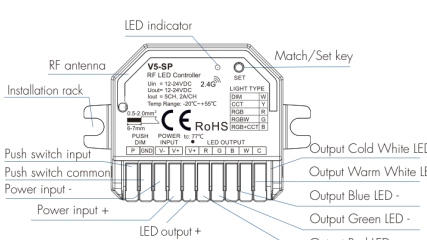


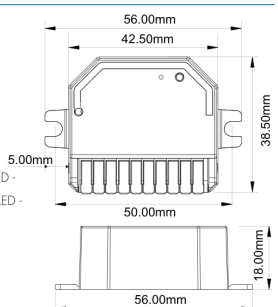
CE RoHS

Technical Parameters

Input and Output		Dimming data		Safety and EMC	
Input voltage	12-24VDC	Input signal	RF 2.4GHz + Push-DIM	EMC standard	EN IEC 55015/ EN IEC 61547-1/-2 ETSI EN 301 489-1/-17
Input current	10.5A	Control distance	30m (Barrier-free space)	Safety standard	EN 61347-1/-2
Output voltage	5x(12-24)VDC	Dimming gray scale	4096 (2^12) levels	Radio equipment	ETSI EN 300 328 ETSI EN 300 440
Output current	5CH,2A/CH	Dimming range	0-100%		
Output power	5×(24-48)W	Dimming curve	Logarithmic	Certification	CE RoHs
Environment		PWM frequency	2KHz(default)	**Package**	
Operation temperature	Ta: -20℃ ~ +55℃	**Warranty and Protection**		Size	L60 x W60 x H40mm
Case temperature (Max.)	Tc: +77℃	Warranty	5 years	Gross weight	0.043kg
IP rating	IP20	Protection	Reverse polarity, Over heat		

Mechanical Structures and Installations





Note: The mounting ear on both sides can be broken along the indentation, to suit different mounting needs.

Light Type Setting

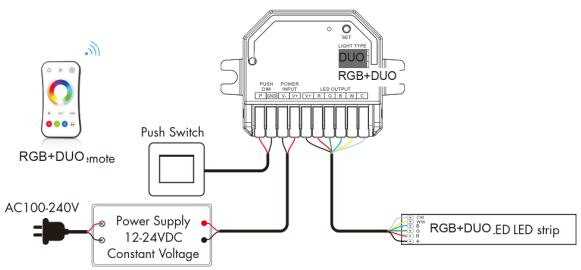
User need to set the correct light type via the SET key before matching the RF remote control. Long press the SET key to switch 5 light types sequentially, every long press 2s to switch one, the LED indicator turns to the corresponding color.

Light type	DIM	DUO	RGB	RGBW	RGB+DUO
LED indicator color	white	yellow	red	green	blue

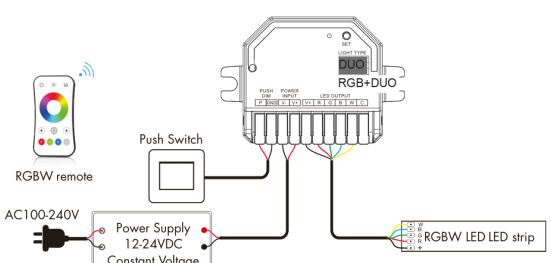
Note:
For RGBW light type, RGB channel and W channel can not be turned on at the same time;
For **RGB+DUO** light type, RGB channel and **DUO** channel can not be turned on at the same time.

Wiring Diagram

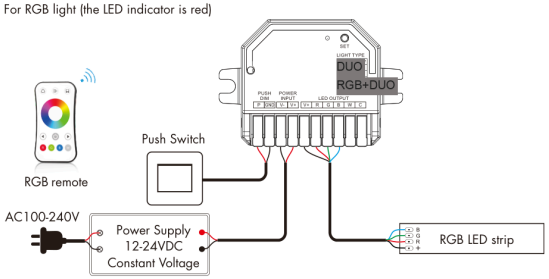
- For **RGB+DUO** light (the LED indicator is blue)



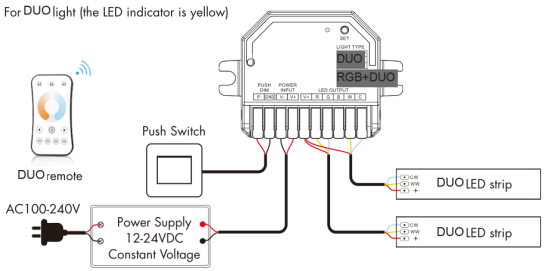
- For RGBW light (the LED indicator is green)



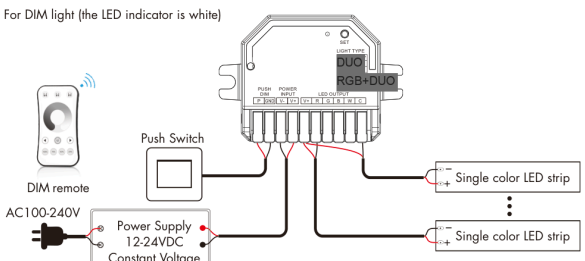
• For RGB light (the LED indicator is red)



• For DUO light (the LED indicator is yellow)



• For DIM light (the LED indicator is white)



Wire preparation:

1. The wiring can be solid or stranded with a cross-sectional area of 0.5 to 2.0 mm². Conventional 1mm² can withstand 10A output current.
2. When wiring is installed, the terminals must be tightened.If they are not tightened, the contact point resistance will be too high and the terminals will easily burn due to heat when used at full load for a long time.

Note: The output power of a constant voltage power supply should be at least 1.2 times that of the output load (light strip), otherwise the full power output of the load can easily cause automatic flickering or shaking of the light.



Push Switch Dimming

The push switch interface can be connected to push panel switch or push button for dimming.
It is recommended that the number of controllers connected to the same push switch does not exceed 25, and the length of the connecting wire does not exceed 20m.

1. DIM light:
- Short press: Turn the light on or off.
- Long press (1-6s): Continuously increase or decrease the brightness, long press again after each release, the brightness changes in the opposite direction, dimming range 1%-100%.
- Double-click: Switch between 10% and 100% brightness.

2. DUO light:
- Short press: Turn the light on or off.
- Long press (1-6s): Adjust the brightness by default, long press again after each release, the brightness changes in the opposite direction, dimming range 1%-100%.
- Double-click: Switch three color temperatures in sequence (warm white - neutral white - cool white). At the same time, it enters the state of adjusting color temperature by long press, and automatically exits the state of adjusting color temperature after 5s of no operation.

3. RGB light:
- Short press: Turn the light on or off.
- Long press (1-6s): Adjust the brightness by default, long press again after each release, the brightness changes in the opposite direction, dimming range 1%-100%.
- Double-click: Switch between color light (RGB) and mixed white light (50% saturation). At the same time, it enters the state of adjusting color or saturation by long press, and automatically exits the state of adjusting color or saturation after 5s of no operation.

4. RGBW light:
- Short press: Turn the light on or off.
- Long press (1-6s): Adjust the brightness by default, long press again after each release, the brightness changes in the opposite direction, dimming range 1%-100%.
- Double-click: Switch between color light (RGB) and white light. At the same time, it enters the state of adjusting color or white light brightness by long press, and automatically exits the state of adjusting color or white light brightness after 5s of no operation.

5. RGB+DUO light:
- Short press: Turn the light on or off.
- Short press(1-6s): Adjust the brightness by default, long press again after each release, the brightness changes in the opposite direction, dimming range 1%-100%.
- Double-click: Switch between color light (RGB) and color temperature. At the same time, it enters the state of adjusting color or color temperature by long press, and automatically exits the state of adjusting color or color temperature after 5s of no operation.

On/Off Fade Time Setting

Press and hold the SET key for 10s to restore the default parameters,
factory default parameters: **RGB+DUO** light type, 100% brightness, light on/off fade time is 0.5s.
Press and hold the SET key for 15s, the light on/off fade time is set to 3s.

Match with RF Remote Control(Two ways of matching)

There are two ways to match/delete:

Use match key

Match:
Short press match key,
immediately press on/off key (single zone remote)
or zone key (multiple zone remote) of the remote,
The indicator blinks means match is successful.

Delete:
Press and hold match/set key for 5s to delete all match,
The LED indicator blinks 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.

Dynamic Change Mode (Recalled by RF remote control)

Used for RGB/RGB+W:

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

Used for **RGB+DUO**:

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

Installation Precautions

1. The products shall not be stacked, the distance should be ≥ 20cm, so as not to affect lifespan of the products due to poor heat dissipation.
2. The product shall not be installed close to the switching power supply with an interval of ≥ 20cm to avoid radiation interference of the switching power supply.
3. The installation height shall be ≥ 1m from the floor to avoid shortening remote control distance due to too weak reception signal.
4. The products are not allowed to be close to or covered by metal objects, with an interval of ≥ 20cm to avoid signal attenuation and shorten the remote distance.
5. Avoid installation at the corner of the wall or the corner of the beam, with an interval of ≥ 20cm to avoid signal interference.