LDT-PUSH-RF-5CV-6A

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	12-48 VDC
LED output channels	5
Maximum output current	6 A/channel at 12/24 V; 4 A/channel at 36/48 V
Control inputs	RF 2.4 GHz + momentary Push-Dim
Dimming	0-100%; 4096 levels
PWM frequency	500 Hz / 2 kHz / 8 kHz / 16 kHz; default 2 kHz
RF distance	Up to 30 m in unobstructed space
Paired remotes	Up to 10
Operating temperature	-30 to +55 °C
Maximum case temperature	+85 °C
IP rating	IP20
Body dimensions	179 x 56 x 30 mm
Protection	Reverse polarity, short circuit and overheat

The 6 A/channel rating applies at 12/24 V. The source also requires lower loading at higher PWM frequencies; no numeric high-frequency current curve is supplied.

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.

RF | DIM / DUO / RGB / RGBW / RGB+DUO

5 Channel LED RF Controller

- 5 in 1 function, used for control RGB, RGBW, **RGB+DUO**, 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.



CE RoHS

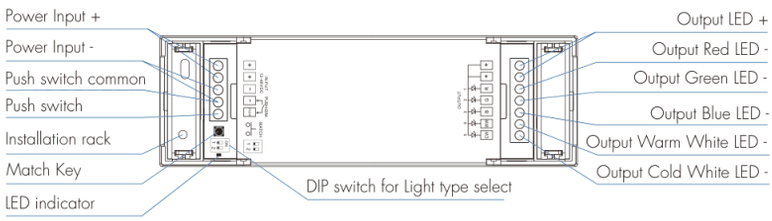
Technical Parameters

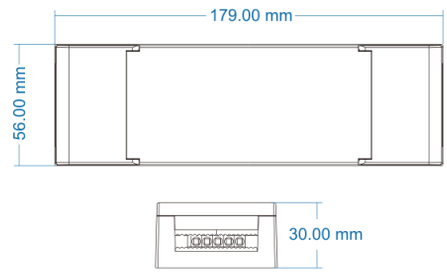
Input and Output	
Input voltage	12-48VDC
Input current	30.5A
Output voltage	5 x (12-48)VDC
Output current	6A/CH@12-24V 4A/CH@36-48V
Output type	Constant voltage
Warranty	
Warranty	5 years
Protection	Reverse polarity Short circuit Over heat

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

Safety and EMC	
EMC standard	EN IEC 55015/EN IEC 61547-1/-2 ETSI EN 301 489-1/-17
Safety standard	EN 61347-1/-2 EN 62493
Radio Equipment	ETSI EN 300 328 ETSI EN 300 440
Certification	CE RoHS
Package	
Size	L185 x W58 x H36mm
Gross weight	0.186kg

Mechanical Structures and Installations





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.

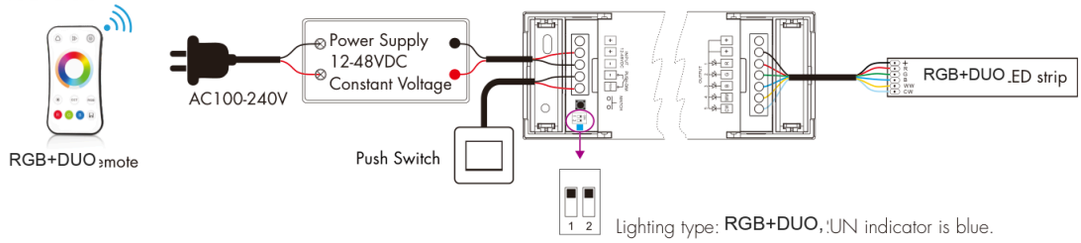
Use Power Restart

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.

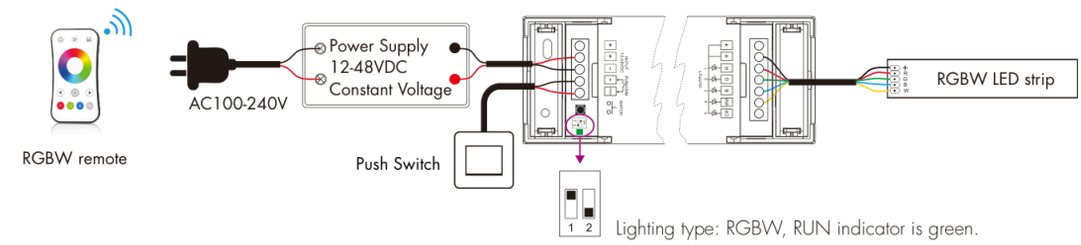
Delete:
Switch off the power, then switch on power, repeat again.
Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 5 times on the remote.
The light blinks 5 times means all matched remotes were deleted.

Wiring Diagram

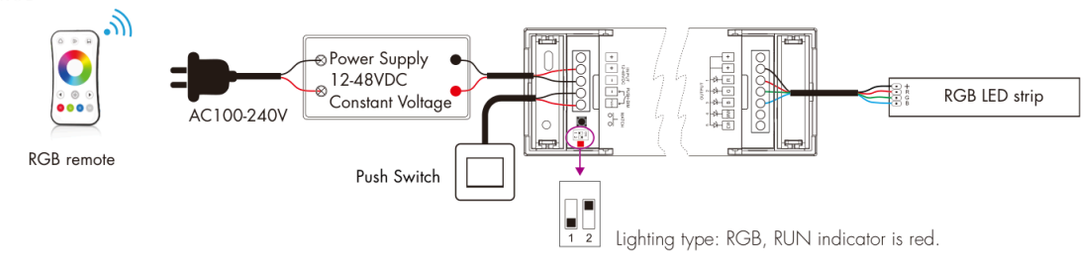
- For RGB+DUO



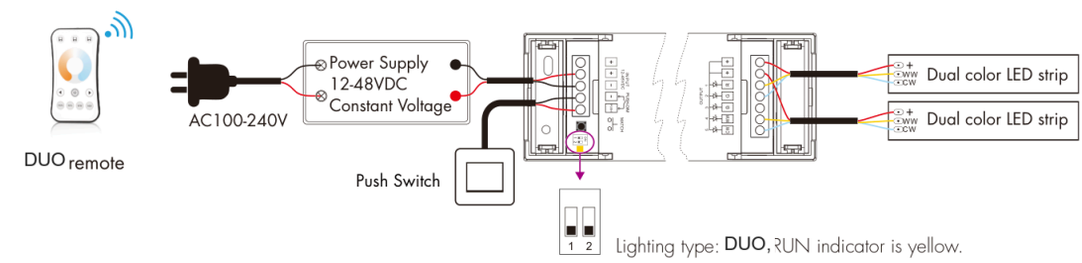
- For RGBW



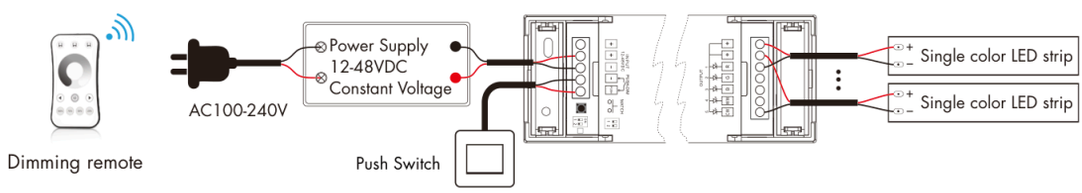
- For RGB



- For dual color DUO



- 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.

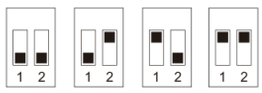
Note: For RGB+DUO or DUO light type, continuous power on and off will change 3 levels color temperature (WW, NW and CW) in sequence.

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 OFF	Dimming UP/DOWN
	Long press(>1s) from ON	Dimming UP/DOWN
Dual Color	Click	ON/OFF
	Double Click	Turn on at 100% or 10%(night light) and vice-versa
	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+DUO	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+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 smoot	10	White fade in and out