LDT-RF-2CV-15A

Dual-Channel RF DUO Controller

A high-current two-channel RF receiver for constant-voltage DUO lighting. Adjust the warm/cool balance from a compatible remote and use a wired momentary button for local dimming.

Model specifications

Input / output voltage	12-36 VDC
Output type	2-channel constant-voltage PWM
Maximum output current	15 A/channel
Maximum output power	2 x (180-540 W) over 12-36 VDC
Lighting type	DUO: warm white + cool white
Control inputs	RF 2.4 GHz + momentary Push-Dim
Dimming	0-100%; 4096 levels; linear
PWM frequency	2 kHz
RF distance	Up to 15 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	107 x 75 x 24.5 mm
Protection	Reverse polarity, overload, short circuit and overheat

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 | DUO

Dual Color LED RF Controller

- 4096 levels 0-100% dimming smoothly without any flash.
- Match with all RF 2.4G single zone or multiple zone dual color or single color remote control.
- One RF controller accept up to 10 remote control.
- Auto-transmitting function: Controller automatically transmit signal to another controller with 15m control distance.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- Over-load / Short circuit / Over heat protection, recover automatically.
- Can be set 3 levels color temperature (WW, NW and CW) selectable by continuous power off and on operation.



CE RoHS

2 Channel / Step-less dimming / Wireless remote control / Auto-transmitting / Synchronize / Push Dim / Multiple protection

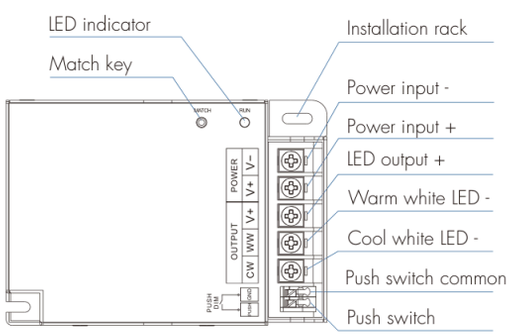
Technical Parameters

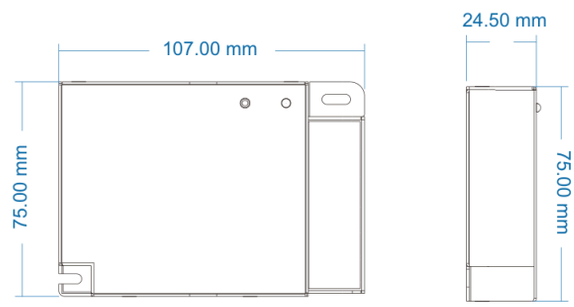
Input and Output	
Input voltage	12-36VDC
Input current	30.1A
Output voltage	2 x (12-36)VDC
Output current	2CH, 15A/CH
Output power	2x(180-540)W
Output type	Constant voltage
Warranty and Protection	
Warranty	5 years
Protection	Reverse polarity,Over load Short circuit,Over heat

Dimming data	
Input signal	RF 2.4GHz + Push Dim
Control distance	15m(Barrier-free space)
Dimming gray scale	4096 (2^12) levels
Dimming range	0 -100%
Dimming curve	Linear
PWM frequency	2KHz
Package	
Size	L120 x W80 x H30mm
Gross weight	0.294kg

Safety and EMC	
EMC standard	EN IEC 55015/EN IEC 61547 ETSI EN 301 489-1/-3
Safety standard	EN 61347-1/-2
Radio Equipment	ETSI EN 300 440
Certification	CE RoHS
Environment	
Operation temperature	Ta: -30°C ~ +55°C
Case temperature (Max.)	Tc: +85°C
IP rating	IP20

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) of the remote.
The LED indicator fast flash a few times means match is successful.

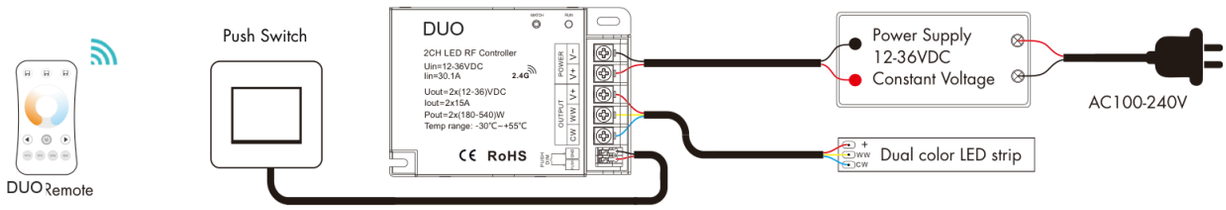
Delete:
Press and hold match key for 5s to delete all match,
The LED indicator fast flash a few times
means all matched remotes were deleted.

Use Power Restart

Match:
Switch off the power, then switch on power 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 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



Note:

- Long press the match key for 15s to enable the continuous switch off-on two times rapidly to switch 3 levels color temperature function (This feature is disabled by factory default).
  Long press the match key for 10s to restore the factory setting.
- Power failure memory: after setting the light state for 5s, the current light state will be saved automatically, the light state will not be changed when re-powering.

Wire Preparation:

1. The wiring can be solid or stranded with a cross-sectional area of 0.5 to 2.5 mm^2.
   Conventional 1mm^2 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.
3. 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 Dim

Click	ON/OFF
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

The provided Push-Dim interface allows for a simple dimming method using commercially available non-latching(momentary) wall switches.
If more than one controller are connected to the same push switch, do a long press for more than 10s,
then the system is synchronized and all lights in the group dim up to 100%.
This means there is no need for any additional synchrony wire in larger installations.
We recommend the number of controllers connected to a push switch does not exceed 25 pieces,
the maximum length of the wires from push to controller should be no more than 20 meters.

PWM Frequency Setting

At the moment of power-up:
Long press the match key for 2s, set the output PWM frequency 500Hz, the LED indicator flash 1 time.
Long press the match Key for 5s, set the output PWM frequency 2KHz, the LED indicator flash 2 times.
Long press the match Key for 10s, set the output PWM frequency 8KHz, the LED indicator flash 3 times.
Long press the match Key for 15s, set the output PWM frequency 16KHz, the LED indicator flash 4 times.
The factory default PWM frequency is 2KHz.

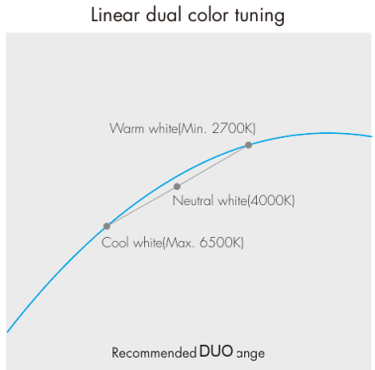
Note: Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

Dual Color Control

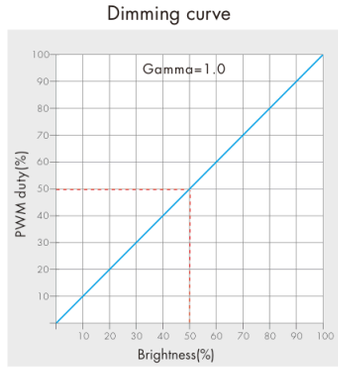
WW=Warm white LED CW=Cool white LED
Each channel can supply up to 360W(@24V) and white balance can be controlled as such:

Color temperature	Cool white	Neutral white	Warm white
Power distribution	WW=0W,CW=360W	WW=180W,CW=180W	WW=360W,CW=0W

Linear dual color tuning



Dimming curve



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 the 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.