LDT-PUSH-RF-1CV-20A-IP67

IP67 RF & Push-Dim LED Controller

A high-load, IP67 single-channel constant-voltage receiver for RF dimming or a wired momentary push button. The sealed enclosure is intended for outdoor or damp installations within the published limits.

Model specifications

Input / output voltage	12-48 VDC
Output type	1-channel constant-voltage PWM
Maximum output current	20 A at 500 Hz / 2 kHz
Maximum output power	240/480/720/960 W at 12/24/36/48 V
Control inputs	RF 2.4 GHz + momentary Push-Dim
Dimming	0-100%; 4096 levels; logarithmic
PWM frequency	500 Hz / 2 kHz (default) / 8 kHz / 16 kHz
PWM / output current	500 Hz / 2 kHz / 8 kHz: 20 A; 16 kHz: 15 A (12-48 V)
RF distance	Up to 30 m in unobstructed space
Paired remotes	Up to 10
IP rating	IP67
Operating temperature	-20 to +55 °C
Maximum case temperature	+87 °C
Body dimensions	153 x 45 x 34 mm
Cable length	350 ±5 mm
Protection	Reverse polarity, overheat and short circuit

The permissible current changes at higher PWM frequencies; the detailed load table must be checked before commissioning.

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

Waterproof RF Dimming Constant Voltage LED Controller



CE RoHS

Features

- Waterproof 1 channel constant voltage LED controller with IP67 rating, suitable for outdoor and damp environment.
- Match with RF 2.4G single-zone or multi-zone dimming remote control optional.
- One RF controller accept up to 10 remote control.
- 4096 levels 0-100% dimming smoothly without any flash.
- PWM frequency 500KHz, 2KHz, 8KHz or 16KHz selectable.
- Logarithmic dimming curves.
- 3s on/off fade can be set.
- Connect with external push switch to achieve on/off and 0-100% dimming functions.

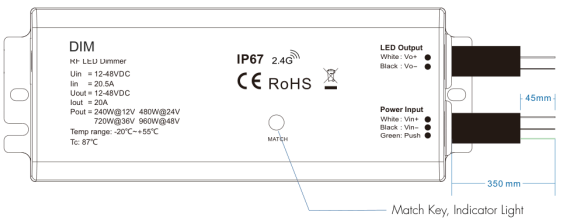
Technical Parameters

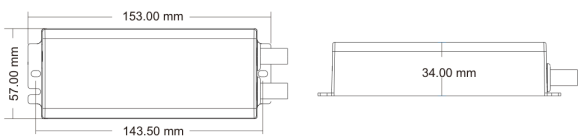
Input and Output	
Input voltage	12-48VDC
Input current	20.5A
Output voltage	12-48VDC
Output current	20A
Output power	240W@12V 480W@24V 720W@36V 960W@48V
Output type	Constant voltage
Warranty	
Warranty	5 years
Protection	Anti-reverse, overheat, short circuit

Dimming Parameters	
Input signal	RF 2.4GHz + push switch
Control distance	30m(Barrier-free space)
Dimming level	4096 (2^12) levels
Dimming range	0 -100%
Dimming curve	Logarithmic
PWM frequency	500Hz/2KHz(default)/ 8KHz/16KHz
Package	
Size	L200 x W93 x H45mm
Gross weight	0.512kg

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: -20 °C ~ +55 °C
Case temperature(Max.)	Tc: +87 °C
IP rating	IP67

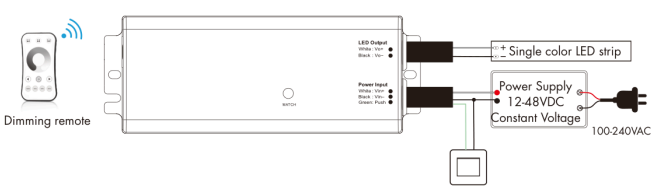
Mechanical Structures and Installations





Wire	Specification
Input line	3 Core: 3x1.31mm² Outside diameter: 8.7mm Length: 350±5mm
Output line	2 Core: 2x1.31mm² Outside diameter: 8.5mm Length: 350±5mm

Wiring Diagram



Push Switch Dimming

The push switch interface can be connected to push panel switch or push button for dimming.

- **Short press:** Turn the light on or off.
- **Double-click:** Switch between 10% and 100% brightness.
- **Long press (1-6s):** Continuously increase or decrease the brightness, long press again after each release, the brightness changes in the opposite direction.
- **Dimming memory:** The brightness value has been set by long-pressing push, with power-down memory.
- **Synchronize:** If multiple controllers are connected to the same self-reset switch, please long press for 10s first to synchronize all lights to 100% brightness. 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.

Match with RF Remote Control

There are two ways to match/delete:

Use match key

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

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

PWM Frequency Setting

After power off, press MATCH key for power-on:
Long press the MATCH key for 2s, set the output PWM frequency to 500Hz, LED indicator flash one time.
Long press the MATCH key for 5s, set the output PWM frequency to 2KHz, LED indicator flash two times.
Long press the MATCH key for 10s, set the output PWM frequency to 8KHz, LED indicator flash three times.
Long press the MATCH key for 15s, set the output PWM frequency to 16KHz, LED indicator flash four 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).

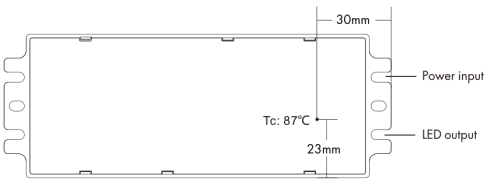
PWM frequency and output current mapping:

U_{in} \ PWM	500Hz	2KHz	8KHz	16KHz
12/24V	20A	20A	20A	15A
36/48V	20A	20A	20A	15A

On/Off Fade Time Setting

Press and hold the MATCH key for 10s to restore the default parameters.
factory default parameters: 100% brightness, PWM frequency is 2KHz, light on/off fade time is 0.5s.
Press and hold the MATCH key for 15s, the light on/off fade time is set to 3s.

Tc Point Location



The Tc point is located at the bottom of the LED driver

Installation Precautions

1. Do not install with electricity.
2. Please use it within the working temperature range of -20˚C ~+55˚C to ensure the stable performance of the product.
3. Avoid prolonged immersion in water.
4. Avoid using it in large metal areas or areas with strong electromagnetic waves, otherwise the remote control distance will be affected.