# LDT-PUSH-RF-1CV-15A

## Single-Channel RF & Push-Dim Controller

A single-channel constant-voltage dimmer with wired Push-Dim and RF control. Select the PWM setting and supply voltage together with the LED load; the available current changes with both.

### Model specifications

| | |
|---|---|
| Input / output voltage | 12-48 VDC |
| Output type | 1-channel constant-voltage PWM |
| Maximum current | 15 A at 12/24 V; 10 A at 36/48 V (500 Hz) |
| PWM / current at 12/24 V | 500 Hz: 15 A; 2 kHz: 12 A; 8/16 kHz: 10 A |
| PWM / current at 36/48 V | 500 Hz: 10 A; 2 kHz: 8 A; 8/16 kHz: 6 A |
| Maximum output power | 180/360/360/480 W at 12/24/36/48 V (500 Hz) |
| Control inputs | RF 2.4 GHz + momentary Push-Dim |
| Dimming | 0-100%; 4096 levels |
| Dimming curve | Linear or logarithmic |
| 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 | 175 x 45 x 27 mm |
| Protection | Reverse polarity, overheat, overload and short circuit |

15 A is not available at every voltage or PWM frequency. Use the current-versus-frequency rows when sizing the load.

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**

# Single Color LED RF Controller

- 4096 levels 0-100% dimming smoothly without any flash.
- Match with RF 2.4G single zone or multiple zone dimming remote control.
- One RF controller accept up to 10 remote control.
- Auto-transmitting function: Controller automatically transmit signal to another controller with 30m control distance.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- Logarithmic or linear dimming curve selectable.
- PWM frequency 500Hz, 2kHz, 8kHz or 16kHz selectable.
- Over-heat / Over-load / Short circuit protection, recover automatically.
- Light on/off fade time 3s selectable.



Step-less dimming / Wireless remote control / Push Dim
Four PWM frequency / Linear or logarithmic dimming

CE RoHS RED

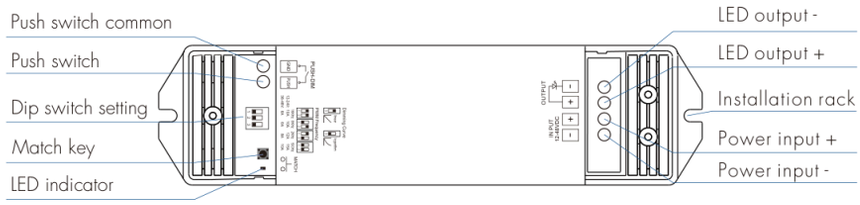
## Technical Parameters

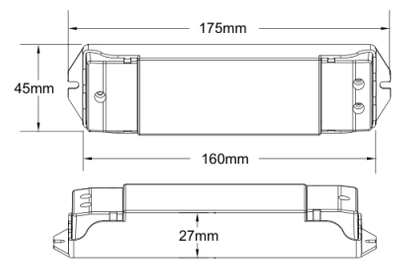
| Input and Output | |
|---|---|
| Input voltage | 12-48VDC |
| Output voltage | 12-48VDC |
| Output current | 15A@12/24V<br>10A@36/48V |
| Output power | 180W@12V 360W@24V<br>360W@36V 480W@48V |
| Output type | Constant voltage |
| **Warranty and Protection** | |
| Warranty | 5 years |
| Protection | Reverse polarity, Over-heat<br>Over-load, Short circuit |

| 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 or linear |
| PWM Frequency | 500Hz, 2kHz, 8kHz, 16kHz |
| **Package** | |
| Size | L178 x W50 x H38mm |
| Gross weight | 0.123kg |

| Safety and EMC | |
|---|---|
| EMC standard | ETSI EN 301 489-1 V2.2.3<br>ETSI EN 301 489-17 V3.2.4 |
| Safety standard | EN 61347-1:2015+A1:2021<br>EN 61347-2-13:2014+A1:2017 |
| Radio Equipment | ETSI EN 300 328 V2.2.2 |
| Certification | CE RED |
| **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) on the remote.
The LED indicator fast flash a few times means match is successful.

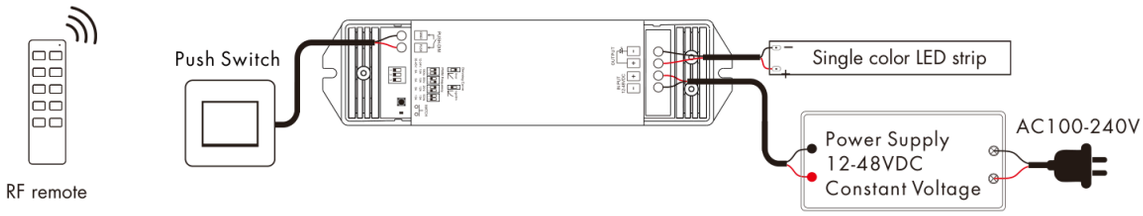
Delete:
Press and hold match key for 5s to delete all match,
The LED indicator fast flash a few times means all matched remotes were deleted.

### 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.

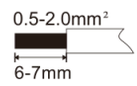
Delete:
Switch off the power, then switch on power, repeat again.
Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 5 times on the remote.
The light blinks 5 times means all matched remotes were deleted.

## Wiring Diagram




Wire Preparation:

1. The wiring can be solid or stranded with a cross-sectional area of 0.5 to 2 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.





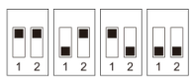

Note: The output power of a constant voltage power supply should be at least 1.2 times that of the output load (light strip), otherwise the full power output of the load can easily cause automatic flickering or shaking of the light.

## Push Dim Function

The provided Push-Dim interface allows for a simple dimming method using commercially available non-latching(momentary) wall switches.

- **Short press:** Turn on or off light.
- **Long press (1-6s):** Press and hold to step-less dimming, with every other long press, the light level goes to the opposite direction.
- **Dimming memory:** Light returns to the previous dimming level when switched off and on again, even at power failure.
- **Synchronization:**
  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

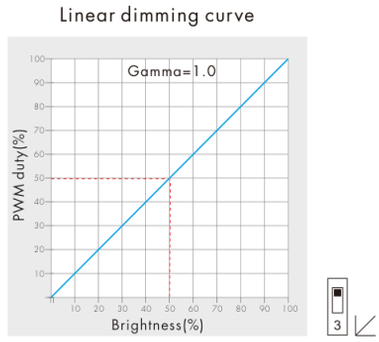



| | 16KHz | 8KHz | 2KHz | 500Hz |
|---|---|---|---|---|
| 12-24V: | 10A | 10A | 12A | 15A |
| 36-48V: | 6A | 6A | 8A | 10A |

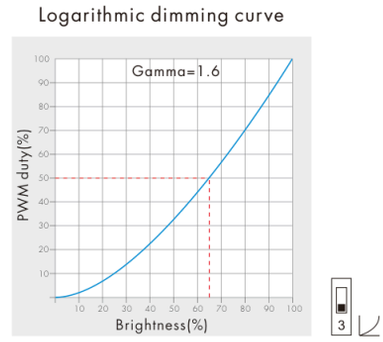
We can select four PWM frequency: 500Hz, 2kHz, 8kHz or 16kHz.
Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

## Dimming curve setting

Linear dimming curve




Logarithmic dimming curve




## 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.

## 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.