LDT-WIFI-RF-1CV-15A

Wi-Fi & RF Single-Channel LED Dimmer

App, RF and wired push-button control for compatible constant-voltage LEDs. Select the lighting mode before network commissioning and pair an RF remote with the same mode. Designed for single-colour brightness control.

Model specifications

Supply voltage	12-48 VDC
LED output	1-channel constant-voltage PWM
Lighting modes	DIM
Maximum current	15 A at 12/24 V; 10 A at 36/48 V (500 Hz)
Maximum output power	180 / 360 / 360 / 480 W at 12 / 24 / 36 / 48 V
Control inputs	Wi-Fi + 2.4 GHz RF + Push-Dim
Dimming	0-100%; 4096 levels
PWM frequency	500 Hz / 2 / 8 / 16 kHz
RF distance	Up to 30 m, unobstructed
PWM / load at 12/24 V	500 Hz: 15 A; 2 kHz: 12 A; 8/16 kHz: 10 A
PWM / load at 36/48 V	500 Hz: 10 A; 2 kHz: 8 A; 8/16 kHz: 6 A
Dimming curve	Linear or logarithmic
Operating temperature	-20 to +55 °C
Maximum case temperature	+70 °C
IP rating	IP20
Dimensions	175 x 45 x 27 mm
Protection	Reverse polarity and overheat; see reference for model-specific protection

Voltage and PWM frequency affect permitted load. The published peak current is not available at every setting.

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.

Wi-Fi + RF

WiFi & RF LED Controller

- **Control app cloud control, support on/off, brightness adjust, delay** turn on/off light, timer run, scene edit function.
- Voice control, support for Amazon Alexa, Google Assistant, Tmall Genie and Xiaodu voice assistant.
- Match with RF 2.4G single zone or multiple zone dimming remote control.
- **Each DIM controller can also work as WiFi-RF converter, then use Control app to control one or more RF LED controller** or RF LED dimming driver synchronously.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- 4096 levels 0-100% dimming smoothly without any flash.
- Output PWM frequency 500Hz, 2kHz, 8kHz or 16kHz selectable.
- Logarithmic or linear dimming curve selectable.
- Light on/off fade time 3s selectable.

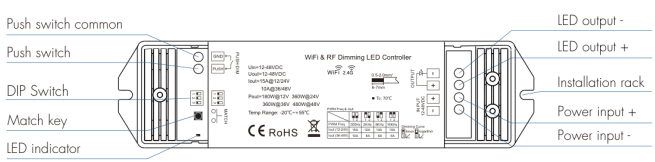


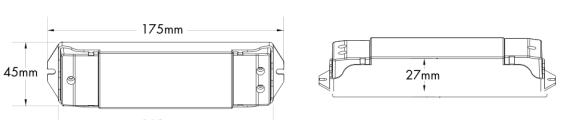
CE RoHS

Technical Parameters

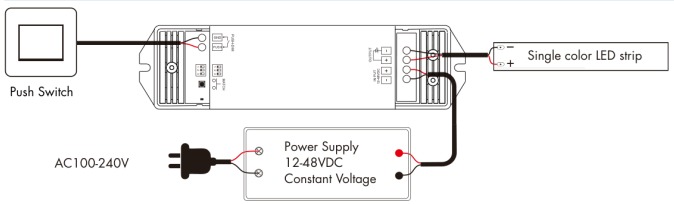
Input and Output		Dimming data		Safety and EMC	
Input voltage	12-48VDC	Input signal	WiFi+RF 2.4GHz+Push Dim	EMC standard	EN IEC 55015/ EN IEC 61547 ETSI EN 301 489-1/-3
Output voltage	12-48VDC	Control distance	30m(Barrier-free space)	Safety standard	EN 61347-1/-2
Output current	15A@12/24V 10A@36/48V	Dimming gray scale	4096 (2^12) levels	Radio Equipment	ETSI EN 300 440
Output power	180W@12V,360W@24V 360W@36V,480W@48V	Dimming range	0 -100%	Certification	CE RoHS
Output type	Constant voltage	Dimming curve	Logarithmic or linear	**Environment**	
Warranty and Protection		PWM frequency	500Hz/2KHz/8KHz/16KHz	Operation temperature	Ta: -20℃ ~ +55℃
Warranty	5 years	**Package**		Case temperature (Max.)	Tc: +70℃
Protection	Reverse polarity, Short circuit, Over heat	Size	L178 x W50 x H38mm	IP rating	IP20
		Gross weight	0.116kg		

Mechanical Structures and Installations



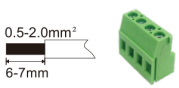


Wiring Diagram



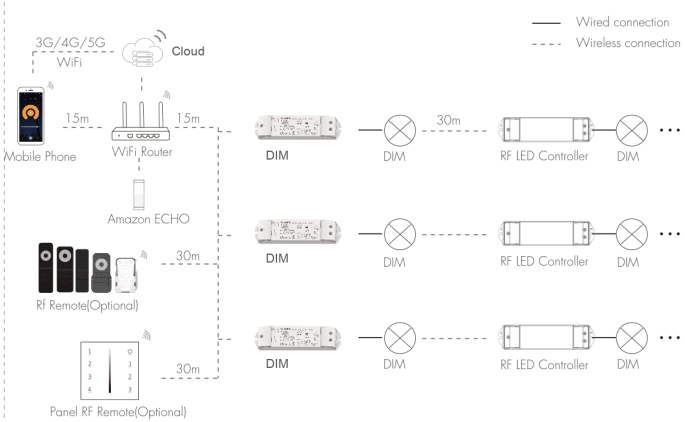
Wire Preparation:

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.

System Wiring



Note:
1. The above distance is measured in spacious (no obstacle) environment, please refer to the actual test distance before installation.
2. Please check if the WiFi router net in 2.4G band, the 5G band is not available, and do not hide your router network.
3. Please keep the distance between devices and router close, and check the WiFi signals.

Control app Network Connection

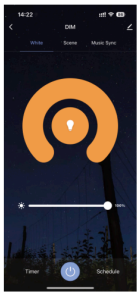
Step 1: Please download the corresponding Smart Life app according to your region.

Step 2: Network connection, press and hold Match key for 5s or push twice Match key fastly, clear previous network connection, enter WiFi config mode, the LED indicator flash fastly.

Step 3: If Smart Life app network connection succeed, the LED indicator will stop flash, and in Smart Life app, you can find DIM device.

Step 4: **When controlling the light +xture with Smart Life app, the network connection is poor,** you can control the light fixture with Bluetooth within the Bluetooth control range.
Note: The fixture cannot be directly controlled by Bluetooth without WiFi configuration.

Step 5: APP interface, touch the brightness slide to adjust the brightness; 1-4 scenes can be edited to lighting static or dynamic mode.



Match Remote Control (Optional

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 10s 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.

DIM work as WiFi-RF Converter to Match RF LED Controller or Dimming Driver

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 of the controller,
immediately press on/off key on the Control app.
The LED indicator fast flash a few times means match is successful

Delete:
Press and hold match key of the controller for 5s,
The LED indicator fast flash a few times means match was deleted.

Use Power Restart

Match:
Switch off the power of the controller, then switch on power, repeat again.
Immediately short press on/off key 3 times on the Control app.
The light blinks 3 times means match is successful.

Delete:
Switch off the power of the controller, then switch on power, repeat again.
Immediately short press on/off key 5 times on the Control app.
The light blinks 5 times means match was deleted

Push Dim Function

- **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.

Note: When using a push switch to synchronize control of multiple DIM,
please long press the push switch for 10s to synchronize all dimmers to the highest brightness before controlling.

Light on/off Fade Time

Long press match key 15s, restore factory default parameter, the LED indicator fast flash 2 times,
the light on/off time also restore to 0.5s.
Long press match key 20s, the light on/off time will be set to 3s, the LED indicator light flash 3 times.

PWM Frequency Setting

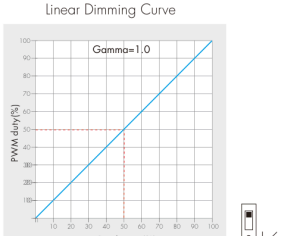
Select 4 PWM frequencies via DIP switch 1-2: 500Hz, 2KHz, 8KHz, 16KHz.
Higher PWM frequency results in lower output current, higher power supply noise, but better for camera shooting (no flicker).

	1 2	1 2	1 2	1 2
PWM frequency	500Hz	2KHz	8KHz	16KHz
Iout (12-24V)	15A	12A	10A	10A
Iout (36-48V)	10A	8A	6A	6A

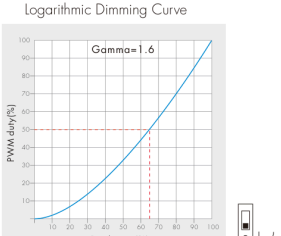
Dimming Curve

Set linear or logarithmic dimming via dip switch 3.

Linear Dimming Curve



Logarithmic 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.