LDT-WIFI-RF-1CV-6A-MINI

Compact Wi-Fi, RF & Push-Dim 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	6 A at 12/24 V; 5 A at 36/48 V
Maximum output power	72 / 144 / 180 / 240 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
Dimming curve	Linear or logarithmic
Operating temperature	-20 to +55 °C
Maximum case temperature	+73 °C
IP rating	IP20
Dimensions	56 x 56 x 18 (including mounting ears) mm
Protection	Reverse polarity and overheat; see reference for model-specific protection

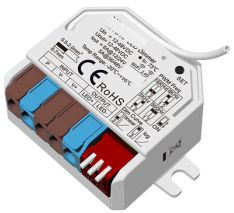
Voltage and PWM frequency affect permitted load. The published peak current is not available at every setting.

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 Dimming LED Controller

- Mini WiFi+RF dimming single channel constant voltage LED controller.
- **Control app cloud control, support on/off, brightness adjust,** delay turn on/off light, timer run and scene edit function.
- Voice control, support for Amazon Alexa, Google Assistant, Tmall Genie and Xiaodu smart speakers.
- Match with RF 2.4G single-zone or multi-zone dimming remote controller optic
- **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 brightness 0-100% adjustment function.
- Logarithmic or linear dimming curves are available.
- 500Hz, 2KHz, 8KHz or 16KHz output PWM frequency selectable.
- 3s on/off fade can be set.
- Overheat/reverse/short circuit protection.



CE RoHS

Technical Parameters

Input and Output	
Input voltage	12-48VDC
Output voltage	12-48VDC
Output current	6A@12/24V 5A@36/48V
Output power	72W@12V 144W@24V 180W@36V 240W@48V

Environment	
Operation temperature	Ta: -20℃ ~ +55℃
Case temperature (Max.)	Tc: +73℃
IP rating	IP20

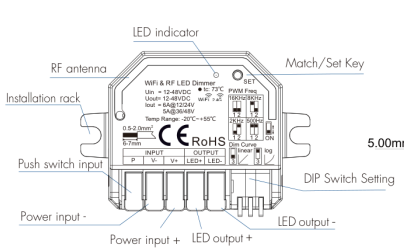
Dimming data	
Input signal	WiFi + RF 2.4GHz + Push-DIM
Control distance	30m (Barrier-free space)
Dimming gray scale	4096 (2^12) levels
Dimming range	0 -100%
Dimming curve	Linear/Logarithmic(default)
PWM frequency	500Hz/2KHz(default)/ 8KHz/16KHz

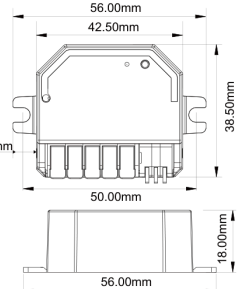
Warranty and Protection	
Warranty	5 years
Protection	Anti-reverse, overheat, short circuit

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
Radio equipment	ETSI EN 300 328 ETSI EN 300 440
Certification	CE RoHs

Package	
Size	L60 x W60 x H40mm
Gross weight	0.043kg

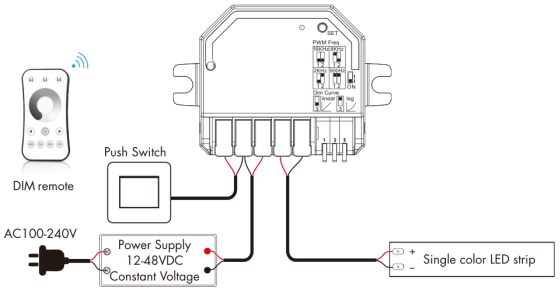
Mechanical Structures and Installations





Note: The mounting ear on both sides can be broken along the indentation, to suit different mounting needs.

Wiring Diagram

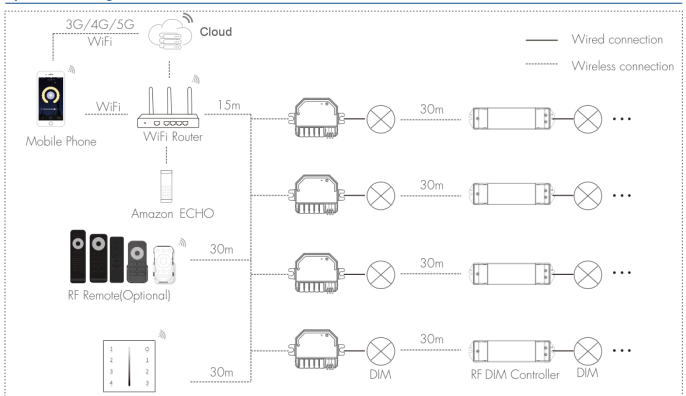


Wire preparation:

1. The wiring can be solid or stranded with a cross-sectional area of 0.5 to 2.0 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 (LED 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 DIM devices and router close, and check the WiFi signals.**

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.

Control app Network Connection

- Download and open APP

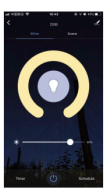
Search for "Smart Life app" in the app store,

or scan the QR code on the right to download the APP.
Register and login after installation.

Smart Life

- APP Pairing Network

Push twice SET key fastly, or press and hold SET key for 5s,
or repeat power off and on for 5 consecutive times fastly,
enter WiFi config mode, RUN LED indicator flash fastly, the output LED strip blinks 10 times.
If Control app network connection succeed, RUN LED indicator will stop Gash.
You can find DIM device in Control app.



When controlling the light with Smart Life app,

if the network connection is poor,
you can control the light with Bluetooth connection within the Bluetooth control range.
But the light can not be directly controlled by Bluetooth without WiFi configuration.

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 10s 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.

Work as WiFi-RF Converter

DIM can work as WiFi-RF converter, matched with RF LED controller or RF dimmable LED driver,

There are two ways to match/delete:

Use Controller's key

Match:
Short press controller's match key,
immediately press the on/off button on the Control app.
The LED indicator fast flash means match is successful.

Delete:
Long press controller's match key for 5s to delete all match.
The LED indicator fast flash means all matched remotes were deleted.

Use Power Restart(optional)

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

Delete:
Switch off the power of the controller, then switch on power, repeat again.
Immediately press the on/off button on the Control app 5 times.
The light flashes 5 times means all matched remotes were deleted.

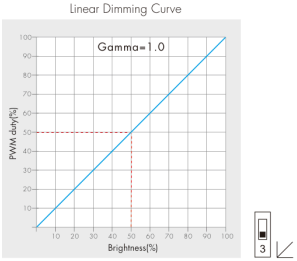
PWM Frequency Setting



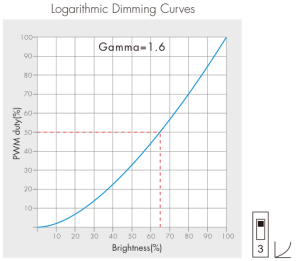
Four PWM frequencies can be selected: 500Hz, 2KHz, 8KHz or 16KHz.
Higher PWM frequency will result in lower output current, higher power supply noise, more suitable for camera shooting (video without flicker).

Dimming Curve Setting

Linear Dimming Curve



Logarithmic Dimming Curves



On/Off Fade Time Setting

Press and hold the SET key for 15s to restore the default parameters, factory default parameters: light on/off fade time is 0.5s.
Press and hold the SET key for 20s, the light on/off fade time is set to 3s.

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 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.