LDT-WIFI-RF-1CV-9A-WB

Wall-Box Wi-Fi, RF & Push-Dim 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	9 A at 12/24 V; 6 A at 36/48 V (500 Hz)
Maximum output power	108 / 216 / 216 / 288 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: 9 A; 2 kHz: 8 A; 8 kHz: 7 A; 16 kHz: 6 A
PWM / load at 36/48 V	500 Hz: 6 A; 2 kHz: 5 A; 8/16 kHz: 4 A
Dimming curve	Linear or logarithmic
Operating temperature	-20 to +55 °C
Maximum case temperature	+68 °C
IP rating	IP20
Dimensions	52 x 52 x 26 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.

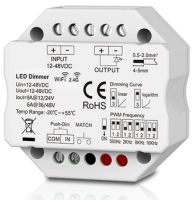
The following technical-reference pages retain the complete diagrams, dimensions, settings and installation instructions. Select the lighting variant stated on this cover; family diagrams may also illustrate other variants.

Wi-Fi + RF

WiFi & RF Dimming LED Controller

Features

- **Control app cloud control, support on/off, brightness adjust,** delay turn on/off light, timer run, scene edit and music play 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.
- Push switch can also work as RF remote to control other controllers.
- 4096 levels 0-100% dimming smoothly without any flash.
- Output PWM frequency 500Hz, 2kHz, 8kHz or 16kHz selectable.
- Light on/off fade time 3s selectable.
- Easy to be placed in standard wall junction box behind a push switch.



CE RoHS

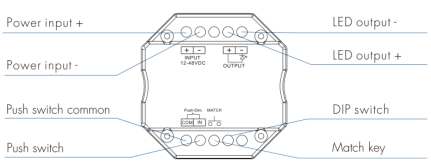
Technical Parameters

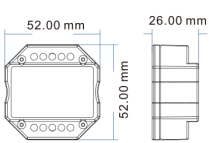
Input and Output	
Input voltage	12-48VDC
Output voltage	12-48VDC
Output current	9A@12/24V 6A@36/48V
Output power	108W@12V,216W@24V 216W@36V,288W@48V
Output type	Constant voltage
Warranty and Protection	
Warranty	5 years
Protection	Reverse polarity, Short circuit, Over heat

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	Logarithmic or linear
PWM frequency	500Hz/2KHz/8KHz/16KHz
Package	
Size	L60x W60 x H40mm
Gross weight	0.049kg

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℃ ~ +55℃
Case temperature (Max.)	Tc: +68℃
IP rating	IP20

Mechanical Structures and Installations

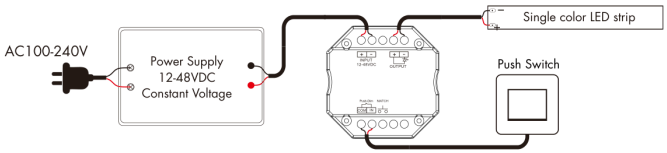




Typical Wall Junction Box Mounting:

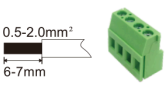


Wiring Diagram



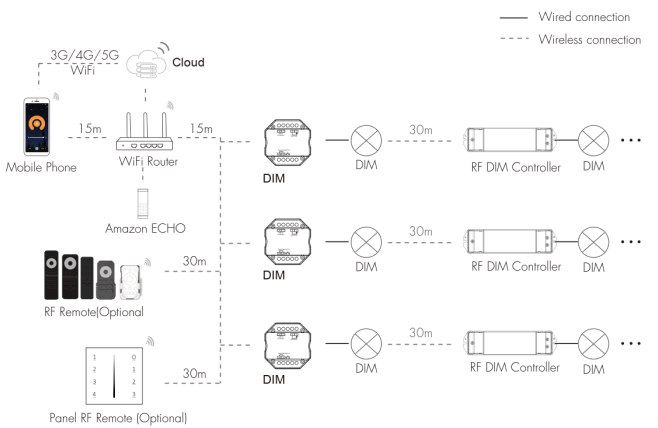
Wire Preparation:

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 (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(noobstacle) 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.**

Control app Network Connection

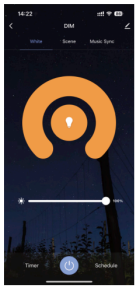
Step 1: Please download Smart Life app according to your region.

Step 2: Network pairing, long press Match key for 5s, or push twice Match key fastly, clear previous network connection, enter Smart config mode, the LED indicator will fast flash.

Step 3: In Smart Life app Fnd the DIM device to add, after the device is added successfully, the LED indicator stops blinking.

Step 4: When controlling the light Fxture 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 bar to adjust the brightness; 1-4 scenes can be edited for static or dynamic lighting mode.



Match Remote Control (Optional)

End user can choose the suitable match/delete ways. Two options are offered for selection:

Use the Match key

Match:
Short press match key of DIM,
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 of DIM for 10s,
The LED indicator fast flash a few times means all matched remotes were deleted

Use Power Restart

Match:
Switch off the power of DIM, 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 of DIM, 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/off light.
- **Long press(1-6s):** Continuous adjustment brightness , dimming range 0-100%.

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

Light on/off Fade Time

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

PWM Frequency Setting

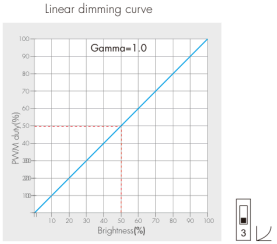
DIP switches 1 and 2 set the four output PWM frequencies: 500Hz, 2kHz, 8kHz, and 16kHz.
Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

ON	1 2	1 2	1 2	1 2
PWM Frequency	500Hz	2KHz	8KHz	16KHz
Iout (12-24V)	9A	8A	7A	6A
Iout (36-48V)	6A	5A	4A	4A

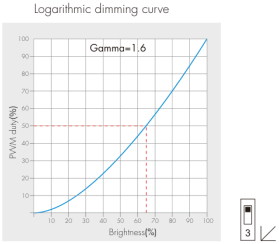
Dimming Curve

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.