LDT-WIFI-RF-5CV-3A

Wi-Fi & RF Five-in-One LED Controller

App, RF and local setup-key control for compatible constant-voltage LEDs. Select the lighting mode before network commissioning and pair an RF remote with the same mode. A multi-mode controller supports one selected lighting configuration at a time.

Model specifications

Supply voltage	12-24 VDC
LED output	5-channel constant-voltage PWM
Lighting modes	DIM / DUO / RGB / RGBW / RGB+DUO
Maximum current	5 x 3 A
Maximum output power	5 x (36-72) W
Control inputs	Wi-Fi + 2.4 GHz RF
Dimming	0-100%; 4096 levels
PWM frequency	1 kHz (default)
RF distance	Up to 30 m, unobstructed
Output channels	5
Dimming curve	Logarithmic
Operating temperature	-30 to +55 °C
Maximum case temperature	+85 °C
IP rating	IP20
Dimensions	114 x 38 x 20 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 5 in1 LED Controller

- 5 in 1 function, used for control RGB, RGBW, RGB+DUO, color temperature or single color LED strip.
- DC power socket input and 5 channel constant voltage output.
- Control app cloud control, support on/off, RGB color, color temperature and 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 remote control optional.
- User need set light type by press key before Control app network connection and match RF remote of the same light type.
- Each 5CH 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.
- Light on/off fade time 3s selectable.



CE RoHS

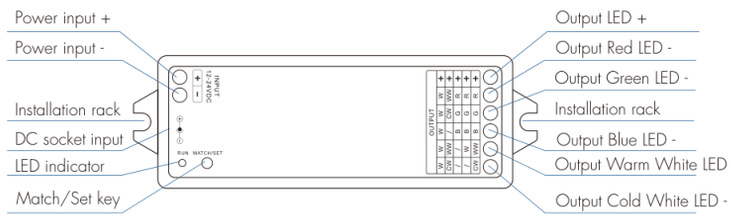
Technical Parameters

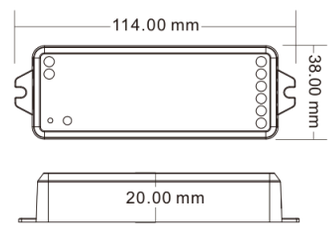
Input and Output	
Input voltage	12-24VDC
Input current	15.5A
Output voltage	5 x (12-24)VDC
Output current	5CH,3A/CH
Output power	5 x (36-72)W
Output type	Constant voltage
Environment	
Operation temperature	Ta: -30°C ~ +55°C
Case temperature (Max.)	Tc: +85°C

Dimming data	
Input signal	WiFi + RF 2.4GHz
Control distance	30m(Barrier-free space)
Dimming gray scale	4096 (2^12) levels
Dimming range	0 -100%
Dimming curve	Logarithmic
PWM frequency	1000Hz (default)
Package	
Size	L120 x W43 x H27mm
Gross weight	0.073kg

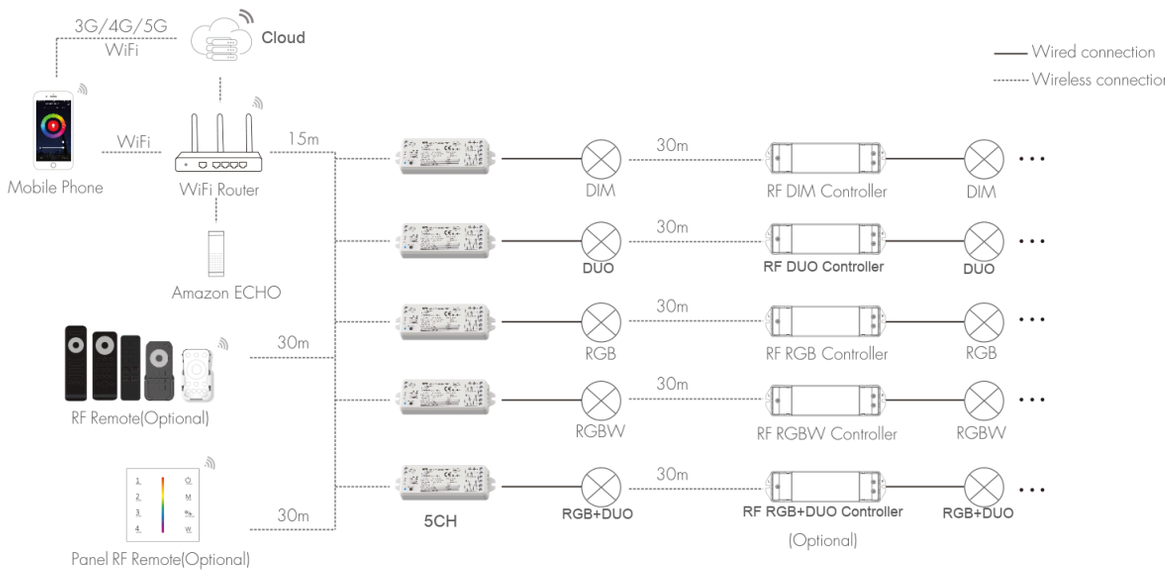
Safety and EMC	
EMC standard	EN IEC 55015/EN IEC 61547 ETSI EN 301 489-1/-3/-17
Safety standard	EN 61347-1/-2
Radio Equipment	ETSI EN 300 440 ETSI EN 300 328
Certification	CE RoHS
Warranty and Protection	
Warranty	5 years
Protection	Reverse polarity Over-heat Short circuit

Mechanical Structures and Installations





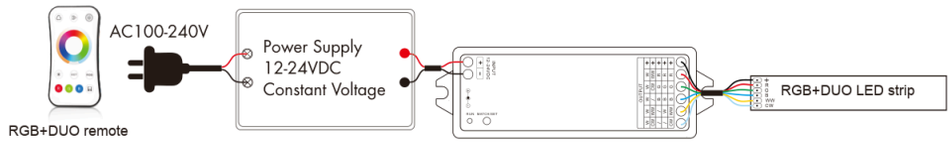
System Wiring



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 5CH devices and router close, and check the WiFi signals.

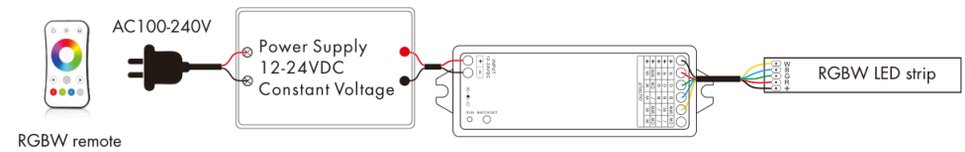
Wiring Diagram

- For RGB+DUO



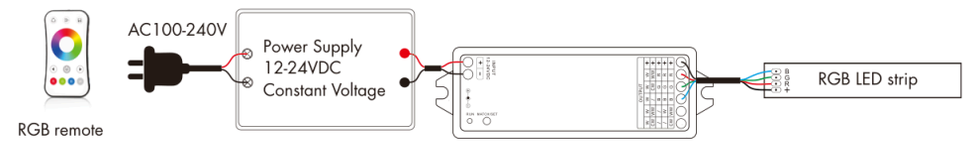
Press and hold match/set key for 16s, until the RUN LED indicator turn blue, then release, the controller will become RGB+DUO type, then do smart conFg by Control app, or short press match key to match with RGB+DUO RF remote.

- For RGBW



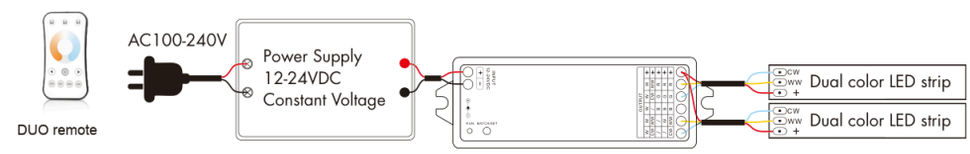
Press and hold match/set key for 14s, until the RUN LED indicator turn green, then release, the controller will become RGBW type, then do smart conFg by Control app, or short press match key to match with RGBW RF remote.

- For RGB



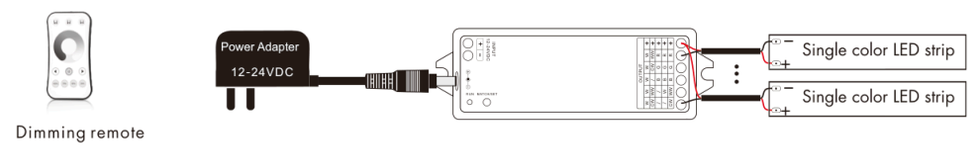
Press and hold match/set key for 12s, until the RUN LED indicator turn red, then release, the controller will become RGB type, then do smart conFg by Control app, or short press match key to match with RGB RF remote.

- For dual color DUO



Press and hold match/set key for 10s, until the RUN LED indicator turn yellow, then release, the controller will become DUO type, then do smart conFg by Control app, or short press match key to match with DUO RF remote.

- For single color



Press and hold match/set key for 8s, until the RUN LED indicator turn white, then release, the controller will become DIM type, then do smart conFg by Control app, or short press match key to match with dimming RF remote.

Note:

1. User can connect constant voltage power supply or power adapter as power input.
2. Press and hold Match/Set key for 2s, switch 5 kinds light type in sequence.
3. For RGB+DUO or DUO light type, continuous power on and off will change 3 levels color temperature (WW, NW and CW) in sequence.
4. Switch off the power, then switch on power, repeat again.
   Immediately short press match key 3 times, the light on/off time will change between 3s and 0.5s.

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 Match/Set key fastly, or when press and hold Match/Set key for 8-16s to set 5 kinds light type:
Clear previous network connection, enter WiFi config mode, the LED indicator flash fastly,
the output LED will flash 10 times.

Press and hold Match/Set key for 2s:
Switch 5 kinds light type in sequence, notice this operation does not automatically clear previous network connection.

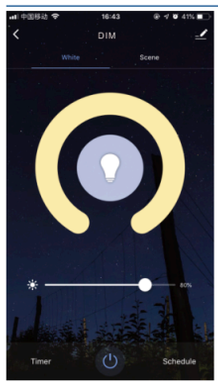
Press and hold Match/Set key for 5s:
Clear previous network connection, enter WiFi config mode, the LED indicator flash fastly.

Repeat power on and off for 5 consecutive times, also clear previous network connection, enter WiFi config mode, the output LED will flash 10 times.

If Control app network connection succeed, the RUN LED indicator will stop flash, and turn corresponding light type color (White: DIM, Yellow: DUO, Red: RGB, Green: RGBW, Blue: RGB+DUO). and in Control app, you can find RGB+DUO device (or other DIM, DUO, RGB or RGBW).

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.
Note: The light can not be directly controlled by Bluetooth without WiFi configuration.

Control app Interface

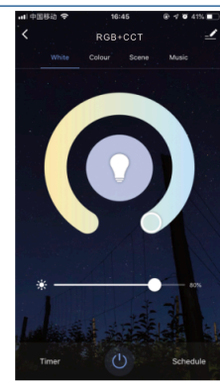


White interface

For DIM type:
Touch brightness slide to adjust brightness.

For RGB type:
Touch brightness slide, get RGB mixed white firstly, then to adjust white brightness.

For RGBW type:
Touch brightness slide, adjust white channel brightness.



Color temperature interface

For DUO type:
Touch color wheel to adjust color temperature.
Touch brightness slide to adjust brightness.

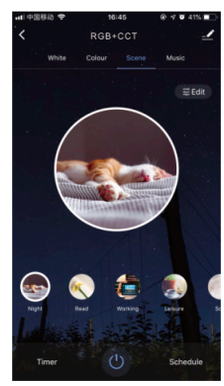
For RGB+DUO type:
Touch color wheel to adjust color temperature,
RGB will turn off automatically.
Touch brightness slide to adjust white brightness.



Colour interface

For RGB or RGBW type:
Touch color wheel to adjust static RGB color.
Touch brightness slide to adjust color brightness.
Touch saturation slide to adjust color saturation,
namely gradient from the current color to white (RGB mixed).

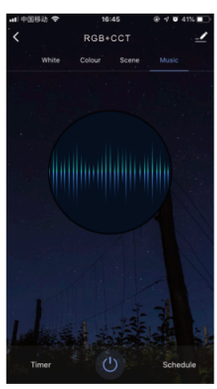
For RGB+DUO type:
Touch color wheel to adjust static RGB color,
WW/CW will turn off automatically.
Touch brightness slide to adjust color brightness.
Touch saturation slide to adjust color saturation,
namely gradient from the current color to white (RGB mixed).



Scene interface

The 1-4 scene is static color for all light type.
the inner color of these scene can be editable.

The 5-8 scene is dynamic mode for RGB, RGBW, RGB+DUO type, such as green fade in and fade out, RGB jump, 6 color jump, 6 color smooth.



Music, Timer, Schedule

The music play can use smart phone music player or micro-phone as music signal input.

The Timer key can turn on or turn off light in the next 24 hours.

The Schedule key can add multiple timers to turn on or turn off light according to different time periods.

5CH Match Remote Control (Optional)

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

Use the 5CH's Match key

Match:
Short press match key of 5CH,
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 5CH for 20s,
The LED indicator fast flash a few times means all matched remotes were deleted.

Use Power Restart

Match:
Switch off the power of 5CH, 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 5CH, 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.

5CH 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.

Dynamic Mode List

For RGB/RGBW:

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Yellow cyan purple smooth	10	White fade in and out

For RGB+DUO:

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Color temperature smooth	10	White fade in and out

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.