

Manual Instruction

WiFi&BT LED Strip Controller

Model No.: C31W/C51W

Please read the instructions carefully before using the controller.

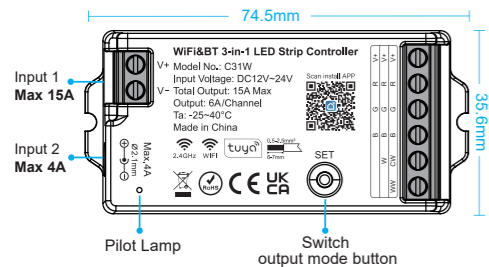
1. Features

The controller is adopted by the most advanced PWM control technology, and has memory function (The light status will keep same as the status before you turn off the light); Wireless and 4G controlled by Tuya Smart Life APP.

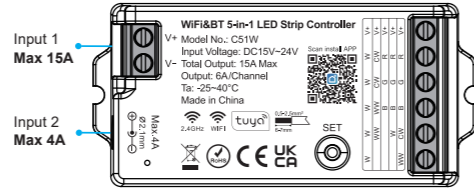
- 16 Millions of colors to choose
- Color temperature 2700K~6500K
- Dim brightness / saturation
- Support music rhythm
- Support scene customization
- Timing setting /countdown turn on /off LED light
- Bluetooth wireless control
- Tap-to-Run & automation
- PWM Frequency Switching
- Overheating protection
- WiFi wireless control
- Smartphone APP control
- Support third party voice control
- Support remote control (control distance 30m)
- Device sharing
- Group control
- 2.4G wireless transmission technology
- Auto-transmitting & Synchronization
- Link/Unlink/Reset Button on the controller

2. Parameters

Model No.: C31W
 Input Voltage: DC12V~24V(5.5*2.1mm)
 Output: 6A/Channel (Total Output Max: 15A)
 Working Temperature: -25~40°C
 Size: 74.5*35.6*16.5mm
 Output Mode: RGB / RGBW / RGB CCT
 Communication Protocol: WiFi+2.4GHz
 RF Control Distance: 30M



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 Output: 6A/Channel (Total Output Max: 15A)
 Working Temperature: -25~40°C
 Size: 74.5*35.6*16.5mm
 Output Mode: Single Color / CCT / RGB / RGBW / RGB CCT
 Communication Protocol: WiFi+2.4GHz
 RF Control Distance: 30M



Smart Link&Unlink: We have 3 methods to Link and Unlink to APP.

- Long press " SET " button for 3 seconds, the purple pilot lamp blinking, the device go into Link/Unlink mode and Smart Link Mode.
- Switch OFF the power for 5 seconds, then switch ON again and Long press the linked Zone ON button on the linked RGB CCT remote. the strip light will blink 3 times, the device go into Smart Link mode.
- Switch ON-OFF the power 4 times(OFF-ON-OFF-ON-OFF-ON-OFF-ON), the strip light will blink 3 times , the device go into Smart Link mode.

Note: On the 4 times " ON-OFF " reset operation; when the light ON, switch OFF the power immediately;after switching OFF the power, please wait until the power supply has no power totally(wait over 5 seconds on each Switch-OFF), then switch ON again.

Note: Pilot lamp red light always ON means device not link to APP, need to do above steps to link. green light aways ON means device linked to APP;device is controllable.

3. Switch output mode

Press the " SET " key briefly. The indicator lights in different colors will flash to represent different output modes, as detailed in the table below.

	White Light Flickering	Yellow Light Flickering	Red Light Flickering	Green Light Flickering	Blue Light Flickering
C031W	\	\	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)
C051W	Single Color Mode	Dual White Mode	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)

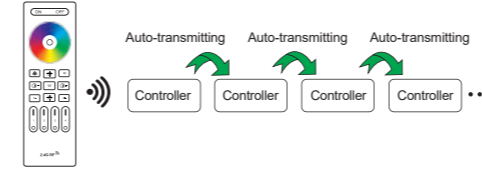
Suggestion: Complete the network distribution of the equipment first, then adjust the output mode Pilot lamp.

Indicating light instruction:

Red light always-on	Green light always-on	Red light blinking	Blue light always-on
Disconnected from network	Networking successfully	Waiting for smart link	WiFi router disconnected but still controllable

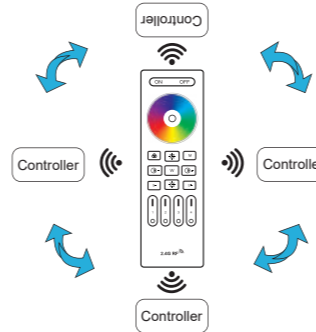
3.Auto-transmitting Diagram

One strip controller can transmit the signals from the remote control to another controller within 30m, as long as there is a strip controller within 30m,the remote control distance can be limitless.



4. Auto-synchronization function

Different controllers can work synchronously when they are started at different times, controlled by the same remote, under same dynamic mode and with same speed.

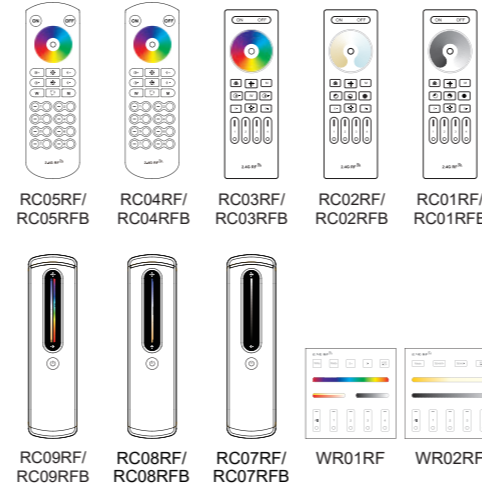


Remark:

- Indicating Auto-transmitting.
- Controller will be auto-synchronizing in the same dynamic modes and within 30m controlling distance.

5. Remote Controller

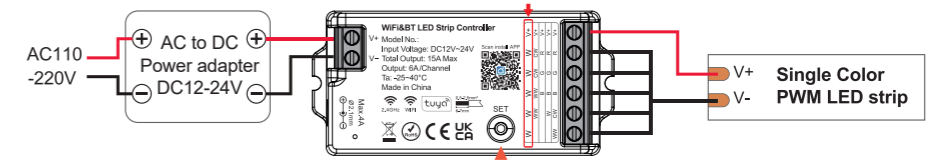
Compatible with these remote controls (Purchased separately). For more details, pls read the remote instruction.



6. Connect to LED strip

! The controller should be installed as close to the power supply as possible. In particular, when the current exceeds 10A, the wiring length between the power supply and the controller must not exceed 1 meter.

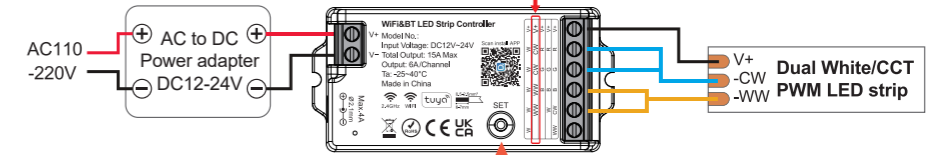
6.1. Connect to Single Color/Dimming PWM LED strip diagram



Short press the SET button; the indicator light will flash white, activating the monochrome/Dimming LED strip's output port.

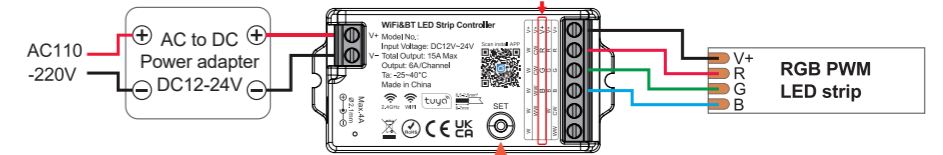
6.2. Connect to Dual White/CCT PWM LED strip diagram

(Note: For CCT mode, total output current is 12A max.)



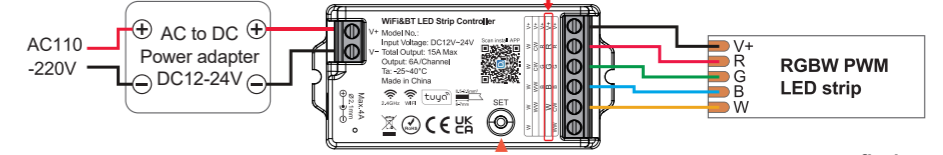
Short press the SET button; the indicator light will flash yellow, activating the CCT color LED strip's output port. The other port will be inactive/disabled.

6.3. Connect to RGB PWM LED strip diagram



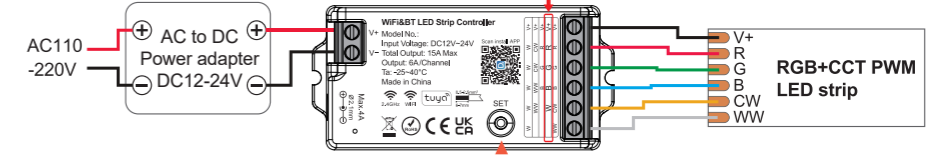
Short press the SET button; the indicator light will flash red, activating the RGB color LED strip's output port. The other ports will be inactive/disabled.

6.4. Connect to RGBW PWM LED strip diagram



Short press the SET button; the indicator light will flash green, activating the RGBW color LED strip's output port. The other port will be inactive/disabled.

6.5. Connect to RGB+CCT PWM LED strip diagram



Short press the SET button; the indicator light will flash blue, activating the RGB CCT color LED strip's output port.

7. Tuya Smart Life APP WiFi Control Instruction:

7.1. Download and install [Tuya Smart] APP or [Smart Life] APP:

Search for [Smart Life] in Apple or Google store or scan following QR code to download and install the app.

Please click “Register” button to create account while using it the first time, Log in directly if you already had account.



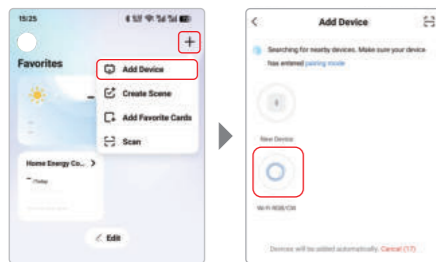
(Smart Life)



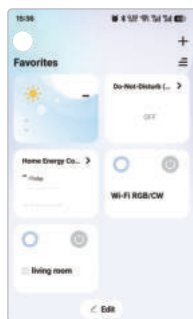
(Tuya Smart)

7.2. Connect to Smartphone

- Connect controller with power supply.
- Confirm Pilotlamp flashing quickly (2 flashes per second)
If Pilot lamp isn't in fast flashing state, there are two ways to enter:
 - Long press “ SET ” key until Pilot lamp flashing quickly.
 - Power OFF and ON once, long press Zone ON button of linked remote until the LED strip blinking 3 times.
- Connect phone with home WiFi network in the 2.4GHz frequency. (make sure that your phone linked with 2.4GHz WiFi, the controller does not support 5GHz WiFi and WiFi 6)
- Open homepage of APP and click “ + ” button at the upper right corner of page. If the pilot lamp is flashing red, it will find the new device automatically.
- Added devices will be displayed on home page after network configuration is successful.

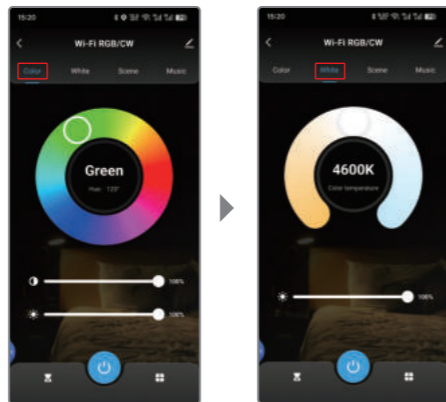


- Click device you want to control to enter the control interface.

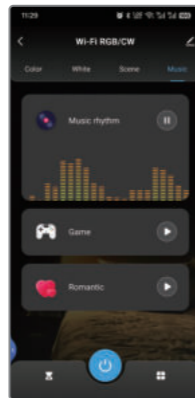


7.3. APP Control

- Click “ device ” or “ group ” you want to control on homepage to enter control page, where you can control color, saturation, brightness, color temperature, and scene.

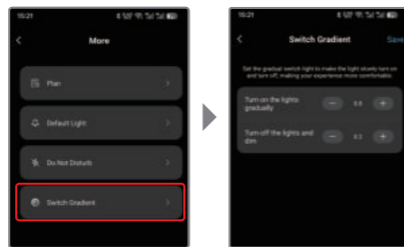


- Click music sync to enter music rhythm mode, light will change with rhythm of music.



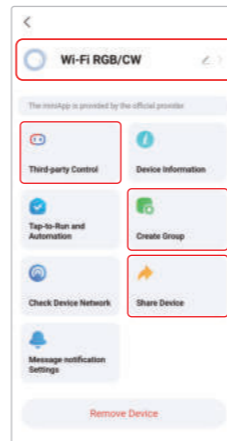
Note: Music rhythm mode requires phone keep on this page.

- Click “ ” on the right bottom, you can choose more settings, including Plan, Default Light, Do Not Disturb, Switch Gradient.
- Set the gradual switch light to make the light slowly turn on and turn off, making your experience more comfortable.



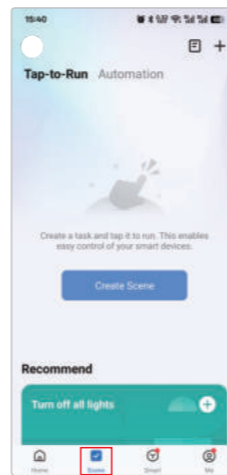
7.4. Device name editing, third-party control, device sharing, group control.

- Click “ ” on the upper right corner of control page to enter edit page, where you can modify device name, icon, etc.
- Click icon under third-party control to view detailed description of third-party control.
- Click “Share Device” to share device with family and friends.
- Click “Create Group” and follow APP prompt after setting is completed, the device can be controlled by group.

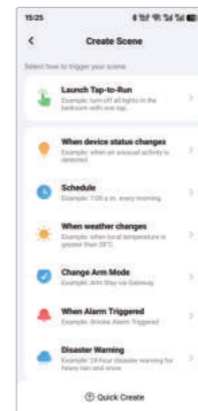


7.5. Intelligent control

- Click “ Scene ” at the bottom.
- Click “ + ” in the upper right corner to create intelligent control.



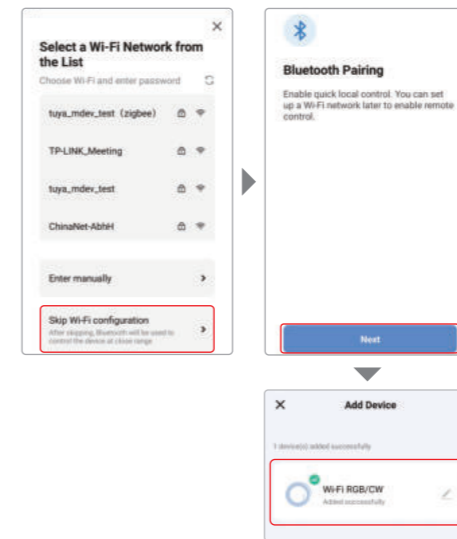
- In the page of creating smart, you can set command to be executed under the specified conditions (such as: turn on or turn off light, color, brightness, mode, etc.)



8. Bluetooth control instructions

This controller supports Bluetooth direct connection. The specific operation steps are as follows:

- Put the controller into network configuration mode. At this time, you need to turn off the phone's WiFi, disconnect connected Bluetooth devices (such as headphones), and enable mobile data simultaneously.
- Open the Tuya APP, select “ Add Device ”, click on the target controller after discovering it, choose “Skip WiFi configuration” at the bottom, enter the Bluetooth connection page, and click “ Next ” to complete pairing. Then you can control the device.



Note: Bluetooth control only supports short-distance operation and can realize basic functions such as switching lights on/off, dimming, and adjusting color temperature. Advanced functions like remote control and voice control are not supported temporarily.

9. Network Reset Methods

Method 1	<p>Reset by Long-Pressing the SET Button: Press and hold the SET button for more than 3 seconds until the indicator light flashes slowly in purple, indicating the long press is effective. Release the button, and the controller will simultaneously trigger three operations: remote control code clearing, network reset, and factory settings restoration (Note: PWM frequency settings will not be restored).</p> <p>Attention: Network configuration must be completed within 5 minutes; otherwise, the controller will automatically exit the network configuration state.</p>
Method 2	<p>Reset via Power Cycle: Perform the “ power on - power off ” operation more than 4 times continuously (Operation sequence: ON→OFF→ON→OFF→ON→OFF→ON→OFF→ON). Key Requirements: Immediately turn off the power (OFF) after each power-on (ON). Before powering on again, ensure the residual voltage of the power supply is fully discharged and the controller is completely powered off. It is recommended that the interval between two operations is more than 10 seconds.</p>
Method 3	<p>Reset via Remote Control: 1. Applicable Remote Control Models: RC01 ~ RC06, Press and hold the paired Group “ON” button, then re-power on the controller. The LED strip will flash 3 times after approximately 3 seconds, indicating a successful reset. 2. Applicable Remote Control Models: RC07 ~ RC11, Press and hold the “Power” button for approximately 20 seconds. The LED strip will flash once, indicating a successful reset.</p>

Attention

- Please check whether the input voltage of the constant voltage power supply is in accordance with the controller, and please check the connection of both the cathode and anode.
- The working Voltage is DC12~24V, the controller will be broken if the voltage is higher than 24V.
- Non-professional user cannot dismantle the controller directly, otherwise, it may cause fire and electric shock.
- The working temperature is -25~40°C; Do not use the device to direct sunlight, moist and other high temperature area.
- Please do not use controller around the mental area and high magnetic field, otherwise, it will badly affect the control distance.
- When the device load to 12A, wire diameter must be over 1.5mm².
- The light automatically turns off during operation and then automatically turns back on after a while. This indicates that the overheating protection has been triggered. Please reduce the load power.



Controller can not use in humid area



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