



Rayrun XT50 LED Controller Umi and Tuya Dual Smart User Manual

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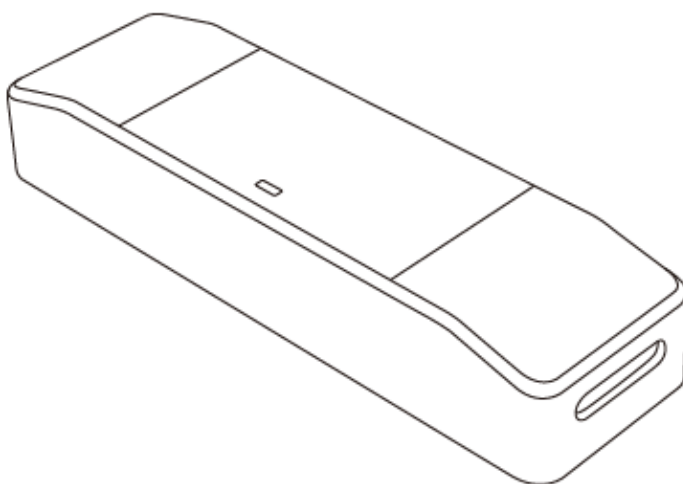
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Rayrun XT50 LED Controller Umi and Tuya Dual Smart



5-in-1 Multi-function Model Dual Smart Connection Full Protection



Dual Smart



Advanced Setting



Full Protection



Push Terminal



8-50 Volt



Multi-Function

Press key input

Connect to a normally open type press key switch if local operation is needed. Three operation method is available for the press key:

- **Single press:** Turn on/off.
- **Double click:** Change color or color temperature.
- **Hold press:** Dimming.

Working status indicator

This indicator shows the working status of the controller. It displays different events as follows:

- **Steady yellow:** Umi only mode, Tuya disconnected. Steady green: Umi and Tuya mode.
- **Short blink:** Command received.
- **Blink for 3 times:** Confirmation or identification. Single yellow flash : Edge of the adjustment.
- **Red flash:** Overload protection.
- **Yellow flash:** Overheat protection.

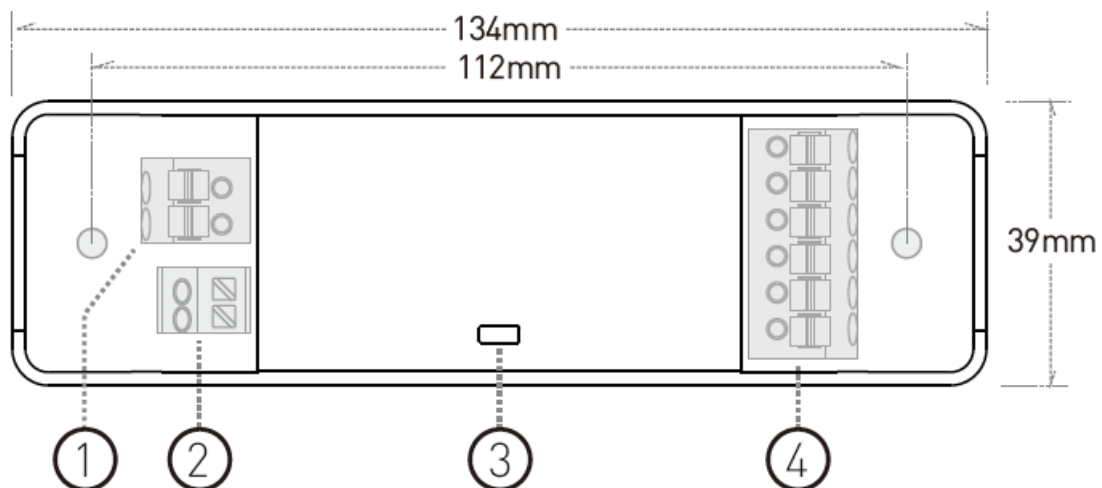
LED output

Connect to LED loads. The LED loads must be constant voltage driving type and with a common anode connection for multi-channel models. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is in range of the controller's rated current.

Introduction

This series LED controller is designed to drive single color to RGB+CCT constant voltage LED products in a wide DC voltage range. It can be controlled by both Umi and Tuya smart system synchronously. There are advanced user parameters to fine tune the application, and the full protection feature can ensure safety and reliability.

Function & Size

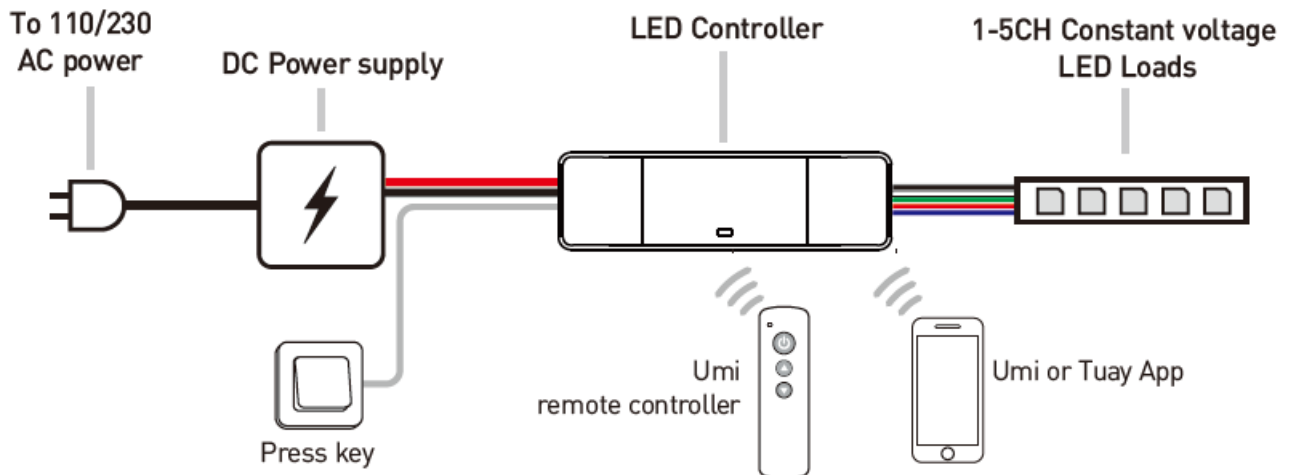


Power supply input

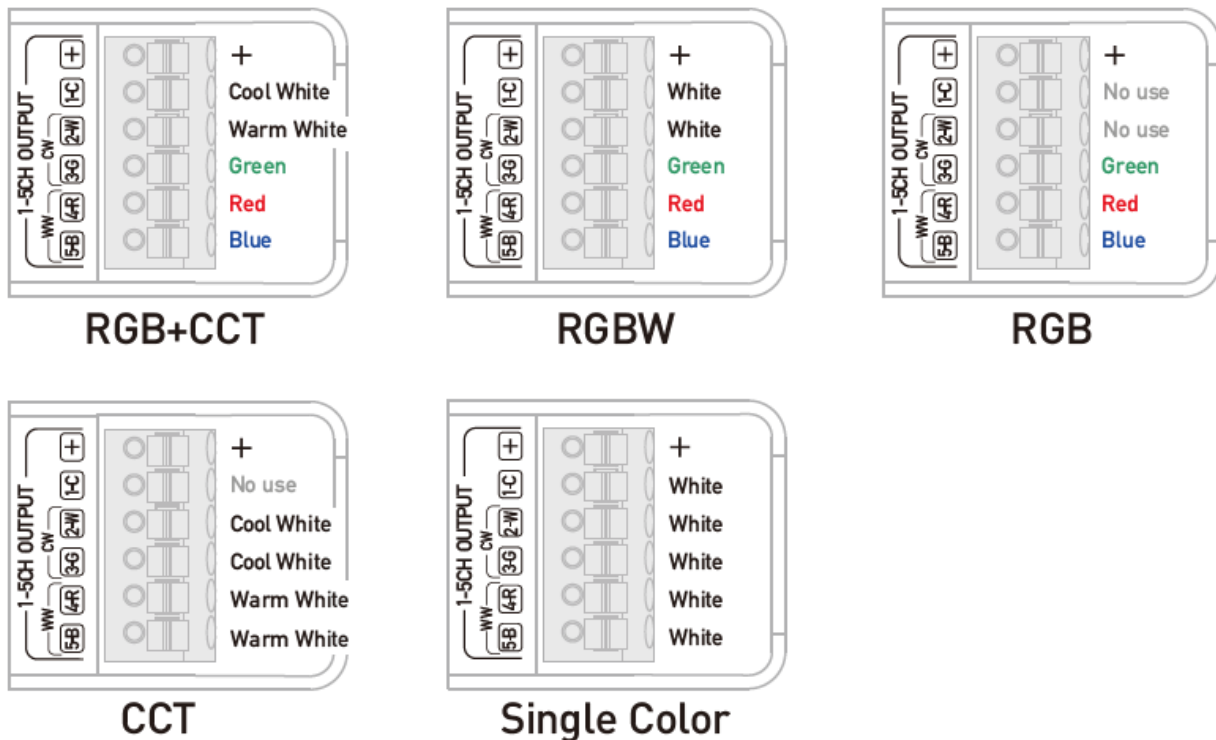
Connect to power supply. The controller can accept supply voltage from DC 8V to 50V (XT50) or 6V to 24V (XTE50), the maximum cable gauge is AWG12 or 2 2.5mm . The controller's output voltage is at same level as the power input voltage, please make sure the power supply voltage is correct and the power is capable for the load wattage. The power input '+' unit is directly connected to the output terminal '+' unit inside the controller.

Wiring

Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be the same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.



The controller supports 1-5 channel application from single color to RGB+CCT, please refer to following diagram for multiple application output wiring.



Operation

Control by smart phone

The controller can be controlled by both Umi Smart and Tuya Smart smartphone app synchronously. For Tuya setup, please make sure the controller is at factory default mode and not connected to any gateway or router. For Umi Smart app, please scan the QR code on the housing to download.

Pairing Umi remote controllers

The controller can be paired with compatible Umi remote controller for direct setup and operation. To pair or unpair the remote controller, user needs to connect and disconnect the power of controller and press specific

combo keys on the remote controller. Each controller can be paired up to 5 remote controllers, please refer to the Umi remote controller's user's manual for detailed operation.

Advanced features

Change model function

The working mode can be changed from 1 channel (single color) to 5 channels (RGB+CCT) from the Umi Smart app. To change the model function, please use the Umi Smart app and detect factory default devices in 'Discover nearby' function and then tap the item icon and select 'change function' menu to proceed.

Timing play function (-T model only)

A real time clock with backup power supply is equipped with the -T version model. User can use Umi Smart app to setup timing play function with multiple repeating features of weekday or date. The real time clock will set the time with smart phone once connected to the Umi Smart app. The built-in backup power will reserve the timing play setting up to 48 hours after power cut. The saved timing play function will be invalid after the backup power runs out and it will automatically recover once being connected to smart phone again. For more timing play features, please check the Umi Smart app.

Change PWM frequency to avoid noise and flicker

The controller PWM frequency can be changed via the Umi Smart app. Please use the Umi Smart app and detect factory default devices in Discover nearby function and then tap the item icon and select the change settings menu to proceed. The frequency must be tuned with LED type and installation. To maintain more stable working and less power loss, please do not set to high frequency if no noise or flicker issues occurred.

CAUTION: The controller efficiency will drop versus increased frequency and the output current needs to be derated a maximum 50% with frequency higher than 4KHz. Otherwise, the controller may run into overheating protection from excess heat.

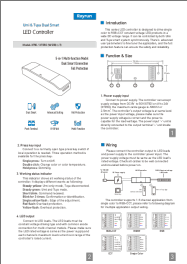
Specification

Model	XT50 (W/B/Z)(-T)	XTE50 (W/B/Z)(-T)
Function	Single color, CCT, RGB, RGBW and RGB+CCT	
Working voltage	DC 8-50V	DC 6-24V
Rated output current (at 1KHz PWM freq.)	Max 8A for each channel, total max 24A * output current need to be derated up to 50% when PWM frequency is higher than 4Khz.	
Umi connection	Umi protocol based on SIG Bluetooth mesh	
Tuya connection	W: Wifi; Z: Zigbee; B: Bluetooth	
Timing play function	-T model only, with backup battery via Umi Smart	
Communication distance	>20 meters at open area	
Output mode	PWM constant voltage	
PWM frequency	498Hz – 20.9KHz	498Hz – 6.3KHz
Overload protection	Yes	
Overheat protection	Yes	
Working temperature (Ta)	-20°C~+55°C	
Dimension	134x39x24mm	

Umi Smart app link:



Documents / Resources

	<p>Rayrun XT50 LED Controller Umi and Tuya Dual Smart [pdf] User Manual XT50 LED Controller Umi and Tuya Dual Smart, XT50, LED Controller Umi and Tuya Dual Smart, Controller Umi and Tuya Dual Smart, Umi and Tuya Dual Smart, Dual Smart, Smart</p>
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