



Rayrun TT10 Smart and Remote Control Single Color LED Controller User Manual

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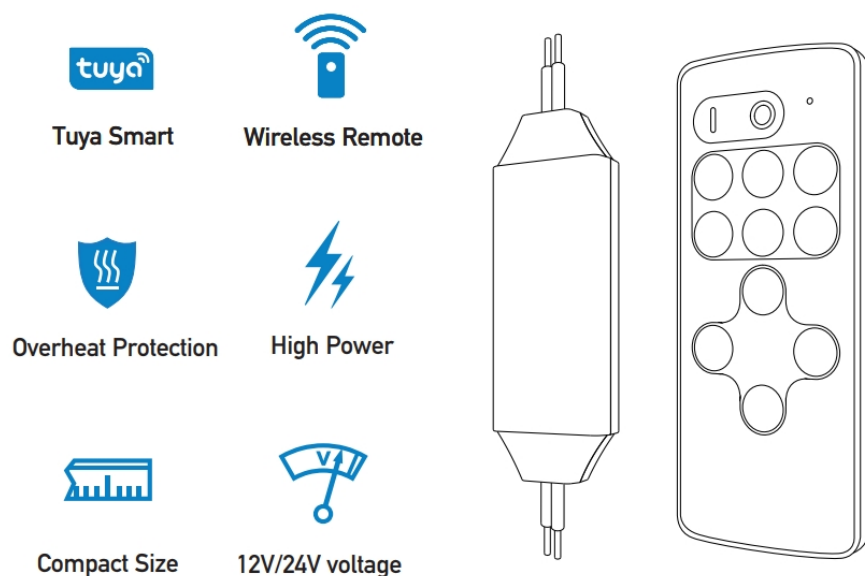
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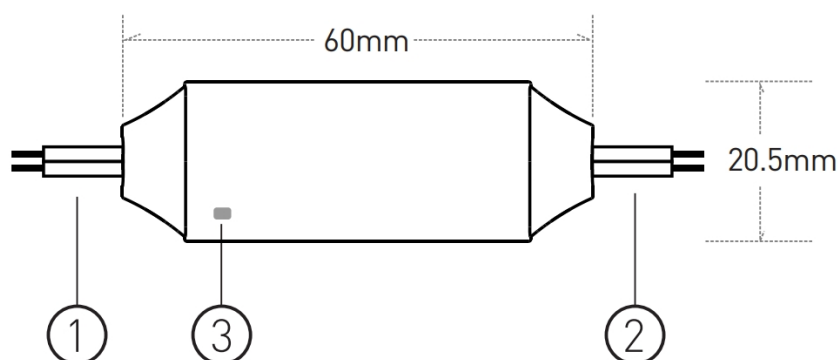
Introduction

TT10 LED controller is designed to drive constant voltage single color LED products in voltage range of DC12-24V. It can be controlled by Tuya smart app or by a RF wireless remote controller. User can setup LED brightness, scene and dynamic effects with the rich function on the Tuya smart app or from the easy operation remote controller.

Product Descriptions



Terminal & Size



1. Power supply input

Connect positive power to the cable marked with '+' and negative to the cable marked with '-'. The controller can accept DC power from 12V to 24V, the output is PWM driving signal with same voltage level as the power supply, so please make sure the LED rated voltage is same as the power supply.

2. LED output

Connect LED fixtures positive to the cable marked with '+' and negative to the cable marked with '-'. Please make sure the LED rated voltage is same as the power supply and the maximum load current is below the controller rated current.

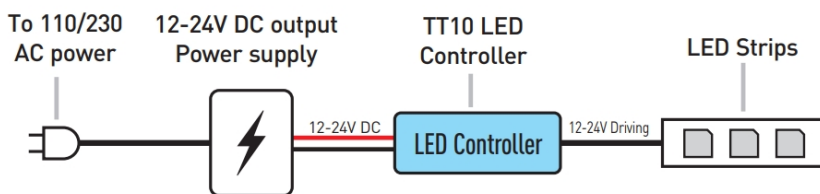
CAUTION! The controller will be permanently damaged if output cables short circuited. Please ensure the cables are well insulated to each other.

3. Work status indicator (optional)

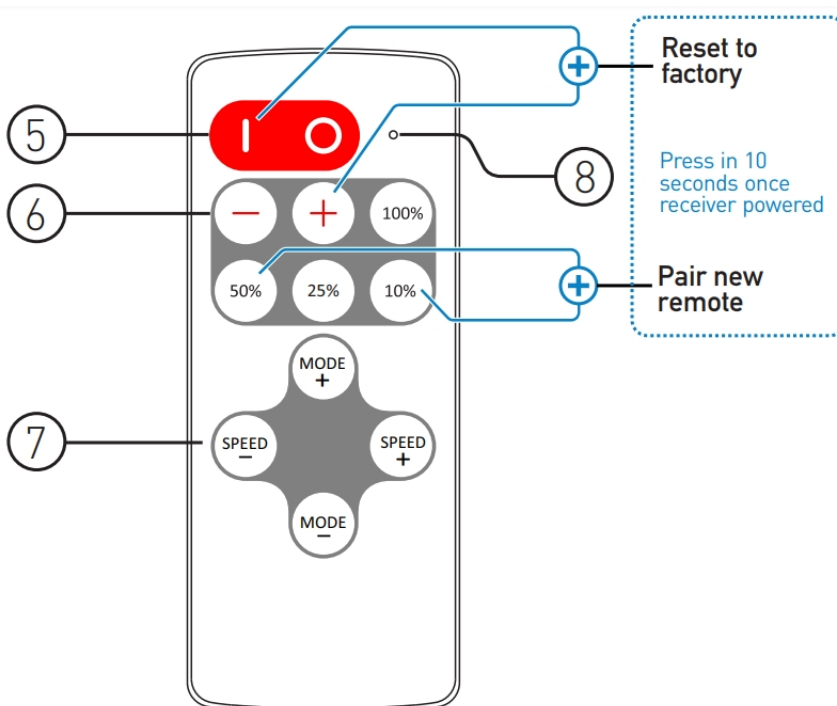
This indicator shows all working status of the controller. It displays different events as following:

1. **Steady on:** Remote and Tuya smart mode.
2. **Flash twice:** Tuya not connected.
3. **Flash 3 times:** Over heat protection.
4. **Blink:** New command received.
5. **Long single blink:** Brightness or speed reach limit

4. Wiring diagram



Functions





5. Turn ON / OFF

Press 'I' key to turn on unit or press 'O' key to turn off. The power on status can be set to last status or default status from app. At last status mode, the controller will memorize the on/off status and will restore to the previous status on next power on. Please use remote controller or app to turn on if it was switched to off status





before power cut.

6. Brightness control

Press key  to increase brightness and press  key to decrease. There are 4 brightness shortcut key to set brightness to 100%, 50%, 25% and 10% of full brightness.

The controller applies brightness gamma correction on dimming control, makes the brightness tuning more smooth to human sense. The brightness shortcut level is valued to human sense, it's not proportional to the LED output power.

7. Dynamic mode and speed control

Control the dynamic modes. Press  and  to select dynamic modes  and  press and key to set the running speed of the dynamic modes.

8. Remote indicator

This indicator blinks when remote controller working. Please check the remote battery if the indicator does not light up or flash slowly. The battery type is CR2032.

Operation

Using the remote controller

Please pull out the battery insulate tape before using. The RF wireless remote signal can pass through some nonmetal barrier. For proper receiving remote signal, please do not install the controller in closed metal parts.

Setup Tuya connection

Please install the Tuya app to setup the connection. Before setup, please make sure the controller is at factory default mode and not connected to any gateway or router.

Pair a new remote controller

The remote controller and receiver is 1 to 1 paired as factory default. It's possible to pair maximum 5 remote controllers to one receiver and each remote controller could be paired to any receivers.



To pair a new remote controller, please follow two steps:

1. Plug off the power of receiver and plug in again after more than 5 seconds.
2. Press and key simultaneously for about 3 seconds, within 10 seconds after the receiver powered on.

After this operation, the LED fixture will flash quickly to acknowledge that remote pairing is accomplished.

Reset to factory default

To reset the controller's Tuya setting and unpair all remote controllers, please operate with following two steps:

1. Plug off the power of controller and plug in again after more than 5 seconds.
2. Press  and  key simultaneously for about 3 seconds, within 10 seconds after the receiver powered on.

After this operation, the controller will be reset to factory default, the Tuya configuration and remote pairing will all

be reset.

Overheat Protection

The controller has overheat protection feature and it can protect itself from damage caused by some abnormal usage such as overloading which generates excess heat. At overheat situation, the controller will shutdown the output for a short while and recover when temperature drops to a safe range.

Please check the output current and make sure it's under rated level at this situation.

Specification

Model	TT1 0 (W/Z/B)
Output Mode	PWM constant voltage
Working voltage	DC 12-24V
Rated output current	6A
Tuya connection	W: Wifi; Z: Zigbee; B: Bluetooth
PWM grade	4000 steps
Overheat protection	Yes
Remote frequency	433.92MHz
Remote control distance	>15m at open area
Controller dimension	60×20.5×9mm
Remote dimension	86.5×36×8mm

The Rayrun logo consists of the word "Rayrun" in a white, italicized, sans-serif font, centered within a solid blue rectangular background.

