Rayrun

Smart & Remote Control
RGB+W LED Controller

Model: TT40 (W/Z/B)

Powered by
tuya
Intelligence Inside

Tuya Smart

Wireless Remote

Overheat Protection

High Power

Compact Size

12V/24V voltage
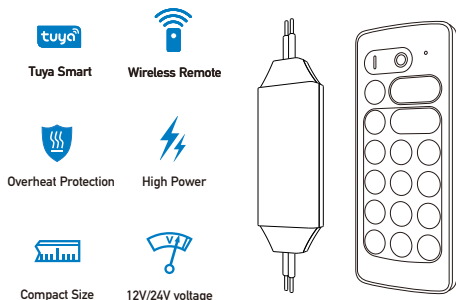
■ Introduction

TT40 LED controller is designed to drive constant voltage RGB+White color LED products in voltage range of DC12-24V. It can be controlled by smart phone with Tuya smart app connection or by the stand alone RF remote controller. User can setup LED brightness, color, scene and dynamic effects with the rich function on smart phone Tuya app or the easy operation remote controller.

■ Terminal & Size

60mm

20.5mm

① ③ ②
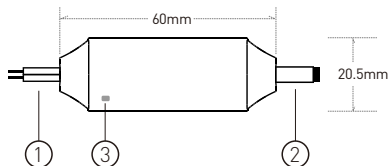
1. Power supply input

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.

1

2. LED output

Connect to constant voltage type LED load. Connect the LED ⊕ to black cable, and R, G, B, W cable to the relevant color ⊖. 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:

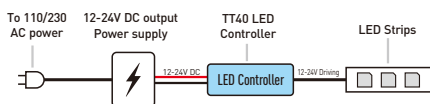**Steady on**: Remote and Tuya smart mode.
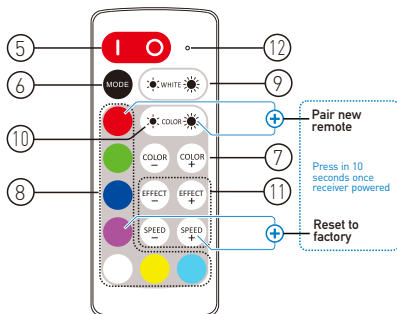**Flash twice**: Tuya not connected.
Flash 3 times: Over heat protection.
Blink: New command received.
Long single blink: Brightness or speed reach limit.

4. Wiring diagram

To 110/230 AC power | 12-24V DC output Power supply | TT40 LED Controller | LED Strips

12-24V DC | LED Controller | 12-24V Driving

■ Functions

⑤ ⑫
⑥ MODE WHITE ⑨
COLOR
⑩ ⑦ Pair new remote
COLOR COLOR
− +
⑧ EFFECT EFFECT ⑪
− +
SPEED SPEED
Reset to factory

Press in 10 seconds once receiver powered

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.

6. Light mode switch

Press this key to switch between RGB, white and RGB+White mode. In RGB mode, white channel will be disabled; In white mode, RGB channel will be disabled; In RGB+White mode, all channels are usable.

7. Select static RGB color

Press (COLOR) and (COLOR) key to select color from the preset library colors.

8. Shortcut color select

Shortcut key to static colors. LED will run the relevant color when pressing the specific color key. The shortcut color is included in (COLOR+) and (COLOR-) content.

9. White brightness control

Press (☀) key to increase white LED brightness and press (☀) key to decrease.

10. RGB brightness control

Press (☀) key to increase RGB LED brightness and press (☀) key to decrease.

11. RGB dynamic effect

Control the RGB dynamic effects. Press (EFFEC-) and (EFFEC+) to select dynamic effects and press (SPEED-) and (SPEED+) key to set the running speed of the dynamic effects.

12. 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

13. 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.

14. 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.

15. 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 can be paired to any receivers.

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

1). Plug off the power of the controller and plug in again after more than 5 seconds.

2). Within 10 seconds after controller powered on, press ● and (COLOR☀) key simultaneously for about 3 seconds.

After this operation, the LED lights will flash 3 times to acknowledge that remote pairing is accomplished.

16. 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 (SPEED+) 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	TT40(W/Z/B)
Output Mode	PWM constant voltage
Working voltage	DC 12-24V
Rated output current	4x2A
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
Overheat protection	Yes
Controller dimension	60x20.5x9mm
Remote dimension	86.5x36x8mm

涂鸦智能无线

RGB+W LED控制器

Model: TT40 (W/Z/B)

Powered by
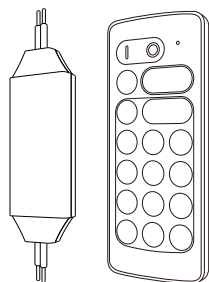**tuya**
Intelligence
Inside
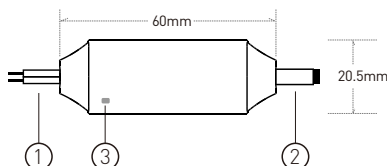
涂鸦智能　无线遥控

过热保护　高功率

小尺寸　12-24V电压

■ 简介

TT40 RGB+W LED控制器是设计用于驱动电压范围为DC 12-24V的恒压 LED 产品。用户可以通过涂鸦智能app或者卡片式射频遥控器来调节LED灯具。用户可以通过涂鸦智能app的功能调节LED灯具的亮度、场景和动态模式,也可以通过操作遥控器来调节LED灯具的亮度、颜色和动态模式。

■ 接线与尺寸

60mm

20.5mm

① ③ ②

1. 电源输入

连接到电源。控制器可接受电压为12V到24V的直流电源供电,请将电源正极连接到标有"+"电缆上,电源负极连接到标有"-"电缆上。请确保 LED 灯具的额定电压与电源电压相同,且电源的功率满足控制器和灯具的需求。

为保证安全,在通电前请先确保所有电缆均已可靠连接且绝缘良好。

1

2. LED输出

连接到LED灯具。请将LED灯具正极连接到黑色电缆上,LED灯具对应颜色的电缆分别连接到白、绿、红、蓝电缆上,请确保 LED 的额定电压与电源相同,并且每个通道的最大负载电流在控制器的额定电流范围内。

请注意!如果控制器输出电缆被意外短路,可能将导致控制器严重损坏,请确保电缆可靠连接并良好绝缘。

3. 状态指示灯(可选)

该指示灯显示控制器的工作状态,指示灯与控制器工作状态和对应关系如下:
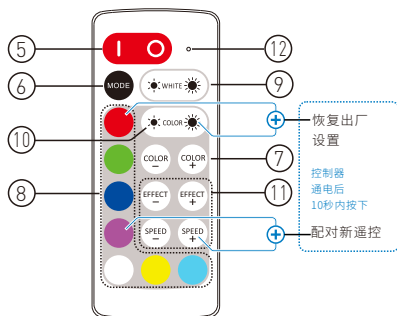
常亮:遥控和智能模式
闪烁2次:遥控模式,涂鸦智能未连接
闪烁3次:过热保护
闪烁:收到命令
慢闪:达到亮度或速度极限

4. 接线图解

接交流电　　12-24V　　TT40　　LED恒压灯具
　　　　　　直流电源　LED控制器

12-24V DC　　控制器

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■ 功能

⑤ ⑫
⑥ MODE WHITE ⑨
　　　　　　　　　　⊕ 恢复出厂
　　COLOR　　　　　设置
⑩ COLOR COLOR ⑦ 控制器
　　－　　 ＋　　　通电后
⑧ EFFECT EFFECT ⑪ 10秒内按下
　　－　　 ＋
　SPEED SPEED ⊕ 配对新遥控
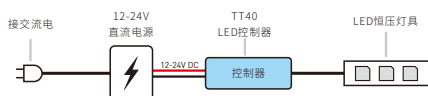
5. 开关

按"I"键开启灯光,按"O"键关闭。控制器会记忆断电前的开关状态,如果在断电前为关机状态,下次通电后请使用遥控器或者涂鸦智能app开灯。

6. 模式调节

按此键可以自动切换单白光模式、RGB模式和RGB加白光模式。在单RGB动态模式下,仅能调节RGB功能;在单白光模式下,仅能调节白光的亮度;在RGB加白光模式下,RGB的颜色和亮度以及白光的亮度均可以独立调节。需注意在RGB动态模式下,单白光模式处于关闭状态。

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### 7. 静态RGB颜色调节

按 (COLOR) 与 (COLOR) 可以从预设的颜色库中调节颜色。

8. 颜色快捷键

按下相应颜色快捷键时,LED灯具会跳转成相应的颜色。预设的颜色库中已包含快捷键所对应的颜色。

9. 单白光亮度调节

按 (☀) 键增加单白光亮度,按 (☀) 键降低单白光亮度。

按 (☀) 键增加RGB亮度,按 (☀) 键降低RGB亮度。

11. RGB动态模式调节

按 (EFFECT) 和 (EFFECT) 调节RGB动态模式,按 (SPEED) 和 (SPEED) 调节RGB动态模式的运行速度。

12. 遥控器指示灯

按下遥控器按键时,该指示灯会快速闪烁。如果指示灯慢闪,则说明遥控器电池电量已耗尽,请更换遥控器电池(CR2032型纽扣电池)。

■ 操作方法

13. 使用遥控器

使用前请拔出遥控器电池绝缘片。RF无线遥控信号可以穿过一定的非金属屏障,为了保证控制器的接收效果,请勿将控制器安装在有大面积金属遮挡的位置。

14. 连接涂鸦智能app

请通过安装并设置涂鸦智能app来进行连接。在设置连接前,请确保控制器是处于出厂默认模式状态,且没有连接任何网关或路由器。

15. 与新遥控器配对

遥控器和控制器出厂默认为1对1的配对状态。1个控制器最多可配对5个遥控器,而遥控器可配对到任意的控如需配对新遥控器,请按以下两个步骤操作:

1) 断开控制器电源,并在超过5秒后重新通电。

2) 在控制器通电后的10秒内,同时按下新遥控器的 ● 和 (COLOR☀) 键约3秒钟。

配对成功后,LED灯具将快速闪烁提示配对成功。

16. 恢复出厂设置

按以下两个步骤操作,即可将涂鸦智能连接恢复到出厂状态,同时已配对的遥控器也会被清除。

1) 断开控制器电源,并在超过5秒后重新通电。

2) 在控制器通电后的10秒内,同时按下遥控器的● 和 (SPEED) 键约3秒钟。

操作完成后,控制器将恢复成出厂状态,需要重新配置智能连接以及重新配对遥控器。

■ 过热保护

本机具有过热保护功能,可防止控制器因负载过重引起异常发热而导致损坏。过热保护时控制器将关断输出,当温度下降到安全范围时,将尝试恢复正常工作。过热保护功能仅能在一定程度上防止控制器损坏,为确保安全,请勿将控制器输出过载或短路。

■ 规格

型号	TT40(-W/Z/B)
输出方式	PWM恒压
工作电压	DC 12-24V
额定输出电流	3x3A
涂鸦连接	W: Wifi; Z: Zigbee; B: Bluetooth
遥控器工作频率	433.92MHz
遥控器工作距离	空旷范围 >15米
PWM分辨率	4000级
过热保护	有
控制器尺寸	60x20.5x9mm
遥控器尺寸	86.5x36x8mm