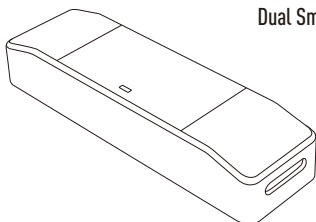


Umi & Tuya Dual Smart

LED Controller

Model: XT50 / XTE50 (W/Z/B) (-T)

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



Dual Smart



Advanced Setting



Full Protection



Push Terminal



8-50 Volt

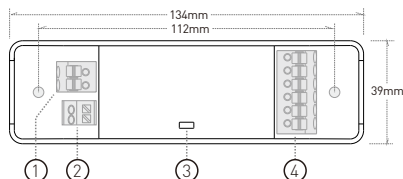


Multi-Function

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's advanced user parameters to fine tune the application, and the full protection feature can ensure the safety and reliability.

Function & Size



1. 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 2.5mm². 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.

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2. 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.

3. Working status indicator

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

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.

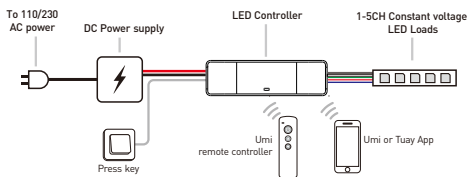
Yellow flash: Overheat protection.

4. LED output

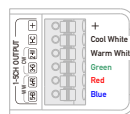
Connect to LED loads. The LED loads must be constant voltage driving type and with common anode connection for multi-channel models. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is in range of the controller's rated current.

Wiring

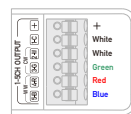
Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.



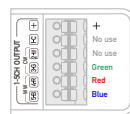
The controller supports 1-5 channel application from single color to RGB+CCT, please refer to following diagram for multiple application output wiring.



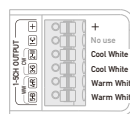
RGB+CCT



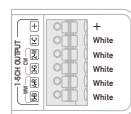
RGBW



RGB



CCT



Single Color

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■ Operation

5. 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.

6. 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

7. 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.

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10. Protection feature

The controller has full protection function against wrong wiring, load short circuit, overload and overheat. The controller will stop working and the indicator will flash with red / yellow color to indicate the malfunction. The controller will try to recover from protection status in a short time when the working condition is good.

For protection issues, please check the situation with different indicator information:

Red flash: Check the output cables and load, make sure no short circuit and the load current is in rated range. Also the load must be constant voltage type.

Yellow flash: Check the installation environment, make sure in a rated temperature range and with good ventilation or heat dissipation condition.

8. 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.

9. Change PWM frequency to avoid noise and flicker

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

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■ 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:



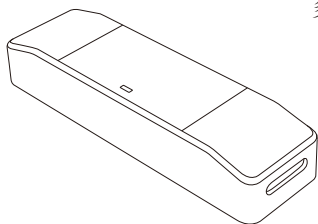
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Umi-涂鸦双系统

LED控制器

型号: XT50 / XTE50 (W/Z/B)(-T)

5合1多功能型号
多参数可调节
双智能系统
全功能保护



多智能系统



高级设置



全功能保护



按钮式端子



50V工作电压



5合1功能

2. 按键控制输入

连接到常开型按键开关,用于开关和调光操作。

按键开关有三种操作方式:

单按:切换开关状态

快速双按:调节颜色或色温

长按:调节亮度

3. 工作状态指示灯

该指示灯显示控制器的工作状态,指示灯的闪烁方式与工作状态的对应关系如下:

绿色常亮:Umi加涂鸦模式

黄色常亮:Umi模式,涂鸦未连接

单次闪烁:收到命令

慢闪3次:变更设置

黄色单闪:已调至最高或最低

红色闪烁:过载保护

黄色闪烁:过热保护

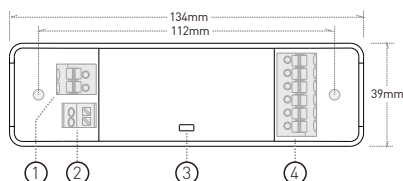
4. LED输出

连接到LED灯具。LED灯具必须为恒压型且适用于PWM驱动。对于多通道应用,各通道需为共阳极连接方式。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。

■ 简介

该LED控制器用于驱动单色到RGB+CCT的各类恒压LED产品。用户可以通过Umi Smart和涂鸦App对灯具做同步控制,同时也可以使用Umi遥控器进行直接配置和操作。本机并且具有丰富的参数设置功能,结合全功能保护特性和按压式接线端子,本产品可以满足各类高要求、高可靠性的恒压LED应用需求。

■ 功能与尺寸



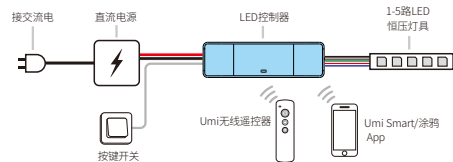
1. 电源输入

连接到电源。控制器可接受直流8-50V(XT50)或6-24V(XTE50)的供电电压,端子可安装的最大电缆规格为 2.5mm^2 。控制器的输出电平与电源输入电压相同,安装前请确保电源电压正确且功率储备满足控制器和负载的需求。请注意电源输入的“+”极与输出端子的“+”极在控制器内部直接相连。

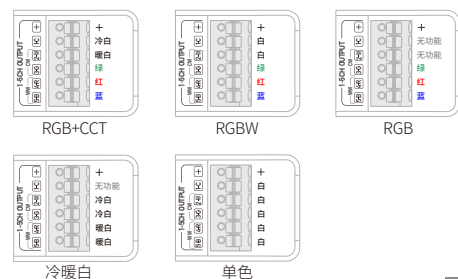
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■ 接线图

请将控制器输出连接到合适的恒压LED灯具,并将电源连接到控制器电源输入端子。电源电压必须与LED负载的额定电压相同。在通电前请检查所有电缆是否连接良好并已可靠绝缘。



本机支持从单色到RGB+CCT的应用,在不同应用下输出端子的功能定义如下:



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■ 操作方法

5. 用智能手机操作

用户可以通过“Umi Smart”和“涂鸦智能”App对本产品做同步控制。请扫描机身上的二维码下载Umi Smart app并连接本机。若要连接涂鸦智能，请确保控为出厂状态且没有连接其他涂鸦网关或路由器。

6. 配对并使用Umi遥控器

本机也可与兼容的Umi遥控器直接配对进行操作。要对遥控器进行配对或取消配对，用户需要连接和断开控制器的电源或者在Umi Smart app上激活配对模式，然后按遥控器上的特定组合键。具体方法请参考遥控器使用说明书。每个控制器最多可配对5个遥控器。

■ 高级功能

7. 改变通道配置

本机可以通过Umi Smart app更改控制器功能，以实现从单色到RGB+CTT的各种应用模式。如需更改机型功能，请使用Umi Smart app并在“发现附近”功能中搜索未配置的设备，然后点击产品图标并选择“更改功能”，然后选择需变更到的机型。

4

9. 保护功能

本产品具有完善的保护功能，可以最大程度的防止因接线错误、负载短路、过载或过热而引起的产品损坏。当发生以上异常状态时控制器将停止工作，同时指示灯会闪烁红色或黄色。当工作状态良好时，控制器会尝试恢复正常工作。

当控制器停止工作时，请检查指示灯的状态，在不同的闪烁状态下应检查相应的故障：

红色闪烁：请检查输出电缆是否短路、负载电流是否过高，并且请确保所驱动灯具为恒压驱动类型。

黄色闪烁：请检查控制器的安装环境以及负载功率，并确保控制器散热条件良好且负载功率在额定范围之内。

8. 可断电保持的定时播放功能(仅限-T机型)

型号后缀为-T的机型配备了带后备电源的实时钟功能。用户可以通过Umi Smart应用设置可编辑日期、时间和灯具状态的定时播放功能。

本机的时钟在连接到Umi Smart app后会自动校准，控制器的后备电源可以确保在断电48小时内仍准确保留定时播放设置。在断电且后备电源用尽的情况下定时播放功能会暂时失效，在控制器再次连接手机后即可自动恢复。

9. 更改PWM频率以避免噪音和频闪

在某些应用中，灯具可能会因PWM驱动方式出现噪音或频闪问题，本机可以通过调整PWM频率来优化这类问题。提高PWM频率后控制器的工作效率会有所下降，某些灯具可能无法正常工作。因此为保证系统工作更加稳定，请尽量设置到较低的PWM频率。

要更改PWM频率，请使用Umi Smart app在“发现附近”功能中点击未配置的设备，然后选择“更改设置”菜单进行配置。

注意：在PWM频率升高时，控制器的发热量会增加，在频率高于4KHz时，根据应用条件控制器的输出电流最多需降额约50%，以避免发生过热。

5

■ 规格

型号	XT50 (W/B/Z/-T)	XT50 (W/B/Z/-T)
功能	单色、冷暖白、RGB、RGBW、RGB+CCCT	
工作电压	DC 8-50V	DC 6-24V
额定输出电流 (1KHz PWM下)	每通道最大8A, 总和最大24A *当PWM频率高于4KHz时, 输出电流需降额最多50%。	
Umi连接方式	Umi协议, 基于SIG蓝牙mesh	
涂鸦连接方式	W: Wifi; Z: Zigbee; B: Bluetooth	
RTC定时播放	仅-T机型, 通过Umi Smart配置	
通信距离	空旷地带大于20米	
输出模式	PWM恒压模式	
PWM频率	498Hz - 20.9KHz	498Hz - 6.3KHz
过载保护	有	
过热保护	有	
工作环境温度(Ta)	-20°C~+55°C	
尺寸	134x39x24mm	

扫码下载Umi Smart:



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