Rayrun

Umi Smart Wireless
LED Controller

Model: TM10 / TM20 / TM30 / TM40 (-A)

Single color to RGBW Model
Remote + Smartphone
Dimming / Effects
Group / Scene

BLE Mesh   Remtoe & Phone

DC 5-24V   Group / Scene

Ultra Compact   Overheat Protection

■ Introduction

This series LED controllers are designed to drive constant voltage LED products in voltage range of DC5-24V. They can be controlled by the Umi compatible remote controllers and Smartphone app (-A version only). With advanced BLE mesh technology, controllers can work synchronously with a robust connection. With the ultra compact design, user can set up LED applications flexibly and conveniently.

■ Function & Size

① ②
14mm
38mm
50mm

1. Power supply input

The controller supply voltage range is from DC 5V to 24V. The white power cable should be connected to power positive and gray to negative (For other cable color, please refer to the labels). The LED output voltage is at same level as the power voltage, please make sure the power supply voltage is correct and the power rating is capable for the load.

2. LED output

Connect constant voltage LED loads to these cables. 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 rated current.

Please refer to following output wiring diagram for different models:

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

⊖⊕   warm cool ⊕   B R G ⊕   B R G W ⊕
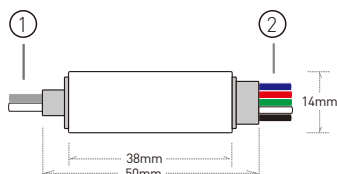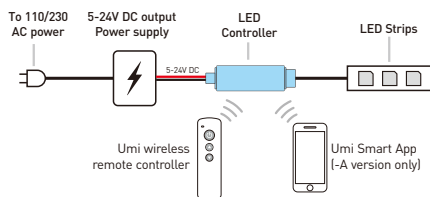
Single color   Tunable white   RGB   RGBW

Model TM40-A can be configured to different application for single color, CCT, RGB or RGBW. For different application, the 1-4 channel function is mapped as following table:

TM40 Application	CH1 (white cable)	CH2 (green cable)	CH3 (red cable)	CH4 (blue cable)
Single color	White	White	White	White
CCT	Cool white	Cool white	Warm white	Warm white
RGB	No use	Green	Red	Blue
RGBW	White	Green	Red	Blue

■ 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.

To 110/230 AC power   5-24V DC output Power supply   LED Controller   LED Strips
5-24V DC
Umi wireless remote controller   Umi Smart App (-A version only)

■ Operation

3. Pairing remote controllers

The controller can be paired with compatible Umi remote controller for 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. For detailed method, please refer to the remote controller's user's manual. Each controller can be paired up to total 5 remote controllers.

4. Control by smartphone

For -A version controller, besides Umi wireless remote controllers, it can also be controlled by Umi Smart app. User can operate the controller from remote and/or Umi Smart app. The status and group/scene features will be synchronized from remote controller and App. Please search and download 'Umi Smart' app from Apple app store or Google play market to setup. There will also be a QR code on the controller for app download link.

■ Advanced features

5. Change model function (TM40 only)

TM40-A controller's function can be changed from 1 channel (single color) to 4 channels (RGB+White) by 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.

6. Force turning on

The controller will restore to the last on/off status on each power on. To force turn on the controller at OFF status, user need to connect and disconnect the power of the controller for 3 times in a short time. After this operation, the controller will be rest to ON status.

7. Overheat Protection

The controller has overheat protection feature and it can protect the controller from damage for some abnormal usage such as overloading which generates excess heat. The controller will stop working and try to recover when temperature drops to a safe range. Please check the output current and make sure it's under the controller's rated value at this situation.

■ Specification

Model	TM10	TM20	TM30	TM40
Function	Single color	CCT	RGB	4-in-1
Working voltage	DC 5-24V			
Rated output current	6A	2x4A	3x3A	4x2A
Wireless connection	Umi protocol based on SIG BLE Mesh			
Smartphone app support	Yes, -A version only			
Communication distance	>20 meters at open area			
Output mode	PWM constant voltage			
Physical PWM level	4000 steps			
Dynamic effects	9 effects	NA	42 effects	42 effects
Overheat protection	Yes			
Dimension	50x15x7mm			

App download link: (for -A version only)

Umi智能无线
LED控制器

单色到 RGBW多机型
遥控器+智能手机
调光/动态效果
群组/场景

蓝牙自组网

遥控+手机

5-24V供电

群组/场景

小尺寸

过热保护

■ 简介

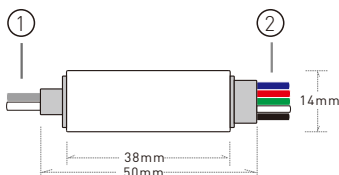　　该系列LED控制器用于驱动电压范围为 DC 5-24V 的恒压 LED 产品。用户可以通过 Umi 兼容的遥控器或智能手机App(-A版本) 进行控制。基于先进的 蓝牙自组网技术，控制器之间可以形成稳定可靠的无线连接并实现多机同步功能。

■ 功能和尺寸

① ②

14mm

38mm
50mm

1. 电源输入

　　控制器电源电压范围为DC 5V至24V。白色电源线应接电源正极，灰色接负极（其他电缆颜色请参考标签）。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。

　　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。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。下图示出各机型输出电缆的功能。

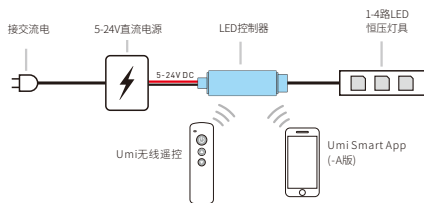　　**警告！如果控制器输出线短路将造成控制器永久损坏，请确保输出电缆连接正确且绝缘良好。**

⊖ ⊕

暖 冷 ⊕

B R G ⊕

B R G W ⊕

单色

冷暖白

RGB

RGBW

　　TM40机型可配置为单色、冷暖白、RGB和RGBW的各种应用，输出电缆在不同配置下的功能如下表所示：

TM40功能	通道1 (白色电缆)	通道2 (绿色电缆)	通道3 (红色电缆)	通道4 (蓝色电缆)
单色	白	白	白	白
冷暖白	冷白	冷白	暖白	暖白
RGB	无功能	绿	红	蓝
RGBW	白	绿	红	蓝

■ 接线方法

　　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。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。

接交流电　　5-24V直流电源　　LED控制器

1-4路LED
恒压灯具

5-24V DC

Umi无线遥控

Umi Smart App
(-A版)

■ 操作方法

3. 遥控器配对

　　控制器可与兼容的Umi遥控器配对进行操作。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。

4. 通过智能手机操控

对于-A版控制器，除了使用无线遥控器外，还可以同时通过Umi Smart App进行控制。

用户可以仅使用遥控器、仅使用app或者同时使用遥控器和app进行操作。控制器的工作状态、分组状态和场景模式在遥控器和app上可以实现同步。请扫描机身上的二维码或者在各大应用市场搜索"Umi Smart"来安装App。

■ 高级功能

5. 变更机型功能（仅适用于TM40）

对于TM40-A机型，可以通过Umi Smart app更改控制器功能，以实现从单色到RGBW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，然后点击项目图标并选择"更改功能"，并选择需要的功能。

6. 强制开启

控制器将在每次通电时会恢复到上次的开/关状态。要把通电后在'关'的状态的控制器强制开启，用户需要在短时间内连接和断开控制器电源 3 次，即可将控制器强制开启。

7. 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	TM10	TM20	TM30	TM40
功能	单色	双色	RGB	4合1
工作电压	DC 5-24V			
额定输出电流	6A	2x4A	3x3A	4x2A
无线通讯协议	Umi协议，基于SIG BLE Mesh			
手机APP	支持，仅限-A版			
工作距离	空旷地带>20米			
输出方式	PWM恒压			
PWM阶数	4000级			
动态效果	9种	NA	42种	42种
过热保护	支持			
尺寸	50x15x7mm			

请扫码下载Umi Smart APP: (仅限-A版)