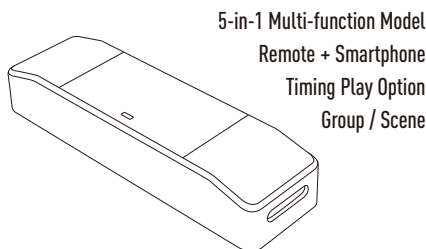


Umi Smart Wireless LED Controller

LC-RR-5IN1-BTT



BLE Mesh



Remote + Phone



Full Protection



Push Terminal



Group / Scene

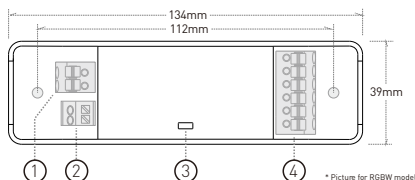


Multi-Function

Introduction

This LED controller is designed to drive constant voltage LED products in voltage range of DC 6-24V. It can be controlled by the Umi compatible remote controllers and Smartphone app (-A and T version). With advanced BLE mesh technology, controllers can work synchronously with a robust connection. Besides the onboard press key operation, it also has timing play (-T version) option features.

Function & Size



1. Power supply input

Connect to power supply. The controller can accept supply voltage from DC 6V to 24V, 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.

1

2. Press key input

Connect to a normally open type press key switch if local wired 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. Work status indicator

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

Steady green: Normal working.

Short green blink: Command received.

Green blink for 3 times: Confirmation or identification.

Single yellow flash : Edge of the content.

Red flash: Overload protection.

Yellow flash: Overheat protection.

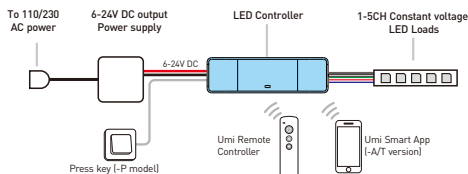
Green blink: Timing play activated.

4. LED output

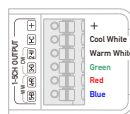
Connect to LED loads. The LED loads must be constant voltage driving type and compatible with PWM modulation. For multi-channel models, the LED connection need to be common anode. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is in range of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

Wiring

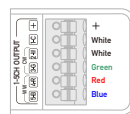
Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.



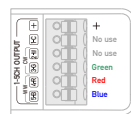
This model supports 1-5 channel application from single color to RGB+CCT, please refer to following diagram for multiple application output wiring.



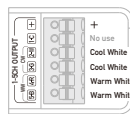
RGB+CCT



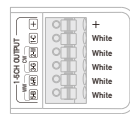
RGBW



RGB



CCT



Single Color

2

3

■ Operation

5. Pairing remote controllers

The controller can be paired with compatible Umi remote controller for remote 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 remote controller's user's manual for detailed operation.

6. Control by smartphone

For -A and -T version controller, besides Umi wireless remote controllers, user can also control it by smartphone with 'Umi Smart' app. Please scan the QR code on the controller to find the app.

User can operate the controller from remote and/or Umi Smart app. The working status and group/scene setting will be synchronized.

■ Advanced features

7. Change model function

For -A and -T version controller, the function can be changed from 1 channel [single color] to 5 channels (RGB+CCT) 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.

4

needs to be derated maximum 50% with frequency higher than 4KHz. Otherwise the controller may run into overheat protection from excess heat.

10. Force turning on

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

11. 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.

6

8. Timing play function (-T model only)

A real time clock with backup power supply is equipped with the -T version model. With this feature, user can setup timing play function with multiple repeating features of weekday or date from the Umi Smart app.

The real time clock will set the time with smart phone once connected to the 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

In some LED application, noise or flicker issue may occur at the default or low PWM frequency. The controller's PWM frequency can be changed via the Umi Smart app. 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.

To change the PWM frequency, please use the Umi Smart app and detect factory default devices in 'Discover nearby' function and then tap the item icon and select 'change setting' menu to proceed.

CAUTION: The controller's efficiency will drop versus increased frequency and the output current

5

■ Specification

Model	XE50-1	XE50-2	XE50-3	XE50-4	XE50-5
Function	Single color	CCT	RGB	RGBW	RGB+CCT
Working voltage	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.				
Wireless connection	Umi protocol based on SIG BLE mesh				
Smartphone app support	Yes, -A & T version				
Timing play function	Yes, with backup battery. -T version				
Communication distance	>20 meters at open area				
Output mode	PWM constant voltage				
PWM frequency	498Hz - 6.3KHz adjustable				
Dynamic effects	9	NA	42	42	42
Overload protection	Yes				
Overheat protection	Yes				
Working temperature (Ta)	-20°C~+55°C				
Dimension	134x39x24mm				

App download link: (for -A & T version)



5