



# Rayrun NM10 LED Controller Instruction Manual

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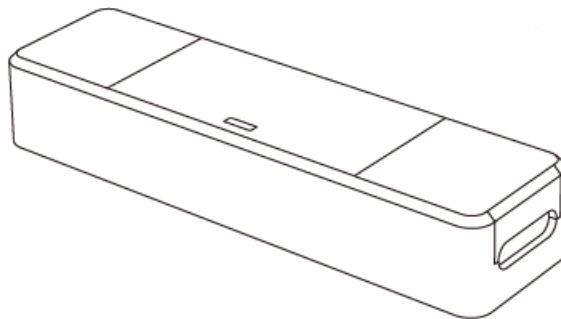
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**Rayrun NM10 LED Controller**



## features



BLE Mesh



Remote + Phone



Full Protection



Compact Size



Group / Scene



Press Key

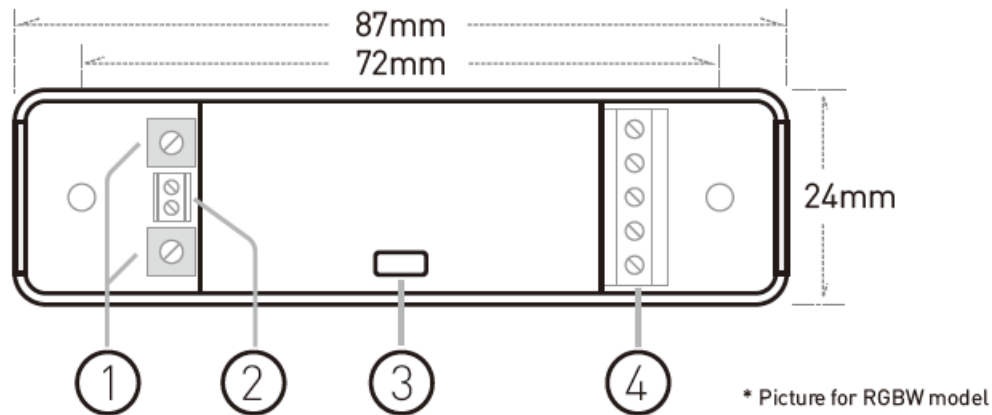
Single color to RGBW Model Remote + Smartphone Press key option Group / Scene

## Introduction

This series of LED controllers are designed to drive constant voltage LED products in the voltage range of DC5-

24V. They can be controlled by the Umi compatible remote controllers and Smartphone app (-A version). With advanced BLE mesh technology, controllers can work synchronously with a robust connection. With the on-board press key on/off and dimming control (-P version), the user can setup lighting projects with multiple operation methods.

## Function & Size



### Power supply input

Connect to power supply. The controller can accept supply voltage from DC 5V to 24V, the maximum cable 2 gauge is AWG12 or 2.5mm . 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.

### Press key input (-P model only)

Connect to a normally open type press key switch for -P version models. (\*The press-key is not included in the packing) Three operation method is available for the press key:

- **Single press:** Turn on/off.
- **Double click:** Change color or color temperature.
- **Hold press:** Dimming.

### Work status indicator

**This indicator shows the working status of the controller. It displays different events as follows:**

- **Steady green:** Normal working.
- **Short green blink:** Command received.
- **Green blink 3 times:** Confirmation or identification.
- **Single yellow flash:** Edge of the content.
- **Red flash:** Overload protection.
- **Yellow flash:** Overheat protection.

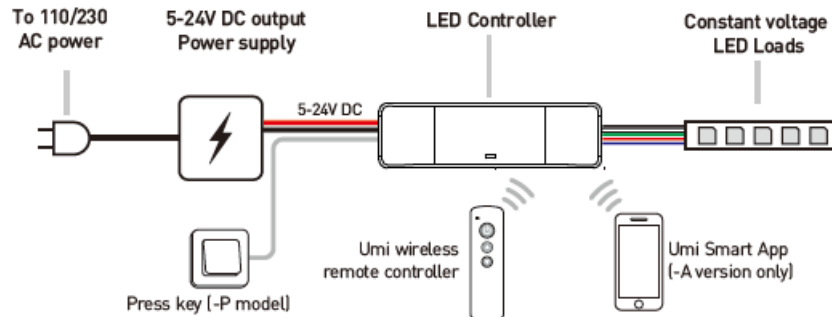
### LED output

Connect to LED loads. The LED loads must be constant voltage driving type and compatible with PWM

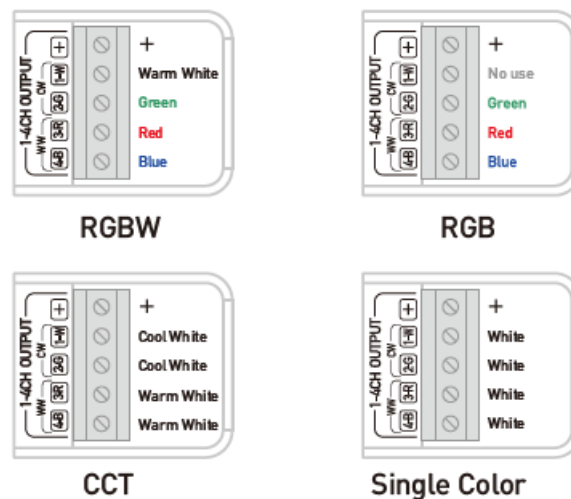
modulation. For multi-channel models, the LED connection needs to be a common anode. Please make sure the LED rated voltage is the same as the power supply and each channel's maximum load current is in range of the controller's rated current.

## 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.



**Model NM40-A** supports 1-4 channel applications from single color to RGB+CCT, please refer to the following diagram for multiple application output wiring.



## Operation

### 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.

### 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

## Change model function

For NM40-A model, the 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.

## 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.

## Protection function

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.

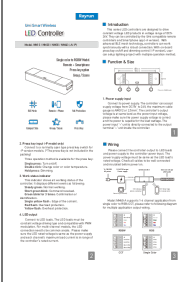
## Specification

Model	NM10	NM20	NM30	NM40
Function	Single color	CCT	RGB	4-in-1
Working voltage	DC 5-24V			
Rated output current	10A	2x5A	3x4A	4x3A
Wireless connection	Umi protocol based on SIG BLE Mesh			
Smartphone app support	Yes, -A version only			
Press key function	Yes, -P version only			
Communication distance	>20 meters at open area			
Output mode	PWM constant voltage			
Output adjust range	0-100% with gamma correction			
Physical PWM level	4000 steps			
Dynamic effect	9 effects	NA	42 effects	42 effects
Overload protection	Yes			
Overheat protection	Yes			
Working temperature (Ta)	-20°C~+55°C			
Dimension	87x24x15mm			

**App download link:** (for -A version only)



Documents / Resources

	<p><a href="#">Rayrun NM10 LED Controller</a> [pdf] Instruction Manual</p> <p>NM10, NM20, NM30, NM40, NM10 LED Controller, NM10, LED Controller, Controller</p>
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