



# Rayrun N10 Single Color LED Wireless Remote Controller User Manual

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The Rayrun logo consists of the word "Rayrun" in a white, sans-serif font, centered within a solid blue rectangular background.

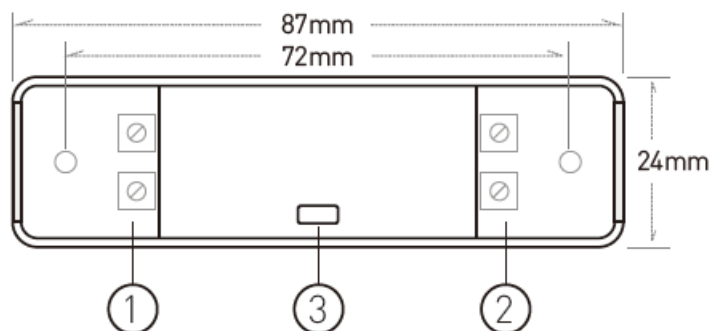
**Rayrun N10 Single Color LED Wireless Remote Controller**



## Introduction

N10 single color LED controller is designed to drive constant voltage LED products in voltage range of DC5- 24V. The main unit works with a RF remote controller, user can setup LED brightness and dynamic modes on the remote controller. The main unit is powered by DC power supply and receives remote controller commands to drive LED fixtures.

## Dimension



## Wiring & Indicator

### Power supply input

Install positive power cable into the terminal marked with '+' and negative power cable into the terminal marked with '-'. The controller can accept DC power from 5V to 24V, the output voltage is the same as the power supply, so please make sure the LED rated voltage is same as the power supply. Do not power on the controller until all connection is firmly finished.

### LED output

- Connect LED fixtures to this terminal. Install positive LED load cable into the terminal marked with '+' and negative cable into the terminal marked with '-'. Please make sure the LED rated voltage is same as the power supply and the maximum load current is lower than controller's rated current.
- The controller will run into protection if the output is overloaded or short circuited. The indicator will flash red color and stop working in this case, Please check the wiring and load current to remove the fault.

## Work status indicator

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

- **Steady green:** Normal working.
- **Single green blink:** Command received.
- **Long single green blink:** Mode or color cycle edge.
- **Long single yellow blink:** Brightness or speed limit.
- **Red flash:** Overload protection.
- **Yellow flash:** Over heat protection.
- **Green flash 3 times:** New remote controller paired

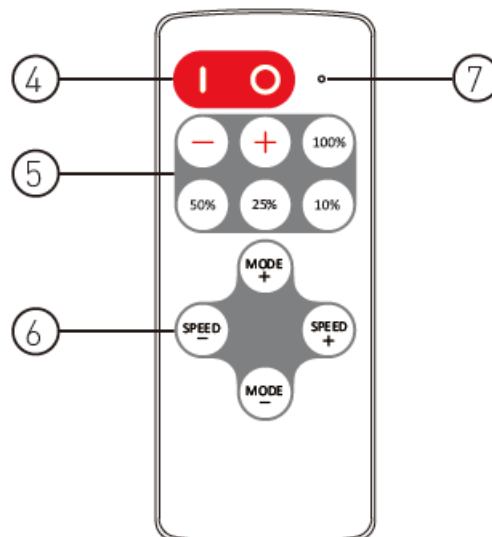
## Functions

### Turn ON / OFF





Press 'I' key to turn on unit or press 'O' key to turn off. Main unit will memorize the on/off status and will restore to the previous status on next power on. Please use remote controller to turn on the unit if it was switched to off status before previous power cut

### Brightness control

Press '+' key to increase brightness and press '-' key to decrease. There are 4 brightness shortcut key to set brightness to 100%, 50%, 25% and 10% of full brightness. The controller applies brightness gamma correction on dimming control, makes the brightness tuning more smooth to human sense. The brightness shortcut level is valued to human sense, and not proportional to the LED output power.



### Dynamic mode and speed control

These keys control the dynamic modes. Press   key to select dynamic modes and press   key to set the running speed of the dynamic modes. User could set multiple dynamic modes including SOS signal and flame effects

## Remote indicator

This indicator blinks when the remote controller works. The indicator will flash slowly if the battery is empty, please change the remote controller battery in this case. The battery model is a CR2032 lithium cell.

## Operation

### Using the remote

Please pull out the battery-insulating tape before using it.

The RF wireless remote signal can pass through some nonmetal barrier. For proper receiving the remote signal, please do not install the controller in closed metal parts.

### Pairing a new remote controller

The remote controller and main unit is 1 to 1 paired for factory default. It's possible to pair maximum 5 remote controllers to one main unit and each remote controller could be paired to any main unit.

You could pair a new remote controller to the main unit by following the steps:

1. Plug off the power of the main unit and plug in again after more than 5 seconds.
2. Press the '50%' and '10%' keys simultaneously for about 3 seconds, within the time of 10 seconds after the main unit is powered on.

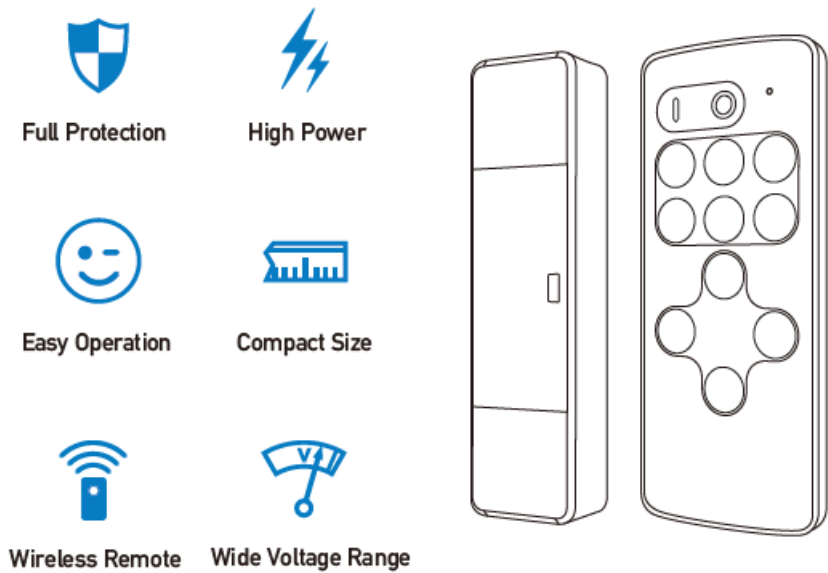
### Recognize the current remote only

In some cases, one main unit might be paired with several remote controllers but extra remote controllers are no longer needed. The user could simply pair the current using the remote to the main unit again, then the main unit will dis-pair all other remote controllers and recognize the current one only.

## Protection

- The main unit has full protection function for wrong wiring, output short circuit, overload and overheating. The controller will protect itself from damage at these extreme conditions and could automatically recover when the working condition is good.
- To avoid the protection, please ensure the LED fixtures are capable for constant voltage driving and in rated range, the cables are well connected and insulated. Also please install the controller with good ventilation and heat dissipation conditions.

FEATURE



Specification

Brightness grade	10 levels
Brightness shortcut	4 levels
Dynamic mode	8 modes
Dynamic speed grade	10 levels
PWM grade	4000 steps
Overload protection	Yes
Overheat protection	Yes
Working voltage	DC 5-24V
Remote frequency	433.92MHz
Remote control distance	>15m at open area
Rated output current	1x10A
Controller dimension	87x24x15mm

Documents / Resources

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