



GLEDOPTO

ESP32 WLED PWM LED Controller

User Instruction

GL-C-211WL

ESP32 WLED PWM LED Controller

Model No: GL-C-211WL

Input Voltage: DC 12-24V

Output Current/Channel: 10A Max

Total Output Current: 15A Max

Wireless Communication: WIFI

Size: 108x45x18mm

Operating Temperature: -20~45°C



Description of Output Terminal Wiring

Connect the ports of the ESP32 WLED PWM LED controller to the LED strip as shown in **Figure 1-1**.

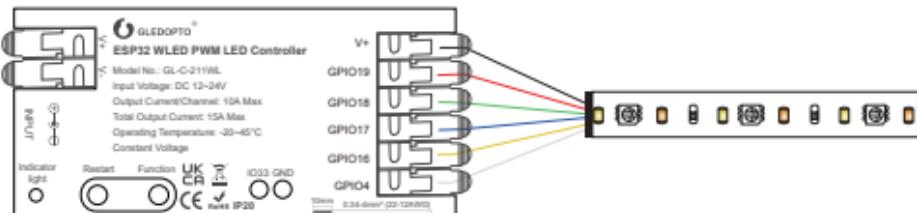


Figure 1-1

APP Download Method

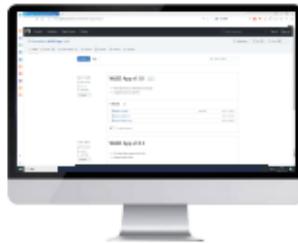


IOS

Search for and download **WLED Native** in the App Store.

Android

Search for and download **WLED Native** in the Google Play Store.



APP Configuration Steps

1. Power on the WLED controller.
2. Open the phone settings and enter WiFi settings, find "WLED-AP" and connect to it with the password "wled1234".



3. After successful connection, it will automatically jump to the WLED page (or enter the website 4.3.2.1 in the browser to enter the WLED page).

4. Click "WIFI SETTINGS", set the WiFi account and password, and click "Save & Connect" at the top of the screen to save.



5. Keep the phone and WLED controller connected to the same WIFI connection, enter the WLED APP (See figure 5-1), click the "+" in the upper right corner of the screen (See figure 5-2), and then click "DISCOVER LIGHTS..." (See figure 5-3). When the button below displays "Found WLED!", it means that the WLED controller has been found (See figure 5-4). Click the checkmark in the upper right corner to return to the main page. The found WLED controller will be displayed in the list (See figure 5-5).



Figure 5-1



Figure 5-2



Figure 5-3



Figure 5-4



Figure 5-5

LED Strip Configuration

LED Strip Configuration Diagram Enter the WLED control page, click on the top right corner "Config", select "LED Preferences", and then find "Hardware setup" to configure the LED strip information. The GPIO pin information for the LED strip is 19, 18, 17, 16, 4.



Note: Since GPIO16 is the default output port, the light connected to GPIO16 port may flash after the controller is reset.

DIY Interface Configuration Diagram

Enter the WLED control page, click "Config" in the top right corner, select "LED Preferences" then find "Button X GPIO:" to configure the DIY interface. The GPIO pin for the controller is IO33.



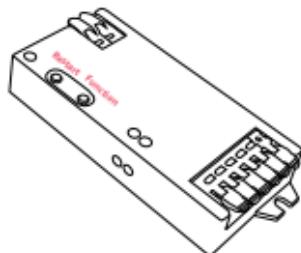
Description of Button Functions

Restart:

Pressing the button will put the controller module in a powered-off state, making the WLED controller unusable. Releasing the button will power the module back on, then you can use WLED controller normally. This button is useful for powering the controller on and off when it's inconvenient.

Function:

1. Short press: Power on/off.
2. Long press for 1 second: Switch colors.
3. Long press for 10 seconds: Reset the WLED controller and activate the WLED-AP hotspot.



Reset to Factory Settings

1. Button Reset

Long press for 10 seconds.

2. APP Reset

Go to the WLED control page and click on the top right corner "Config". Click on "Security & Updates" at the bottom, and then scroll down to find "Factory reset" and check the box. Click "Save" to reset the controller.



Troubleshooting and Solution

Number	Symptoms	Solution
1	Indicator light is not on	Check whether the input power connection is correct
2	APP shows "offline"	<ol style="list-style-type: none">1. Check if the phone is on the same network as the controller.2. Check if the controller is out of the range of the WIFI connection, causing unstable connection.3. Turn off and on the controller to retry.
3	APP is connected, but the light strip is not controllable	<ol style="list-style-type: none">1. Check if the power supply is working properly.2. Check if the power supply voltage matches the light strip.3. Check if the input power connection is correct.4. Check if the light strip connection is correct.5. Check if the GPIO settings in the APP are correct.6. Check if the light strip LED output model in the APP is set correctly.
4	The brightness of the light strip is low, and the front and back colors are significantly different	<ol style="list-style-type: none">1. Check if the power supply is working properly.2. Check if the power supply matches the light strip.3. Check if all connections are good, and use conductive and short wires as much as possible for connection.4. Add power supply at an appropriate position.5. Check if the APP has set a limit on brightness or current.



Attention

1. Before turning on the power, please ensure that all connections are correct and secure, and do not operate while the power is on.
2. The product should be used under the rated voltage. Using it under excessive or insufficient voltage may cause damage.
3. Do not disassemble the product, as it may cause fire and electric shock.
4. Do not use the product in environments exposed to direct sunlight, moisture, high temperatures, etc.
5. Do not use the product in metal shielded areas or around strong magnetic fields, as this may severely affect the wireless signal transmission of the product.

Disclaimers

1. Our company will update the content of this manual based on the improvement of product functionality. The updates will be displayed in the latest version of this manual, without further notice.
2. Due to our continuous adoption of new technologies, product specifications may change without further notice.
3. This manual is provided for reference and guidance only and does not guarantee complete consistency with the actual product. The actual application should be based on the actual product.
4. The components and accessories described in this manual do not represent the standard configuration of the product. The specific configuration is subject to the packaging.
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