GLEDOPTO GL-C-008P(MIX)

GLEDOPTO ZigBee 3.0 RGBCCT LED Strip Controller Pro (Model GL-C-008P(MIX)) User Manual

Your guide to installation, operation, and maintenance.

1. INTRODUCTION

This manual provides detailed instructions for the GLEDOPTO ZigBee 3.0 RGBCCT LED Strip Controller Pro, Model GL-C-008P(MIX). This device allows for smart control of RGB, warm white, and cold white LED strips, offering extensive color and brightness adjustments through a compatible ZigBee hub.

Important Note: Tuya Zigbee hubs currently block third-party devices. GLEDOPTO ZigBee products are not compatible with Tuya hubs at this time. Please consider this before purchase if you intend to use a Tuya hub.

2. PRODUCT FEATURES

- **ZigBee 3.0 Protocol:** Utilizes advanced ZigBee 3.0 for fast, stable, and energy-efficient wireless communication.
- **RGBCCT Mixing:** Combines RGB color and tunable white light (2700K-6500K) for a wide range of lighting possibilities.
- **Wide Compatibility:** Works with Hub Bridge, Homey, Alexa, SmartThings, and other standard ZigBee hubs.
- **Voice & App Control:** Supports voice commands (e.g., Amazon Alexa) and smartphone app control for convenient adjustments.
- **Durable Design:** Constructed from flame-retardant PC material.
- **Broad Voltage Support:** Compatible with 12V, 24V, 36V, 48V, and 54V analog LED strips.

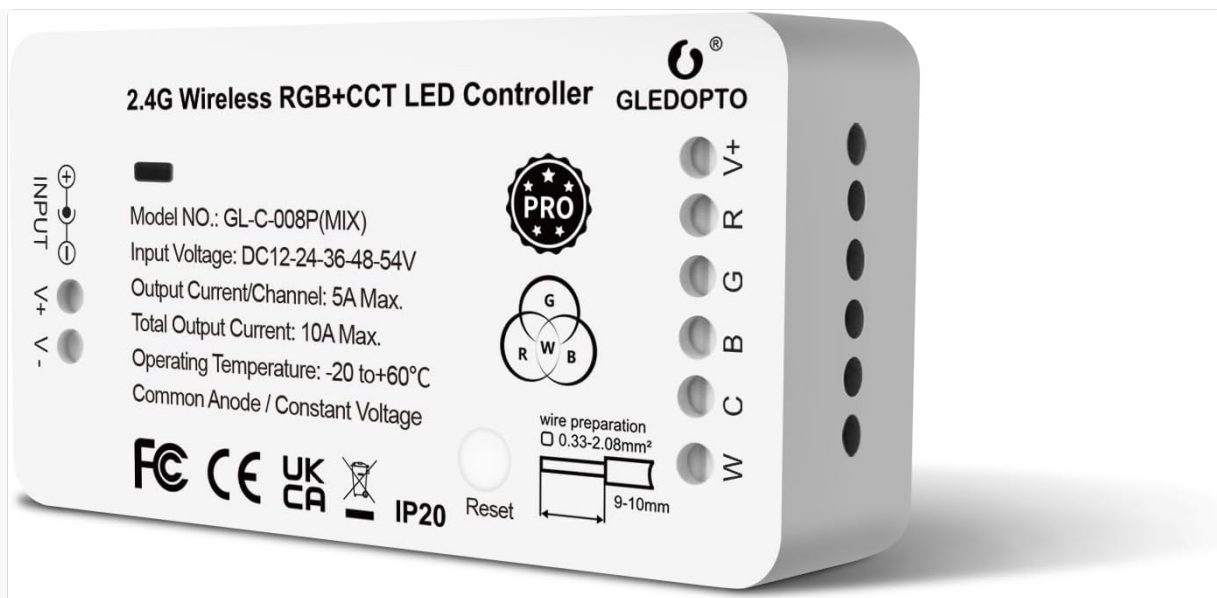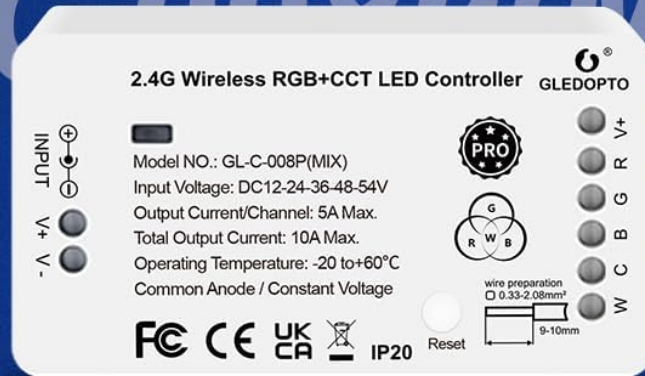## 3. PRODUCT OVERVIEW AND SPECIFICATIONS

Image 3.1: Front view of the GLEDOPTO ZigBee 3.0 RGBCCT LED Strip Controller Pro. This image displays the input and output terminals, model number (GL-C-008P(MIX)), input voltage range (DC12-24-36-48-54V), output current per channel (5A Max), total output current (10A Max), operating temperature (-20 to +60°C), and common anode/constant voltage type. It also shows the wire preparation guide and reset button location.

3.1. Technical Specifications

Product Parameters

GL-C-008P(MIX)

2.4G Wireless RGB+CCT LED Controller GLEDOPTO

Model NO.: GL-C-008P(MIX)
Input Voltage: DC12-24-36-48-54V
Output Current/Channel: 5A Max.
Total Output Current: 10A Max.
Operating Temperature: -20 to+60℃
Common Anode / Constant Voltage

INPUT V+ V-

V+ R G B C W

wire preparation
0.33-2.08mm²
9-10mm

Reset

FC CE UKCA IP20

Product Name: Zigbee 3.0 RGB+CCT LED Controller Pro (MIX)

Model NO.:
GL−C−008P(MIX)

Output Current:
5 A Max

Input Voltage:
DC12−24−36−48−54V

Total Output Current:
10A Max

Size:
89x23.5x48mm

Protection Rate:
IP20

N.W.:
54.8g

G.W.:
67.2g

Operating Temperature:
−20℃~60℃

Image 3.2: Detailed product parameters for the GLEDOPTO ZigBee 3.0 RGBCCT LED Controller Pro. This image lists the product name, model number (GL-C-008P(MIX)), input voltage (DC12-24-36-48-54V), size (89x23.5x48mm), net weight (54.8g), operating temperature (-20°C to 60°C), output current (5A Max), total output current (10A Max), protection rate (IP20), and gross weight (67.2g).

Table 3.1: GLEDOPTO GL-C-008P(MIX) Specifications

Parameter	Value
Model Number	GL-C-008P(MIX)
Input Voltage	DC 12V-24V-36V-48V-54V
Output Current/Channel	5A Max
Total Output Current	10A Max
Operating Temperature	-20°C to +60°C
Protection Rate	IP20
Dimensions	89mm x 23.5mm x 48mm

Parameter	Value
Connection Type	Common Anode / Constant Voltage
Wireless Protocol	ZigBee 3.0

4. SETUP AND INSTALLATION

4.1. Wiring the LED Strip Controller

Ensure all power is disconnected before proceeding with wiring. The controller uses a press-type design for secure wire connections.

Image 4.1: Illustration of the press-type wiring design. To connect wires, press down on the orange tab with a small screwdriver or similar tool, insert the stripped wire (9-10mm length, 0.33-2.08mm² cross-section), and release the tab to secure the connection.

1. **Prepare Wires:** Strip approximately 9-10mm of insulation from the ends of your LED strip wires and power supply wires. The recommended wire cross-section is 0.33-2.08mm².

2. **Connect LED Strip:** Connect the R, G, B, C, W, and V+ wires from your RGBCCT LED strip to the corresponding output terminals on the controller. Ensure correct polarity for V+.

3. **Connect Power Supply:** Connect the positive (V+) and negative (V-) wires from your DC power supply to the INPUT terminals on the controller. Observe correct polarity.

4.2. Power Supply Selection

The controller supports a wide range of input voltages. Select an appropriate power supply that matches the voltage requirements of your LED strip.

Image 4.2: Voltage compatibility chart for the GLEDOPTO LED controller. It shows that for 12V and 24V LED strips, the total maximum current is 10A. For 36V, it's 7.5A; for 48V, 5.6A; and for 54V, 5A. Always match the power supply voltage to the LED strip voltage.

- For a 12V LED strip, use a 12V power supply.
- For a 24V LED strip, use a 24V power supply.
- Ensure the power supply's total current output meets or exceeds the total current draw of your LED strip, considering the controller's 10A maximum total output.

4.3. Pairing with a ZigBee Hub

After wiring and powering on the controller, it needs to be paired with a compatible ZigBee hub.

1. **Power On:** Connect the power supply to the controller and LED strip. The LED strip should briefly

light up.

2. **Initiate Pairing on Hub:** Open your ZigBee hub's application (e.g., SmartThings, Homey, Philips Hue) and initiate the device discovery or pairing mode.

3. **Reset Controller (if needed):** If the controller does not automatically appear, press and hold the "Reset" button on the controller for approximately 5 seconds until the connected LED strip flashes, indicating it has entered pairing mode.

4. **Confirm Pairing:** Once discovered by your hub, follow the on-screen instructions in the hub's app to complete the pairing process.

5. OPERATING INSTRUCTIONS

5.1. App Control (Color and White Light Mixing)

Once paired with your ZigBee hub, you can control the LED strip using the hub's smartphone application.

Image 5.1: Demonstration of RGB+White Light Mix control via a smartphone app. When the color selector is moved towards the edge of the color wheel, only the RGB light turns on. When moved towards the center, both RGB and white light turn on together, allowing for richer, mixed colors.

- **Color Selection:** Use the color wheel in your app to select from millions of colors.
- **White Light Adjustment:** Adjust the color temperature of the white light from warm white (2700K) to cold white (6500K).

- **Brightness Control:** Dim or brighten the LED strip to your desired level.
- **RGB + CCT Mixing:** The controller allows for seamless mixing of RGB colors with tunable white light. Moving the color selector towards the center of the color wheel typically activates both RGB and white LEDs for a broader spectrum of hues and improved color rendering.
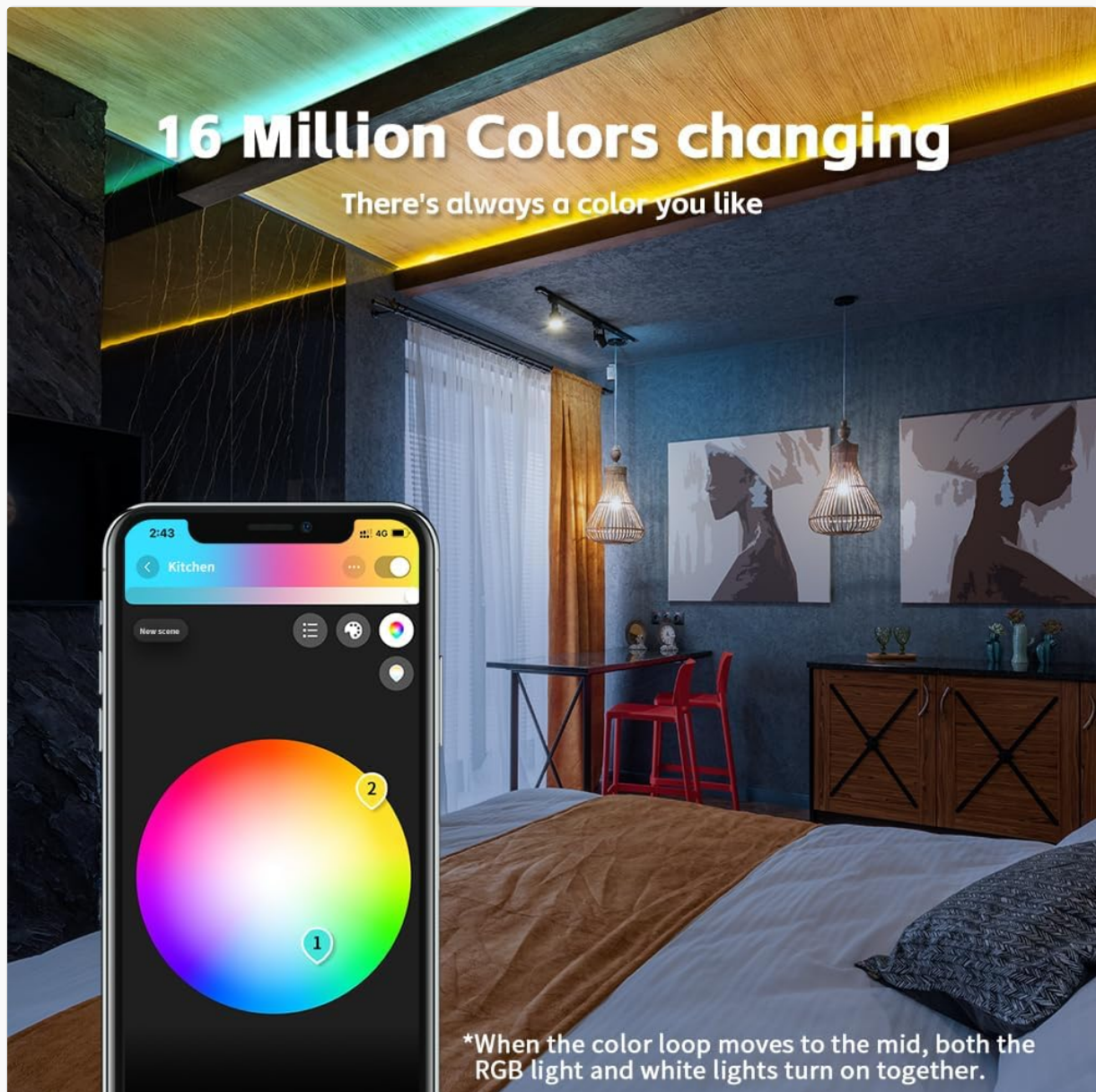

Image 5.2: An example of a room illuminated with 16 million colors controlled by the smartphone app. The image highlights the extensive color customization available, allowing users to create various ambiances.

5.2. Voice Control (e.g., Amazon Alexa)

If your ZigBee hub is integrated with a voice assistant like Amazon Alexa, you can control your LED strip using voice commands.

Press type design

More convenient to use.

Image 5.3: Illustration of voice control functionality with Amazon Echo Plus. Examples of commands include "Alexa, turn on the bedroom light," "Alexa, set to warm white," and "Alexa, increase to 70%."

- Ensure your ZigBee hub is linked to your Amazon Alexa account.
- Use commands such as:
    - "Alexa, turn on [Light Name]."
    - "Alexa, turn off [Light Name]."
    - "Alexa, set [Light Name] to [Color]."
    - "Alexa, set [Light Name] to warm white."
    - "Alexa, dim [Light Name] to 50%."
    - "Alexa, brighten [Light Name]."

6. COMPATIBILITY

The GLEDOPTO ZigBee 3.0 RGBCCT LED Strip Controller Pro is designed for broad compatibility with various ZigBee 3.0 gateways.

Image 6.1: Compatibility chart for ZigBee 3.0 gateways. It indicates compatibility with Homey, Conbee, SmartThings, Philips Hue, and Amazon Echo Plus for RGB, CCT, Brightness, and Mix functionalities. Note the specific warning regarding Tuya hubs.

Compatible Gateways:

- Homey
- Conbee
- SmartThings
- Philips Hue
- Amazon Echo Plus / Studio
- Other standard ZigBee 3.0 hubs

Important Compatibility Alert: As of the latest information, Tuya Zigbee hubs have implemented restrictions that prevent third-party devices, including GLEDOPTO products, from connecting. If you use a Tuya hub, this controller will not be compatible.

7. MAINTENANCE

The GLEDOPTO LED Strip Controller Pro requires minimal maintenance.

- **Cleaning:** Gently wipe the controller with a dry, soft cloth. Do not use liquid cleaners or solvents.
- **Environment:** Ensure the controller is installed in a dry environment, away from direct sunlight, extreme temperatures, and high humidity. The IP20 rating indicates it is not protected against water.
- **Firmware Updates:** Periodically check your ZigBee hub's application for any available firmware updates for connected devices, including the GLEDOPTO controller.

8. TROUBLESHOOTING

Table 8.1: Common Troubleshooting Steps

Problem	Possible Cause / Solution
LED strip does not light up.	- Check power supply connection and ensure it is providing the correct voltage. - Verify LED strip wiring to the controller (V+, R, G, B, C, W). - Ensure the LED strip itself is functional.
Controller cannot be paired with ZigBee hub.	- Confirm the hub is in pairing/discovery mode. - Press and hold the "Reset" button on the controller for 5 seconds to force pairing mode. - Ensure the hub is ZigBee 3.0 compatible. **Check for Tuya Hub:** If using a Tuya hub, the controller is not compatible.
Colors are incorrect or white light is not working.	- Verify that the R, G, B, C, W wires from the LED strip are connected to the correct terminals on the controller. - Ensure your LED strip is an RGBCCT type. - Check settings in your ZigBee app to ensure correct color and white channel control.
Voice control not responding.	- Confirm your ZigBee hub is properly linked to your voice assistant (e.g., Amazon Alexa). - Ensure the light is named correctly in the voice assistant app. - Check network connectivity for both the hub and voice assistant device.

9. SAFETY INFORMATION

- Always disconnect power before installation or maintenance.
- This device is for indoor use only (IP20 rating). Do not expose to water or high humidity.
- Ensure the power supply voltage matches the LED strip voltage and is within the controller's specified input range.
- Do not exceed the maximum total output current of 10A.

- Keep out of reach of children.
- Do not attempt to disassemble or modify the controller. This will void any warranty.
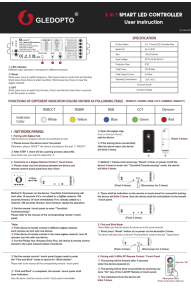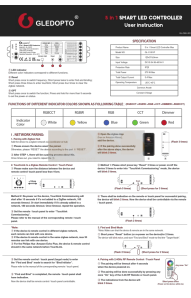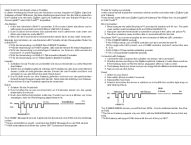
10. WARRANTY AND SUPPORT

GLEDOPTO products typically come with a standard manufacturer's warranty. Please refer to the product packaging or the official GLEDOPTO website for specific warranty terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact GLEDOPTO customer service through their official channels or the retailer from whom you purchased the product.

Online Resources: For additional information, FAQs, and community support, visit the official GLEDOPTO website or relevant smart home forums.

Related Documents - GL-C-008P(MIX)

	[Gledopto 5-in-1 Smart LED Controller User Manual](#) User instructions for the Gledopto 5-in-1 Smart LED Controller (Model: GL-C-001P), covering network pairing, reset procedures, factory reset, wiring diagrams for RGBCCT, RGBW, RGB, CCT, and Dimmer functions, power-on status settings, frequency settings, and saturation control via 2.4GHz RF remote.
	[Gledopto 5 in 1 Smart LED Controller User Instruction Manual](#) Comprehensive user instruction manual for the Gledopto 5 in 1 Smart LED Controller (Model GL-C-001P). This guide details specifications, pairing procedures (Zigbee, RF), wiring diagrams for various LED types (RGBCCT, RGBW, RGB, CCT, Dimmer), reset functions, and power-on status/frequency settings.
	[Gledopto Smart Lighting Products Catalog - Zigbee, WiFi, RF LED Controllers, Bulbs, and Fixtures](#) Explore the comprehensive range of Gledopto smart lighting solutions, including Zigbee 3.0, WiFi, and RF LED controllers, dimmers, RGB+CCT strips, downlights, bulbs, and floodlights. Enhance your home with intelligent, energy-efficient lighting.
	[Gledopto GL-CP-1-002K Three-Button Zigbee RGBCCT LED Controller Manual](#) Instruction manual for the Gledopto GL-CP-1-002K three-button Zigbee RGBCCT LED controller, covering features, installation, operation, and compatibility with smart home systems like Philips Hue.
	[ZigBee Light Link Gateway Controller: Connection and Pairing Guide](#) Instruction manual detailing the connection and pairing of ZigBee Light Link controllers with smart home gateways. Covers wiring, setup, and reset procedures for various LED types.

[Gledopto Zigbee Controller Pro User Manual and Compatibility Guide](#)
User instructions for the Gledopto Zigbee Controller Pro, including wiring diagrams, gateway compatibility, and remote control pairing. Learn how to connect and operate your Gledopto Zigbee devices with various smart home systems.