GLEDOPTO GL-SPI-206P

GLEDOPTO Tuya SPI Pixel Controller GL-SPI-206P User Manual

Model: GL-SPI-206P

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GLEDOPTO Tuya SPI Pixel Controller, Model GL-SPI-206P. This device is designed to control various types of addressable LED strips, including RGBCCT, RGBW, and RGB, offering dynamic lighting effects and smart home integration via ZigBee protocol.

2. PRODUCT OVERVIEW

The GLEDOPTO GL-SPI-206P is a versatile SPI Pixel LED Controller that integrates with the Tuya/Smart Life ecosystem. It supports a wide range of digital LED strip types and offers advanced features such as dynamic lighting modes, music synchronization, segment control, and voice control compatibility with platforms like Google Assistant, Amazon Alexa, and Yandex Alice.

Image 2.1: GLEDOPTO Tuya SPI Pixel Controller GL-SPI-206P. This image displays the front view of the controller with its input and output terminals, QR code for app download, and regulatory markings. A smartphone screen showing the control app interface is also visible.

Image 2.2: Key features of the GLEDOPTO ZigBee Tuya SPI Pixel Controller. This image highlights features such as Music Sync, Multiple Color Scenes, Segmental Control, and compatibility with various IC chipsets, Amazon Alexa, Smart Life, and Home Assistant.

3. SPECIFICATIONS

Feature	Detail
Product Name	Tuya SPI Pixel LED Controller
Model Number	GL-SPI-206P
Input Voltage	DC 5-24V
Max IC Quantity	1000
Total Output Current	15A Max

Feature	Detail
Dimensions	108 x 45 x 18 mm
Operating Temperature	-20 to 45 °C
Protocol	ZigBee + 2.4G RF
Supported LED Strips	WS2811, TM1814B (RGBW), TM1934A, SK6812 (RGBW), SK9822, UCS2904B (RGBW), UCS8904B (RGBW), WS2801, LPD6803, LPD8803, WS2805 (RGBCCT), etc.
Material	Polycarbonate

4. SETUP

4.1. Wiring Diagram

Proper wiring is crucial for the correct functioning of the controller and LED strips. Ensure all connections are secure and match the polarity and data lines of your specific LED strip type.
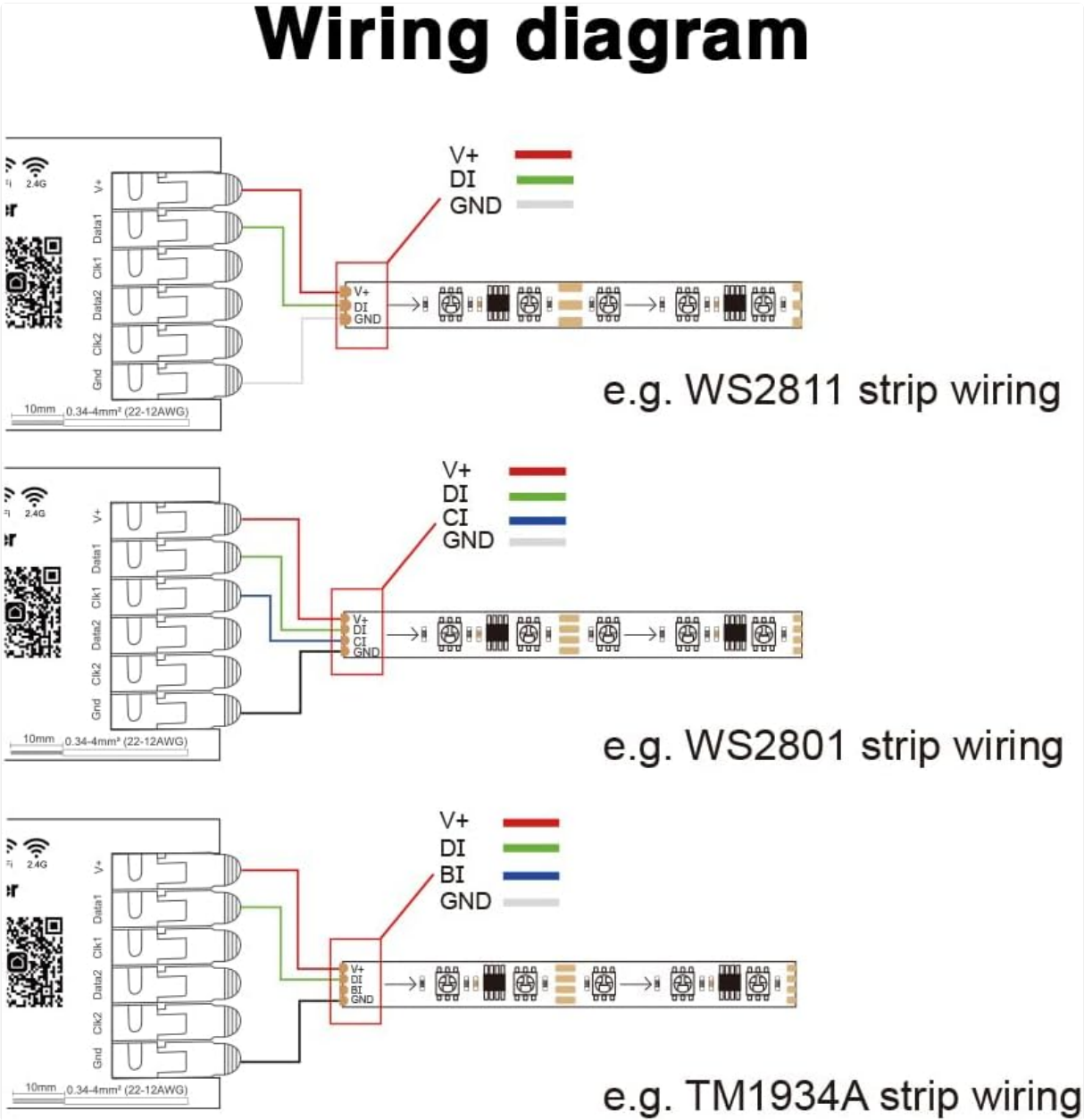

Wiring diagram

e.g. WS2811 strip wiring

e.g. WS2801 strip wiring

e.g. TM1934A strip wiring

- **V+:** Connect to the positive (+) terminal of your DC power supply.
- **V-:** Connect to the negative (-) terminal of your DC power supply.
- **Data1/DI:** Connect to the Data Input line of your LED strip.
- **Clk1/CI:** Connect to the Clock Input line of your LED strip (for strips requiring a clock signal).
- **Gnd:** Connect to the Ground line of your LED strip and the negative (-) terminal of your DC power supply.
- Ensure the input voltage (5-24V DC) matches the requirements of your LED strip and power supply.

4.2. App Installation

To control the GLEDOPTO SPI Pixel Controller, download the Tuya Smart or Smart Life application on your smartphone or tablet.

- Scan the QR code on the controller or visit smartapp.smart321.com/smartlife to download the app.
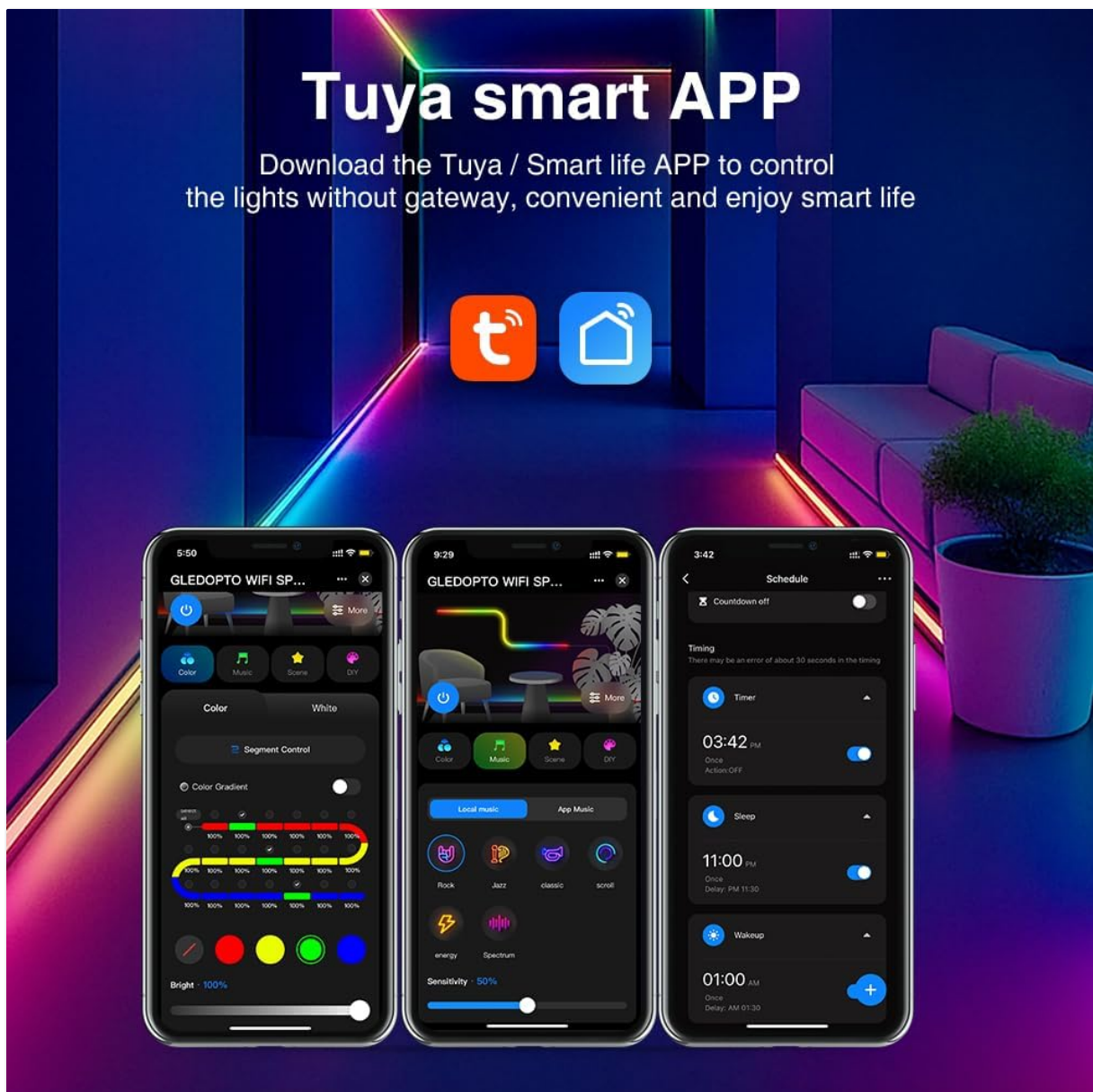- Install the application and register an account if you don't already have one.

Image 4.2: Tuya Smart APP interface. This image shows various control screens within the Tuya/Smart Life app, including color selection, scene modes, and scheduling options.

4.3. Device Pairing

Follow these steps to pair your controller with the Tuya/Smart Life app:

1. Ensure your smartphone is connected to a 2.4GHz Wi-Fi network.
2. Open the Tuya Smart or Smart Life app.
3. Add a new device by tapping the "+" icon in the top right corner.
4. Select "Lighting" or "LED Controller" from the device list.
5. Power on the GLEDOPTO controller. If it does not automatically enter pairing mode (indicated by a blinking light), press and hold the "Push" button on the controller for approximately 5-10 seconds until the indicator light blinks rapidly.
6. Follow the on-screen instructions in the app to complete the pairing process.

5. OPERATING INSTRUCTIONS

5.1. Dynamic Effects and Customization

The controller offers over 40 built-in dynamic modes. You can also create and customize your own lighting effects through the app.

Image 5.1: App interface for DIY dynamic effects. This image shows options for selecting various dynamic effects like Gradient, Jump, Breathe, Flickering, and customizing their speed and colors.

- Navigate to the "DIY" or "Scene" section within the app.
- Choose from predefined effects or select "Add DIY" to create a new one.
- Adjust parameters such as color, speed, and effect type to achieve your desired lighting.

5.2. Segment Control

Divide your LED strip into up to 20 segments for individual dimming and color adjustments, allowing for intricate lighting designs.
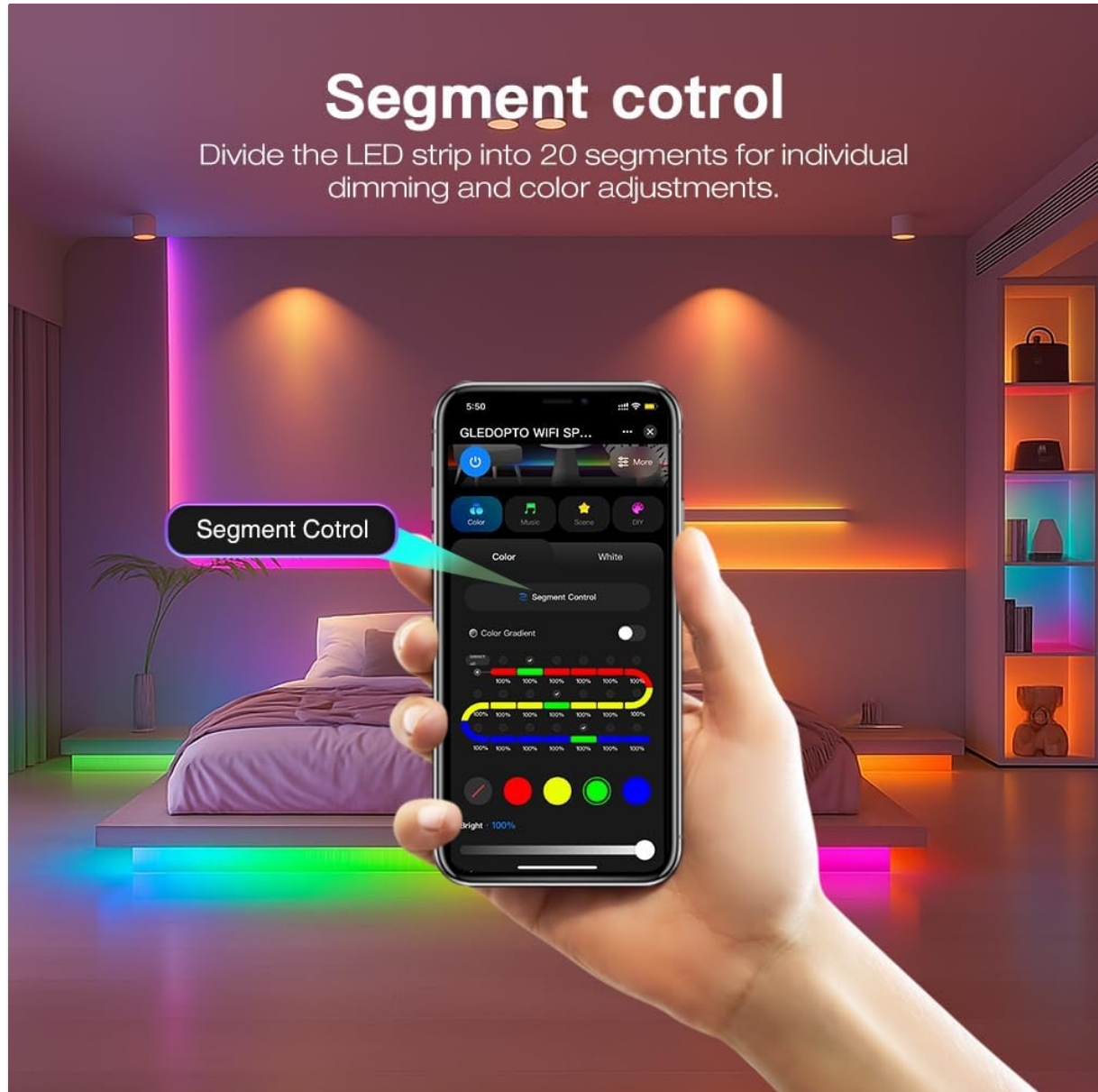

Image 5.2: App interface demonstrating segment control. The image shows a slider for "Segment Control" and individual color/brightness controls for different sections of an LED strip.

- Access the "Segment Control" feature in the app.
- Define the number of segments and their respective lengths.
- Independently adjust the color and brightness for each segment.

5.3. Group Control

Control multiple GLEDOPTO devices simultaneously by creating groups within the Tuya/Smart Life app.

Image 5.3: Diagram illustrating group control. This image shows a house layout with multiple GLEDOPTO devices (represented by Wi-Fi symbols) being controlled from a single smartphone app.

- In the app, go to the device settings and select "Create Group".
- Add other compatible GLEDOPTO devices to the group.
- Control all devices in the group with a single command.

5.4. Music Synchronization

The controller can synchronize lighting effects with music, either by capturing sound through its built-in microphone or your phone's microphone.
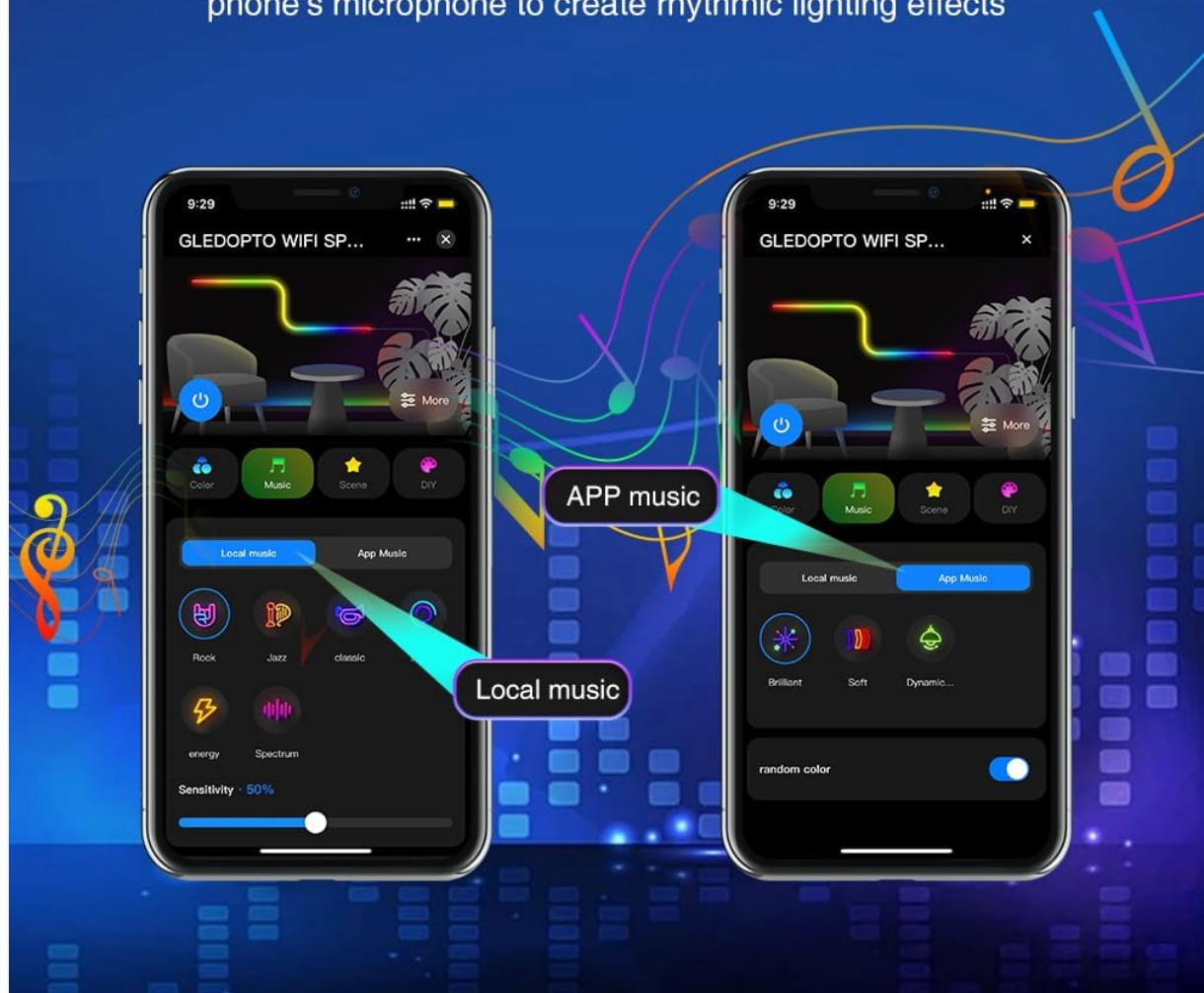
Image 5.4: App interface for music synchronization. This image shows options for "Local music" and "APP music" to create rhythmic lighting effects based on audio input.

- Access the "Music" section in the app.
- Choose between "Local music" (using your phone's microphone) or "APP music" (using the controller's built-in microphone).
- The lights will react to the rhythm and beat of the music.

5.5. Power-off Memory Function

The controller features a power-off memory function with two optional modes:
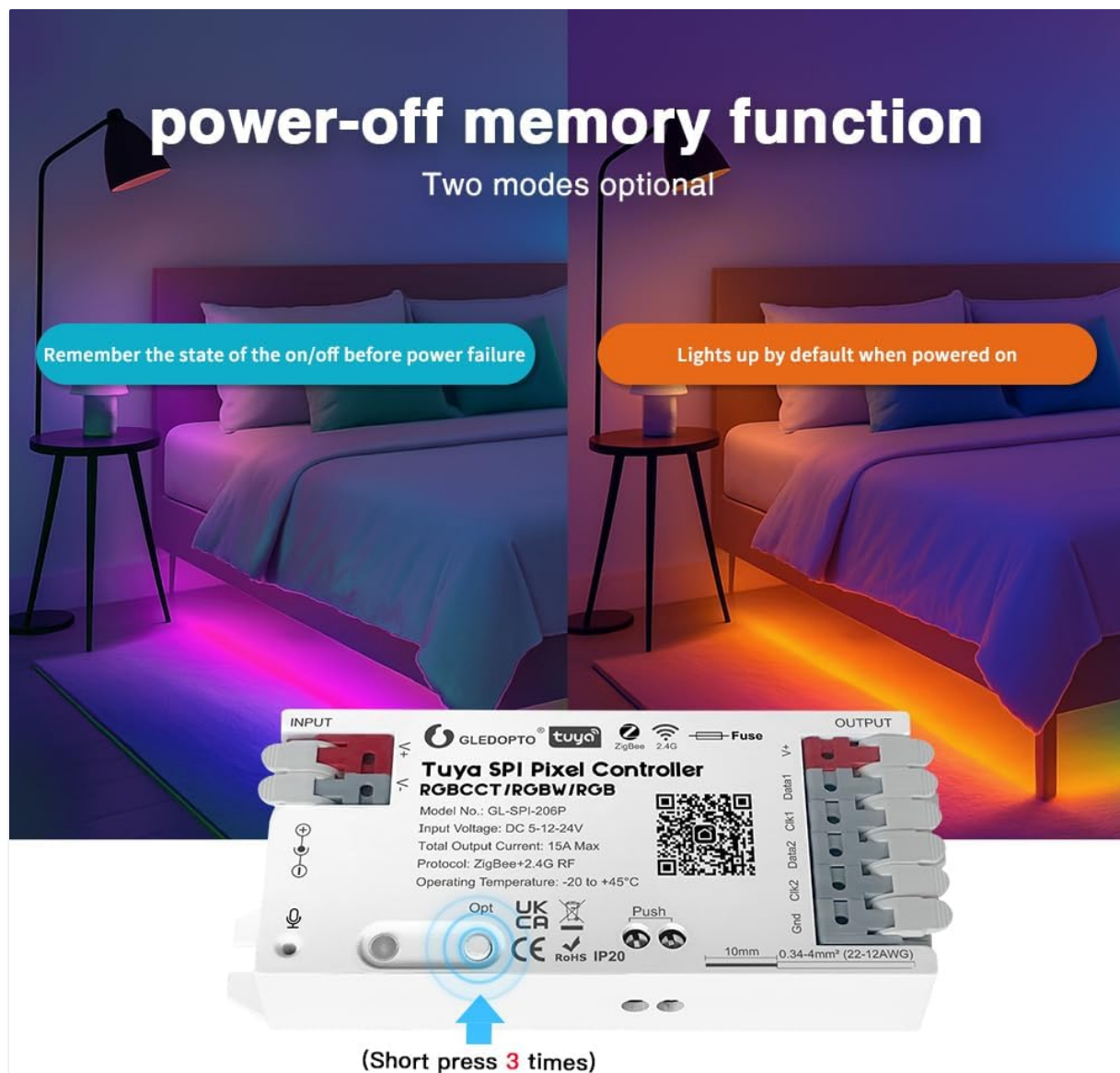
Image 5.5: Illustration of power-off memory modes. One mode remembers the last state before power failure, while the other lights up by default when powered on. The "Push" button on the controller is highlighted for mode selection.

- **Remember Last State:** The controller will resume its last settings (on/off, color, mode) after a power interruption.
- **Default On:** The controller will turn on with a default setting when power is restored.
- To switch between these modes, short press the "Push" button on the controller three times.

5.6. Voice Control

Integrate your GLEDOPTO controller with popular voice assistants for hands-free control.

- Ensure your controller is paired with the Tuya/Smart Life app and linked to your Google Assistant, Amazon Alexa, or Yandex Alice account.
- Use voice commands such as:

  - "Alexa, turn on [Device Name]."
  - "Hey Google, set [Device Name] to blue."
  - "Yandex, dim [Device Name] to 50%."

6. MAINTENANCE

- Keep the controller in a dry environment, away from direct sunlight and extreme temperatures.

- Clean the device with a soft, dry cloth. Do not use liquid cleaners or solvents.
- Ensure proper ventilation around the controller to prevent overheating.

7. TROUBLESHOOTING

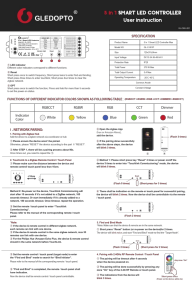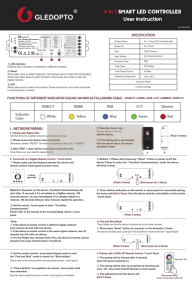| Problem	Possible Cause	Solution
LED strip does not light up.	No power, incorrect wiring, faulty LED strip.	- Check power supply connection and ensure it's providing the correct voltage. - Verify all wiring connections (V+, Data, Clock, Gnd) are correct and secure. - Test the LED strip with another controller or power source if possible.
Controller cannot be paired with the app.	Incorrect pairing mode, Wi-Fi issues, app version.	- Ensure the controller is in pairing mode (indicator light blinking rapidly). - Confirm your phone is connected to a 2.4GHz Wi-Fi network. - Restart the app and try pairing again. - Ensure your app is updated to the latest version.
Colors are incorrect or inconsistent.	Incorrect LED strip type selected in app, faulty strip.	- In the app settings for the device, verify that the correct LED strip type (e.g., WS2811, SK6812 RGBW) is selected. - Check for physical damage on the LED strip.
Voice control not working.	Not linked to voice assistant, incorrect device name.	- Ensure the Tuya/Smart Life app is correctly linked to your Google Assistant, Alexa, or Yandex Alice account. - Verify the device name used in voice commands matches the name in the app.

8. WARRANTY AND SUPPORT

Warranty information for the GLEDOPTO Tuya SPI Pixel Controller GL-SPI-206P is not explicitly provided in the product details. For specific warranty terms or technical support, please contact your retailer or the manufacturer directly.

For further assistance, please refer to the GLEDOPTO official website or contact their customer service.

Related Documents - GL-SPI-206P

[GLEDOPTO GL-SPI-206W Tuya SPI Pixel Controller User Instructions](#)
Comprehensive user instructions for the GLEDOPTO GL-SPI-206W Tuya SPI Pixel Controller, detailing product parameters, button functions, wiring, WiFi/Bluetooth setup via Smart Life app, app features like chip quantity, color order, DIY effects, music sync, scenes, scheduling, and RF remote control pairing/unpairing. Includes supported chip models and important attention/disclaimer notes.

	[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.
	[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 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 GL-C-301P ZigBee 5-in-1 LED Smart Controller Pro+ User Manual](#)
	Comprehensive user instructions for the Gledopto GL-C-301P ZigBee 5-in-1 LED Smart Controller Pro+. Learn about product parameters, button functions, wiring diagrams, gateway connection, remote control compatibility, and reset methods.