

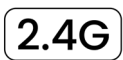
# Datasheet & User Manual

## Model: D5-PFW

DC Constant Voltage LED Dimmer for LED strip

Push / 2.4G RF / Wi-Fi 3-in-1 Control

Suitable for surface mounting & flush-mount boxes ( $\varnothing \geq 55\text{mm}$ )





## Table of Contents

<b>1. Technical Specifications</b>	<b>03</b>
1.1 Operating Condition & Protection	03
1.2 Safety & EMC Standards	03
1.3 Connection Data	03
<b>2. Installation &amp; Wiring</b>	<b>04</b>
2.1 Dimensions	04
2.2 Installation	04
2.3 Wiring Diagram	05
<b>3. Operation &amp; Setup</b>	<b>10</b>
3.1 System Diagram	10
3.2 Hardware Overview	10
3.3 On/Off Fade Time & Factory Reset	11
3.4 Light Type Setting	12
3.5 RF Remote Control	13
3.6 Push Dimming Control	15
<b>4. Network Configuration</b>	<b>17</b>
4.1 Smart Control Features Overview	17
4.2 Setup Preparation	17
4.3 Option A: Wi-Fi Setup	19
4.4 Option B: Bluetooth Setup (Local)	22
<b>5. Smart App Operation</b>	<b>23</b>
5.1 RGBCW/RGBW/RGB/CCT/DIM	23
5.2 Music Sync	38
5.3 Voice Control	40
5.4 Device Sharing	41
5.5 Home Management	42
<b>6. Legal &amp; Support</b>	<b>45</b>
6.1 Important Notice	45
6.2 Disclaimer of Liability	45
6.3 Manufacturer Information	45

## 1. Technical Specifications

Input voltage	12...24 Vdc	
Output voltage	5 x 12...24 Vdc	
Output current	5 x 2 A max.	
Output power	5 x 24 W max.	12 Vdc
	5 x 48 W max.	24 Vdc
Input signal	WiFi, RF 2.4 GHz, PUSH	
Output signal	PWM	
PWM frequency	8 kHz	
Control distance	30 m (barrier-free)	
Dimming range	0...100 %	
Dimming level	4096	
Dimming curve	Logarithmic	

### 1.1 Operating condition & Protection

Operating temperature range (ta)	-20...+55 °C
Max. surface temperature (tc)	77 °C
Type of protection	IP20
Overheating protection	Yes
Reverse polarity protection	Yes

### 1.2 Safety & EMC Standards

Standards	EN 55015, EN 61547 EN 301489-1, EN 301489-17 EN 61347-1, EN 61347-2
Radio Equipment	EN 300328, EN 300440
Marking	CE, RoHS

### 1.3 Connection Data

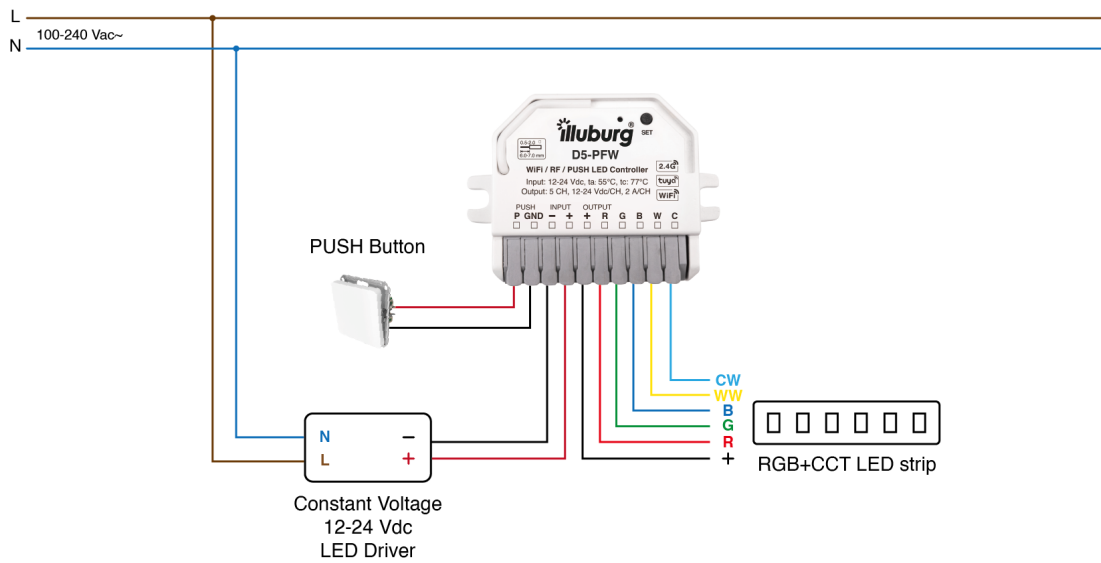
Type of connection	Spring lever terminal
Cable cross-section	0.5...2.0 mm <sup>2</sup>
Cable preparation length	6...7 mm



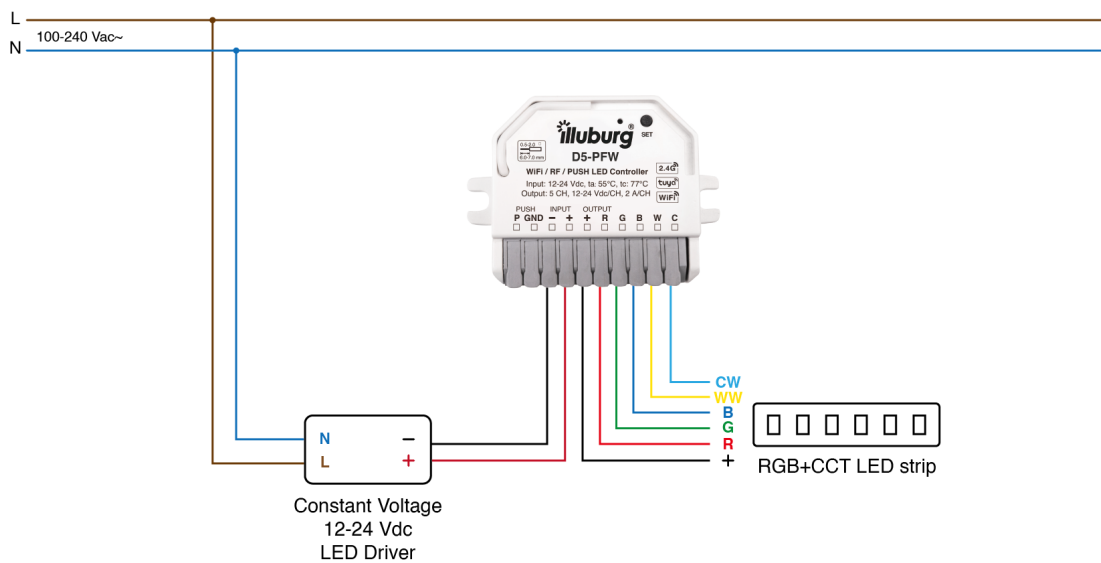
## 2.3 Wiring Diagram

For RGBCW (RGB+CCT) light

### Wiring Diagram 1: with Push Switch

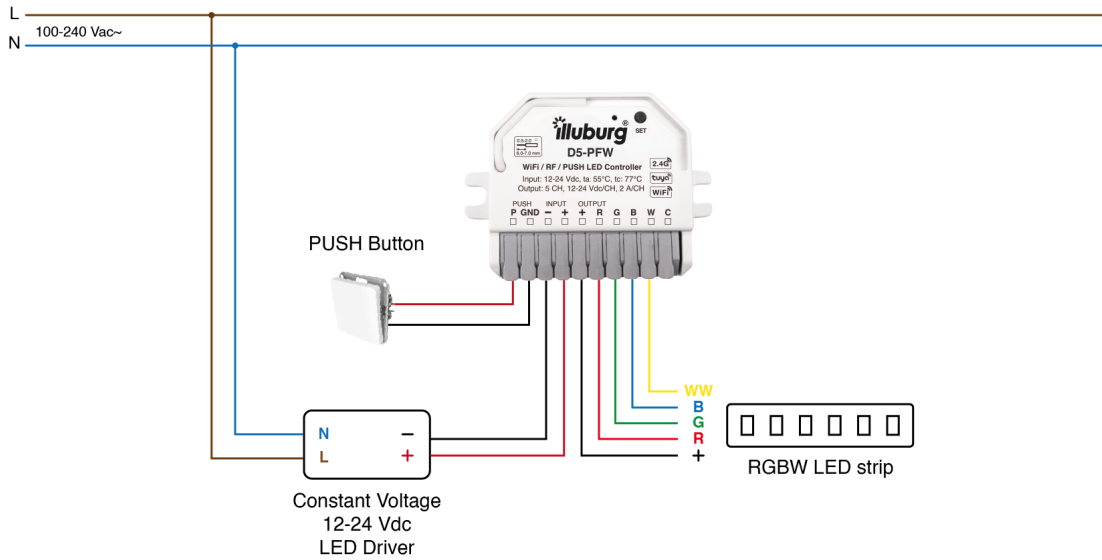


### Wiring Diagram 2: without Push Switch

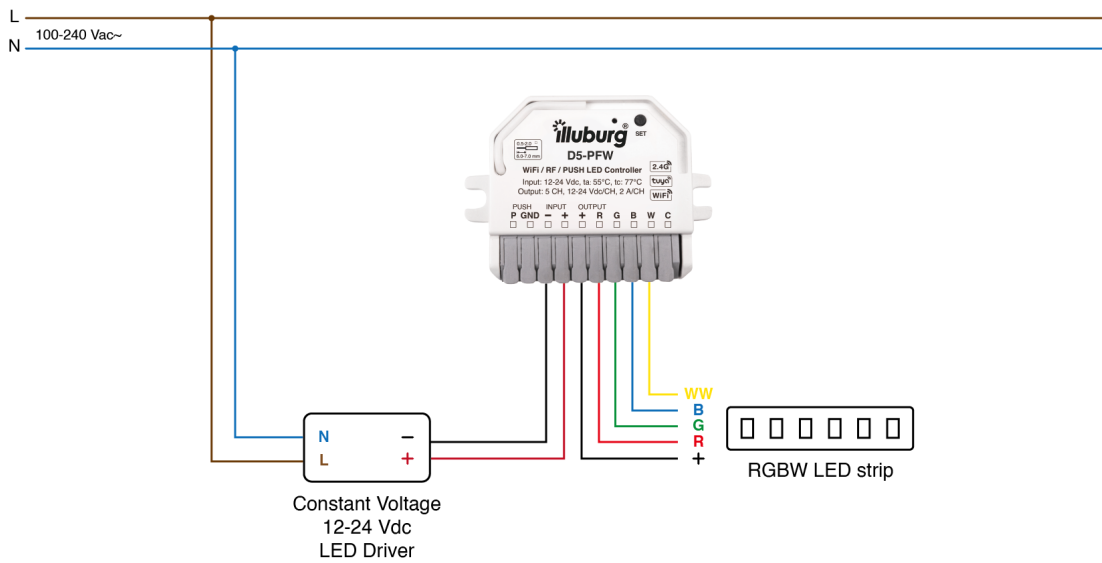


For RGBW light

### Wiring Diagram 1: with Push Switch

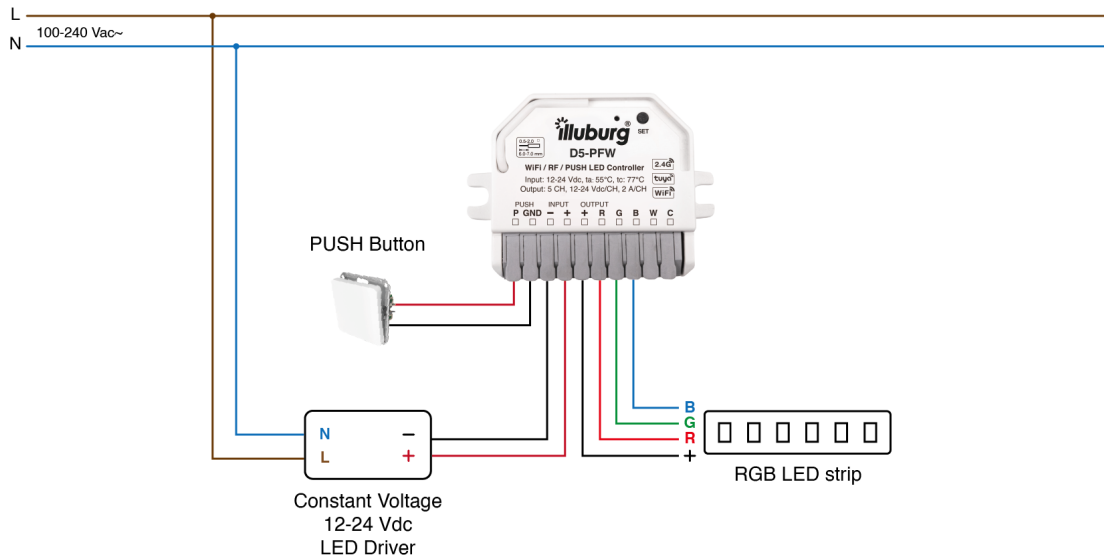


### Wiring Diagram 2: without Push Switch

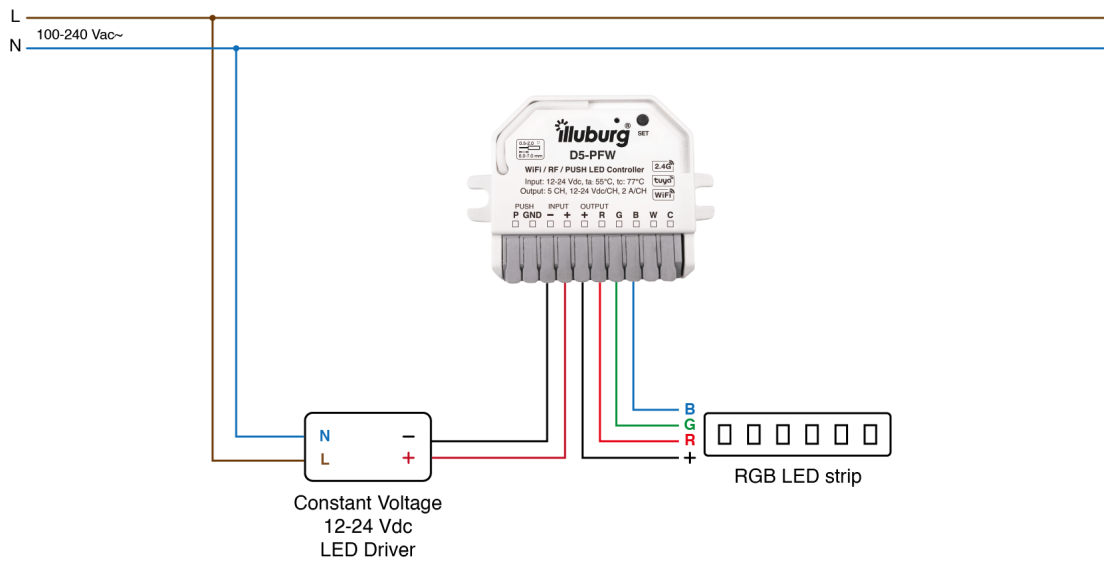


For RGB light

### Wiring Diagram 1: with Push Switch

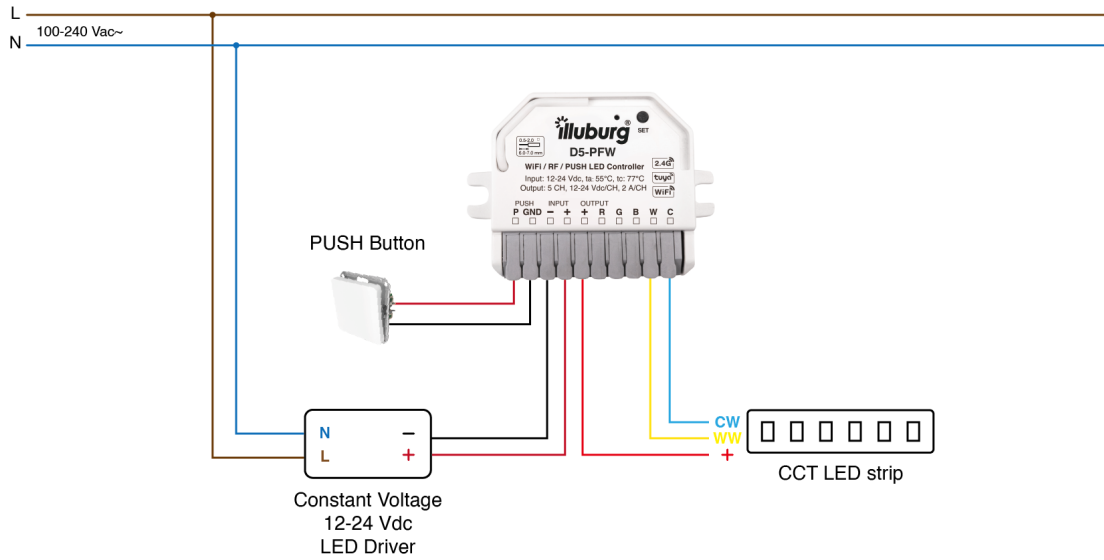


### Wiring Diagram 2: without Push Switch

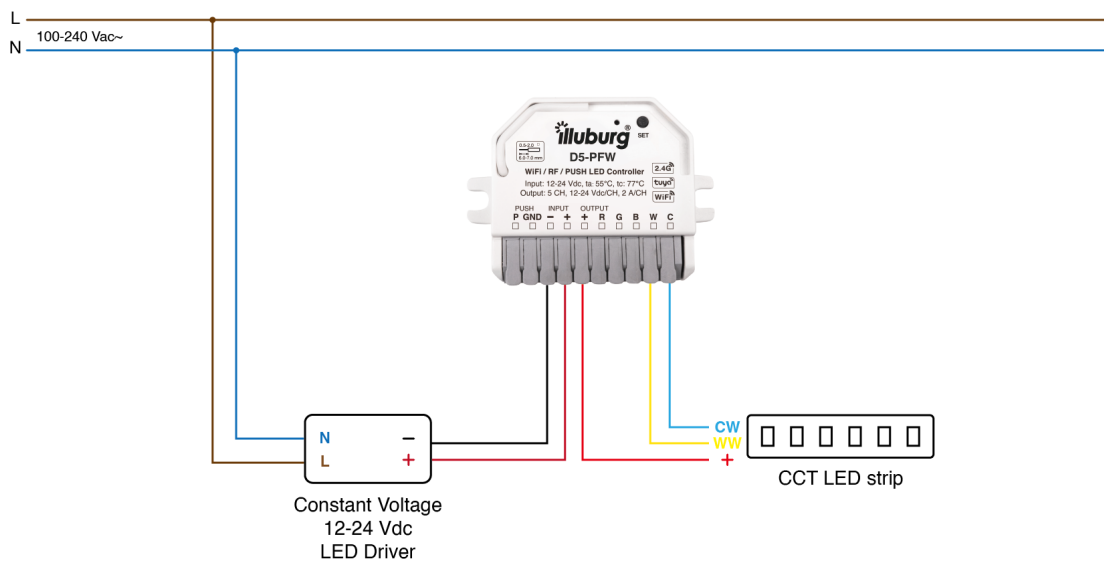


For CCT light

### Wiring Diagram 1: with Push Switch

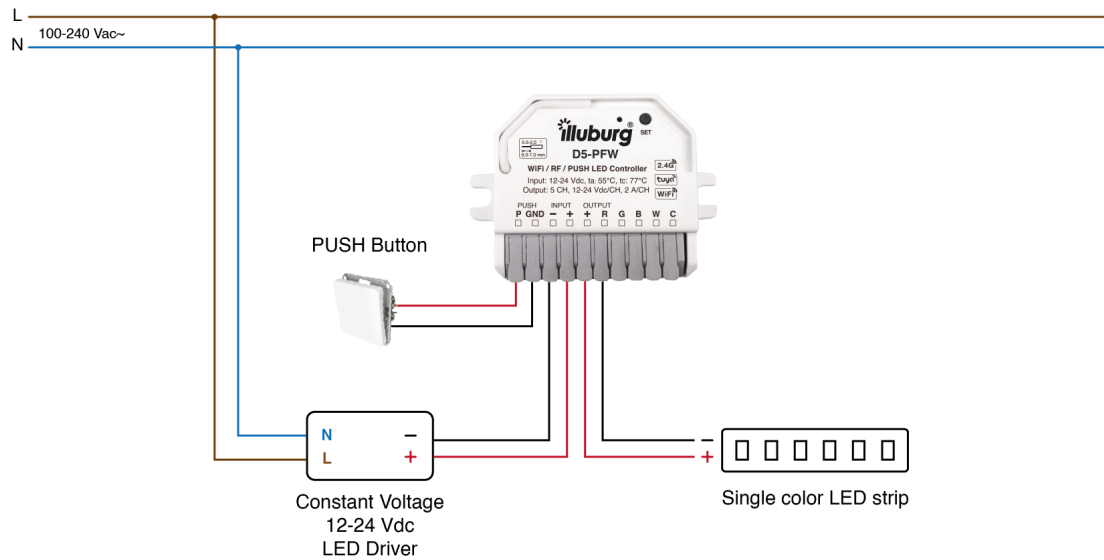


### Wiring Diagram 2: without Push Switch

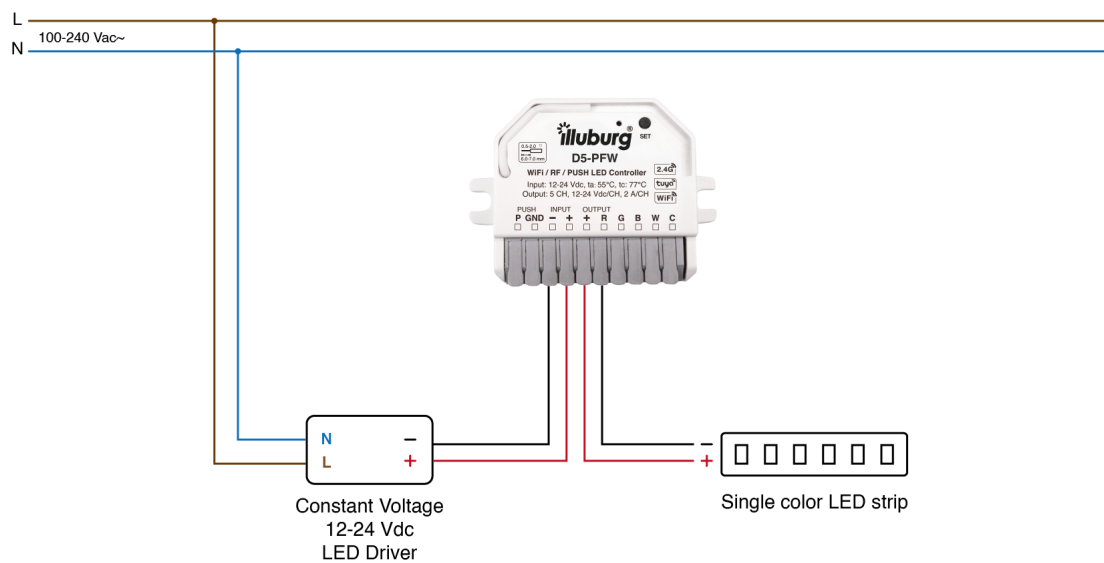


For DIM light

## Wiring Diagram 1: with Push Switch

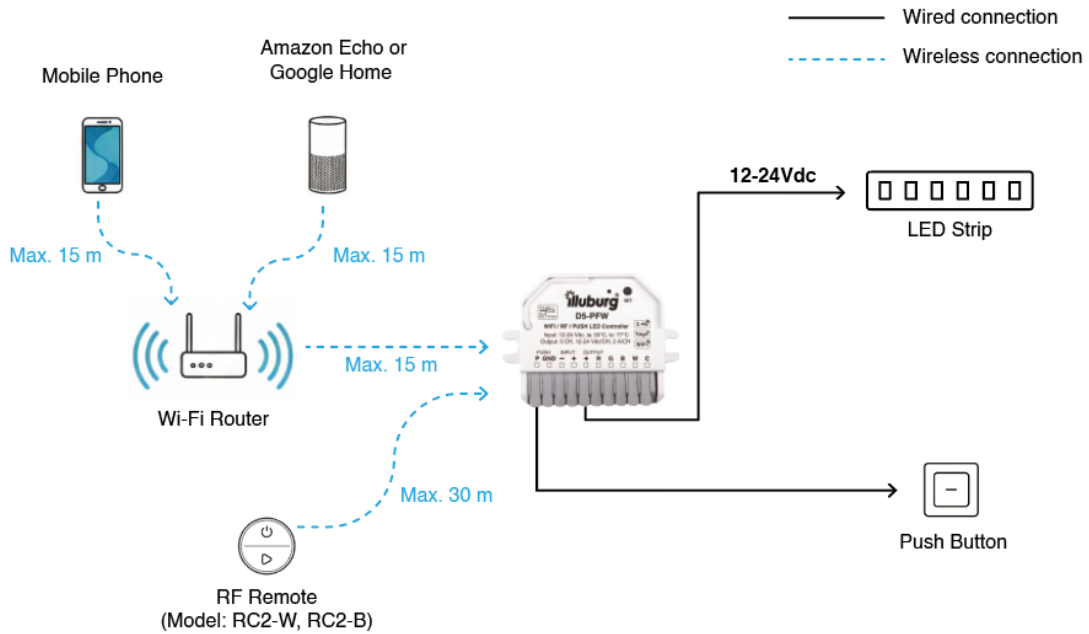


## Wiring Diagram 2: without Push Switch

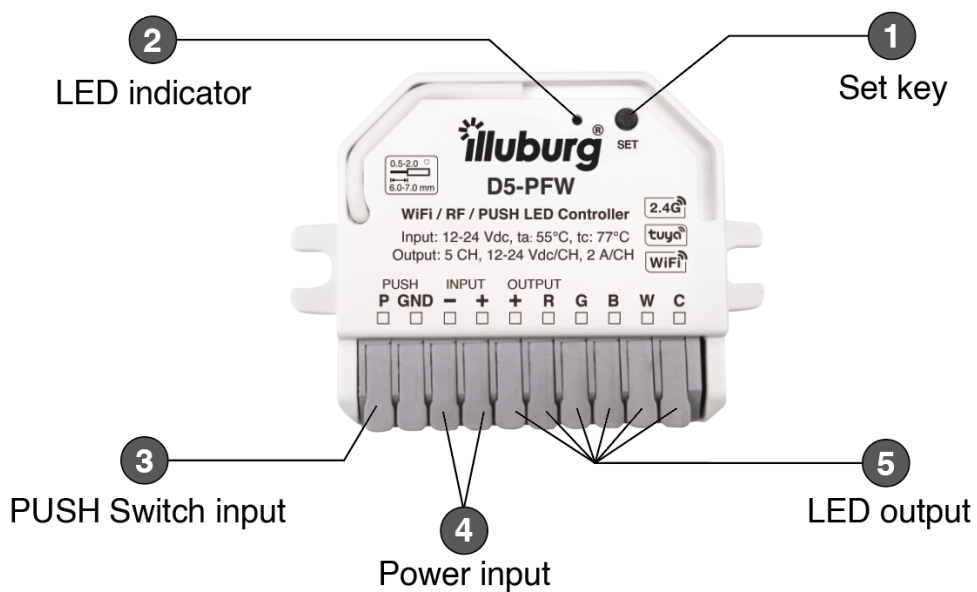


### 3. Operation & Setup

#### 3.1 System Diagram



#### 3.2 Hardware Overview



### 3.3 On/Off Fade Time & Factory Reset



Since adjusting the fade time restores factory settings, it is highly recommended to set it prior to remote pairing and network configuration.

#### On/Off fade time set to 0.5s (Default)

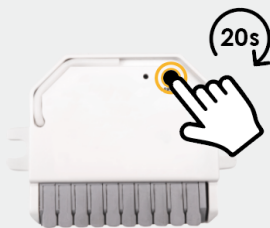
Long press **1** Set Key for 15s to set fade time to 0.5s, and reset all settings.



1. Fade time: 0.5s
2. Light type: RGB+CCT
3. All RF remotes deleted
4. APP configuration cleared


#### On/Off fade time set to 3s

Long press **1** Set Key for 20s to set fade time to 3s, and reset all settings.



1. Fade time: 3s
2. Light type: RGB+CCT
3. All RF remotes deleted
4. APP configuration cleared

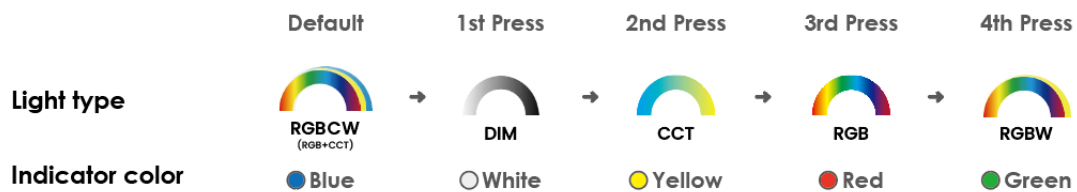
### 3.4 Light Type Setting

 Before APP pairing and RF remote matching, make sure the correct light type is selected. If the wrong light type is selected, the APP interface, RF remote functions, and LED output channels may not match the connected light strip.

Long press **1** Set Key for 2s to switch the light type. Each long press switches to the next type. (Default light type is RGB+CCT)



1. RGB+CCT (Default)
2. DIM
3. CCT
4. RGB
5. RGBW








**Note:**

For RGB+W light type, RGB channel and W channel cannot be turned on at the same time;

For RGB+CCT light type, RGB channel and CCT channel cannot be turned on at the same time.

### 3.5 RF Remote Control

Function	 DIM	 CCT	 RGB	 RGBW	 RGBCW (RGB+CCT)
ON / OFF Control	✓	✓	✓	✓	✓
Brightness Adjustment	✓	✓	✓	✓	✓
Color Temperature Adjustment	–	✓	–	–	✓
RGB Color Adjustment	–	–	✓	✓	✓
Dynamic Mode Control	–	–	10 Modes	10 Modes	10 Modes



Compatible remote models: RC2-B / RC2-W. Remote control is optional and not included.  
For detailed remote operation, please refer to the RC2-B / RC2-W user manual.



RC2-B: [www.illuburg.de/download/datasheet/dimmer/RC2-B\\_DataSheet\\_EN.pdf](http://www.illuburg.de/download/datasheet/dimmer/RC2-B_DataSheet_EN.pdf)

RC2-W: [www.illuburg.de/download/datasheet/dimmer/RC2-W\\_DataSheet\\_EN.pdf](http://www.illuburg.de/download/datasheet/dimmer/RC2-W_DataSheet_EN.pdf)

## Match

Short press **1 Set Key**, and short press the ON/OFF button on your remote control.

**2 LED indicator** will blink fast when matched.



+



(e.g., Model: RC2-W, not included).

## Delete

Long press **1 Set Key** for 10s.  (Do not hold for more than 15s)






**2 LED indicator** will blink fast when deleted.



### 3.6 Push Dimming Control

The controller supports control via an external push switch.

Connect the push switch according to the **wiring diagram (Page 5-9)**.

Function	 DIM	 CCT	 RGB	 RGBW	 RGBCW <small>(RGB+CCT)</small>
ON / OFF Control	✓	✓	✓	✓	✓
Brightness Adjustment	✓	✓	✓	✓	✓
Color Temperature Adjustment	–	✓	–	–	✓
RGB Color Adjustment	–	–	✓	✓	✓



Short press the PUSH switch

**ON / OFF:**

Turns the light on or off.

The light returns to the last brightness level used before it was turned off.

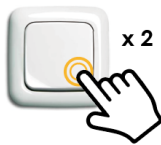


Long press the PUSH switch for 1-6s

**Dim Up / Down:**

Continuously adjusts the brightness.

The dimming direction changes with each long press.



Double click the PUSH switch



**Brightness Switch:**

Switches between 10% and 100% brightness.



**Color Temperature Switch:**

Switches between warm, neutral, and cool white.



**RGB / 50% saturation Switch:**

Switches between RGB color and 50% Saturation.



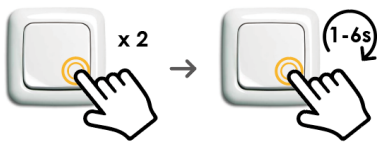
**RGB / White Switch:**

Switches between RGB color light and white light.



**RGB / CCT Switch:**

Switches between RGB color light and CCT white light.



Double click the PUSH switch,  
then within 5s long press for 1-6s



**Color Temperature Switch:**

Continuously adjusts color temperature.



**RGB / Saturation Switch:**

Continuously adjusts RGB color or Saturation.



**RGB / White Switch:**

Continuously adjusts RGB color or white brightness.








**RGB / CCT Switch:**

Continuously adjusts RGB color or color temperature.

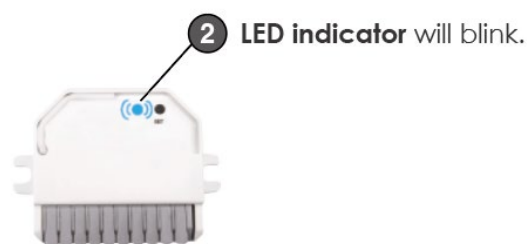
## 4. Smart Control

### 4.1 Control Overview

Functions	 DIM	 CCT	 RGB	 RGBW	 RGB+CCT (RGB+CCT)
ON / OFF Control	✓	✓	✓	✓	✓
Brightness Adjustment	✓	✓	✓	✓	✓
Color Temperature Adjustment	–	✓	–	–	✓
RGB Color Adjustment	–	–	✓	✓	✓
Scene	Preset 4 (Max. 8)	Preset 4 (Max. 8)	Preset 8 (Max. 8)	Preset 8 (Max. 8)	Preset 8 (Max. 8)
Timer	✓	✓	✓	✓	✓
Voice Control	✓	✓	✓	✓	✓
Music Sync	✓	✓	✓	✓	✓

### 4.2 App Connection

**Step 1:** Connect the dimmer according to the **wiring diagram (Page 5-9)** and turn on the power.



**Step 2:** Set the correct light type according to the **light type setting (Page 12)** before APP pairing.

Light type	 DIM	 CCT	 RGB	 RGBW	 RGB+CCT
Indicator color	○ White	● Yellow	● Red	● Green	● Blue

**Step 3:** Download the Smart Life or Tuya Smart App and Create an App account.



Choose either Wi-Fi setup with an app account or Bluetooth setup in Experience Mode according to the required functions.

### Basic Function



#### Switching

Turn the light on/off via App.



#### Adjustment

Adjust brightness, CCT, and RGB color via App.



#### Timer

Set schedules or countdowns via App.

### Premium Function



#### Voice Control

Control via Amazon Alexa or Google Assistant.



#### Device Sharing

Grant device control permissions to other users.



#### Home Management

Control together with family members.

### Wi-Fi Setup with App Account



Create an App account to unlock global remote control, voice control, and device sharing.

### Bluetooth Setup in Experience Mode



Access basic switching, dimming, and timers locally without an account or cloud connection.

### 4.3 Option A: Wi-Fi Setup (Recommended)

Create an App account to unlock global remote control, voice control, and device sharing.



#### Step 1: Connect Smartphone to Wi-Fi

Connect to 2.4GHz Wi-Fi only.



#### Step 2: Enter Pairing Mode

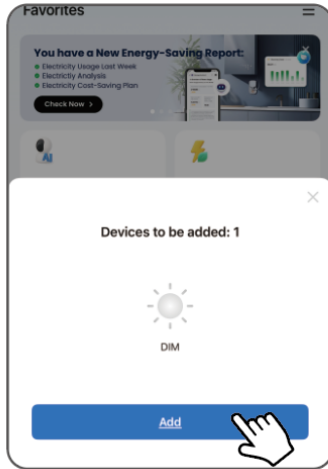
Press and hold **1** Set key for 5 seconds, **2** will blink.  
This clears the previous network connection.



#### Step 3: Open App

Open the Smart Life or Tuya App.

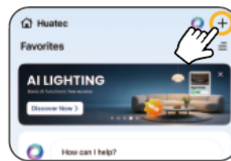




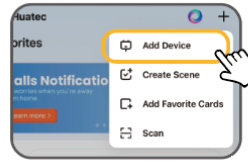
### Step 4: Add Device

Click on 'Add'.

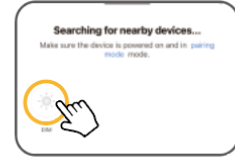
If no window appears automatically, check **Step 2** again and follow these steps:



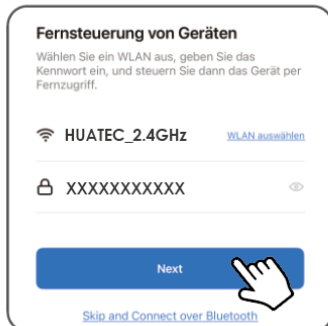
4.1



4.2



4.3



### Step 5: Select Wi-Fi

Enter Wi-Fi password and click 'Next'.



### Step 6: Complete Setup

Click on 'Done'.

#### 4.4 Option B: Bluetooth Setup (Local)

Direct control for areas without Wi-Fi (range up to approx. 15–30 m), or for quick testing and commissioning.



##### Step 1: Enable Bluetooth



##### Step 2: Enter Pairing Mode

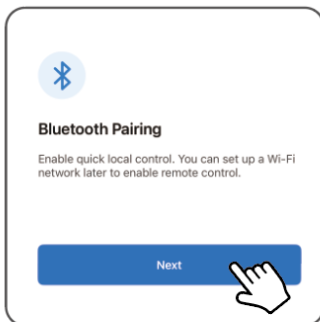
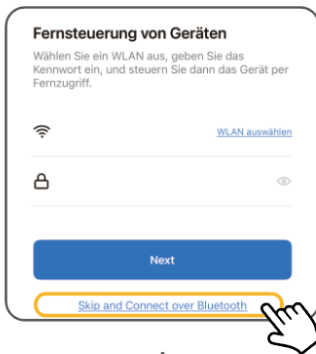
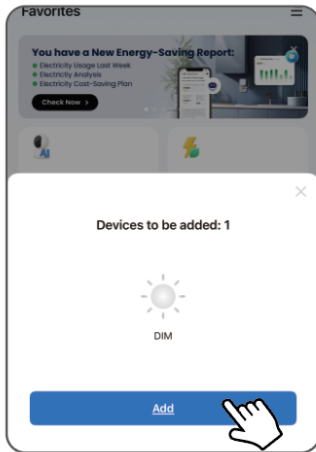
Press and hold **1** Set key for 5 seconds, clear previous network connection.



##### Step 3: Open App

Open the Smart Life or Tuya App.





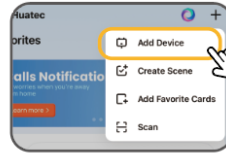
### Step 4: Add Device

Click on 'Add'.

If no window appears automatically, check **Step 2** again and follow these steps:



4.1



4.2



4.3

### Step 5.1: Select Bluetooth

Click on 'Skip and connect over Bluetooth'.

### Step 5.2: Bluetooth Pairing

Click on 'Next'.

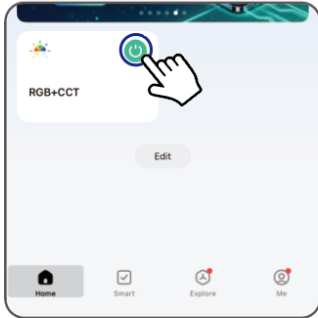
### Step 6: Complete Setup

Click on 'Done'.

## 5. Smart App Operation

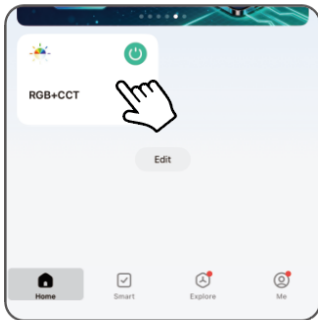


### 5.1.1 For RGBCW (RGB+CCT) light



#### Turn On and Off

Turn the device on and off directly from the home page.

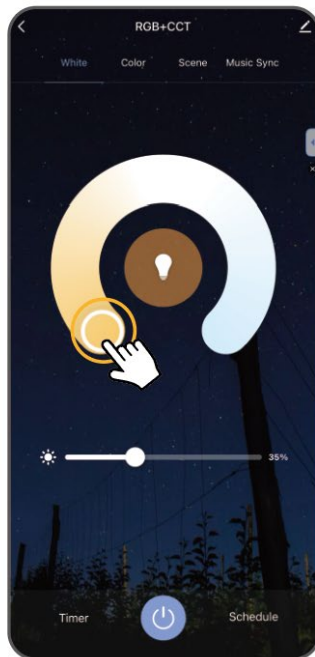


#### Open Control Panel

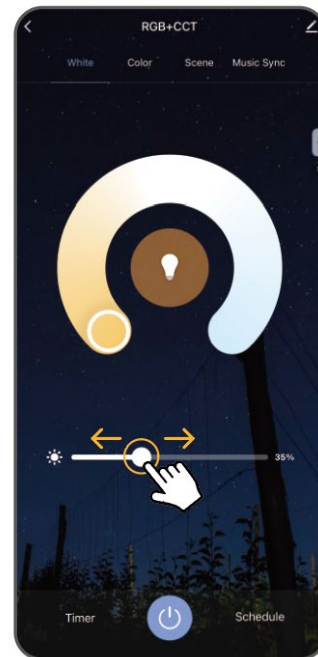
Tap the device to open the detailed control panel.



#### Turn On/Off



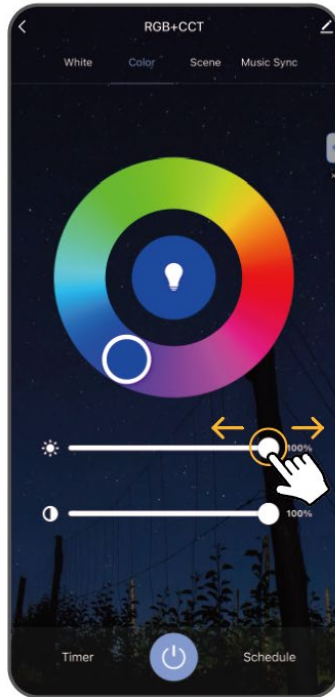
#### Color Temperature Adjustment



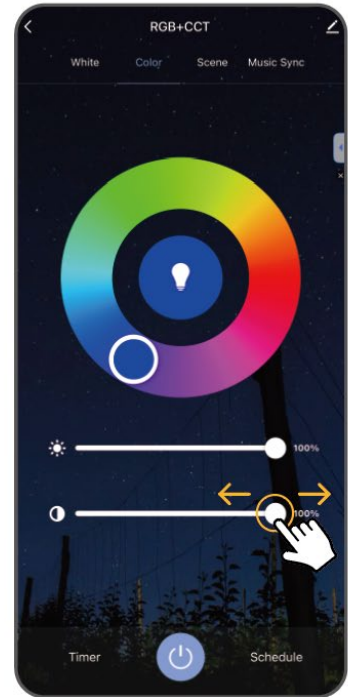
#### Brightness Adjustment (White Light)



**RGB Color Selection**



**Brightness Adjustment**



**Saturation Adjustment**



**Timer**

Set a countdown to automatically turn the device on or off.

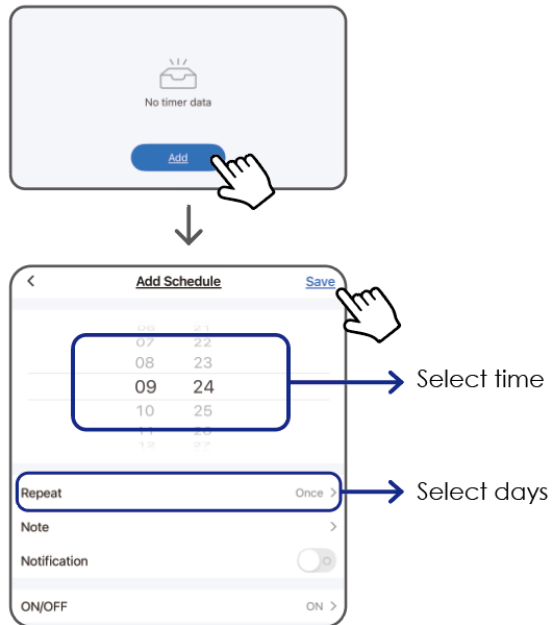


Select time



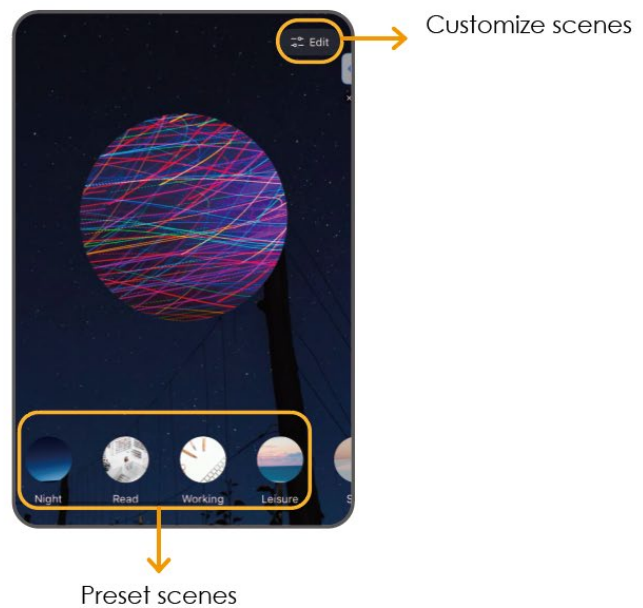
## Schedule

Set specific times and days of the week for automatic switching.



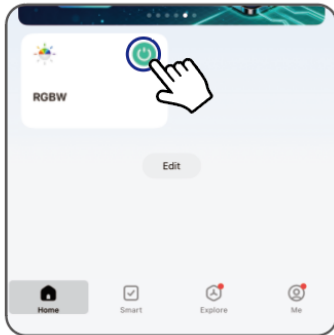
## Scenes

Select preset scenes or create your own.



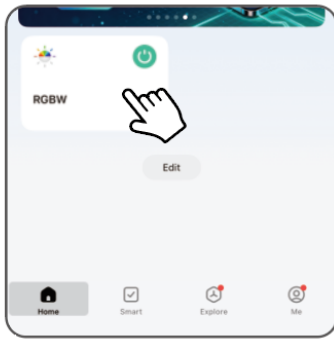


### 5.1.2 For RGBW light



#### Turn On and Off

Turn the device on and off directly from the home page.

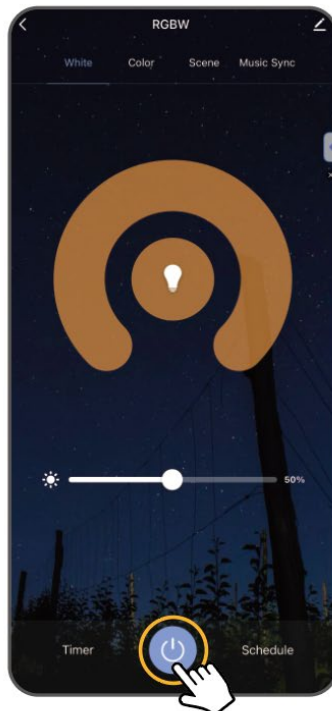


#### Open Control Panel

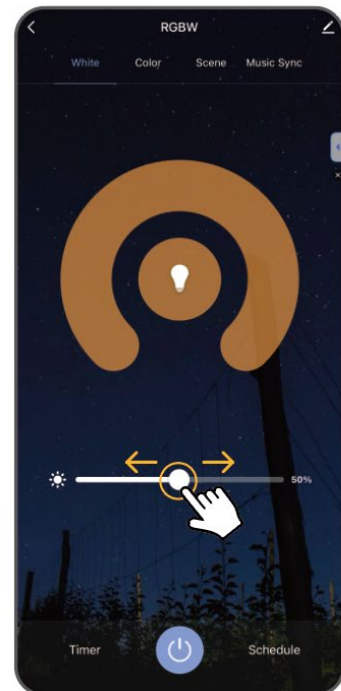
Tap the device to open the detailed control panel.



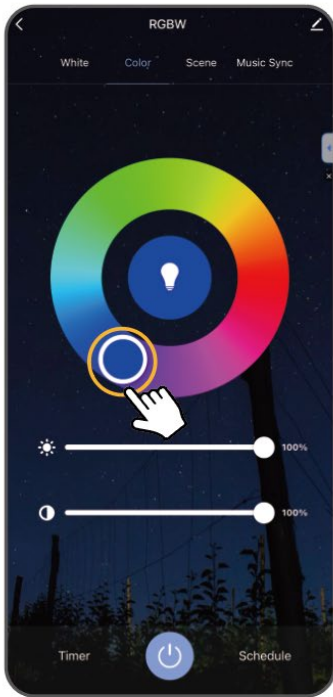
Turn On



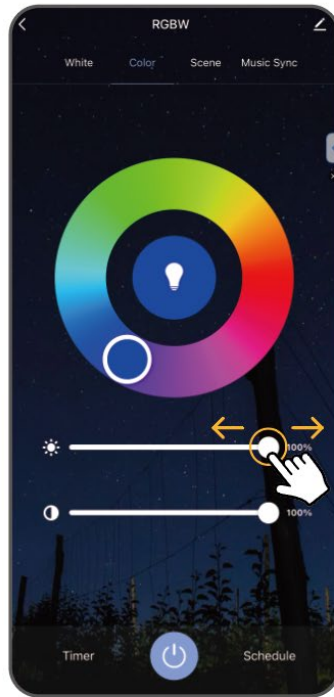
Turn Off



Brightness Adjustment  
(White Light)



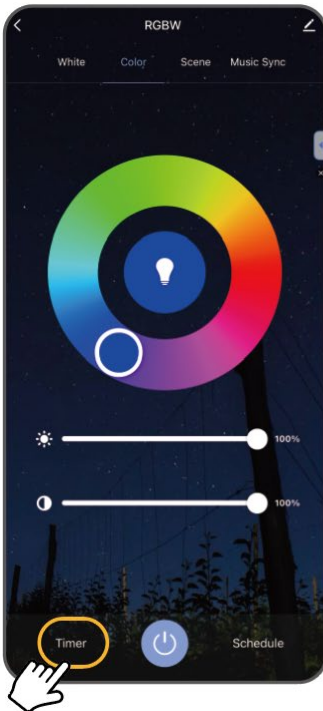
RGB Color Selection



Brightness Adjustment

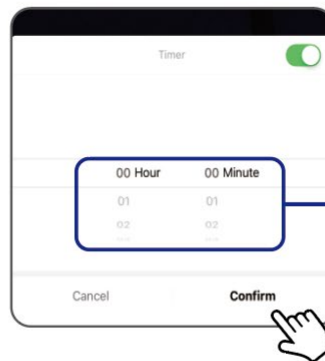


Saturation Adjustment



### Timer

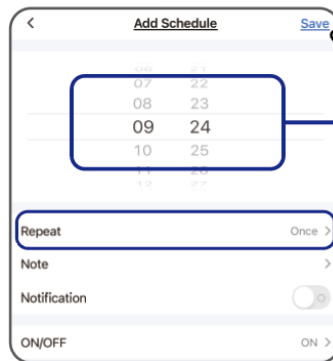
Set a countdown to automatically turn the device on or off.



Select time

### Schedule

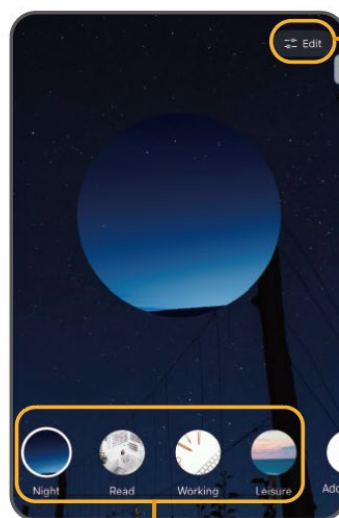
Set specific times and days of the week for automatic switching.



Select time  
Select days

### Scenes

Select preset scenes or create your own.

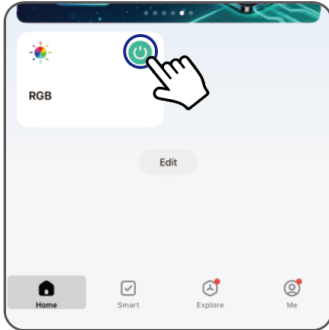


Customize scenes

Preset scenes

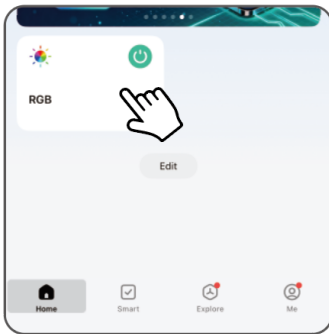


### 5.1.3 For RGB light



#### Turn On and Off

Turn the device on and off directly from the home page.

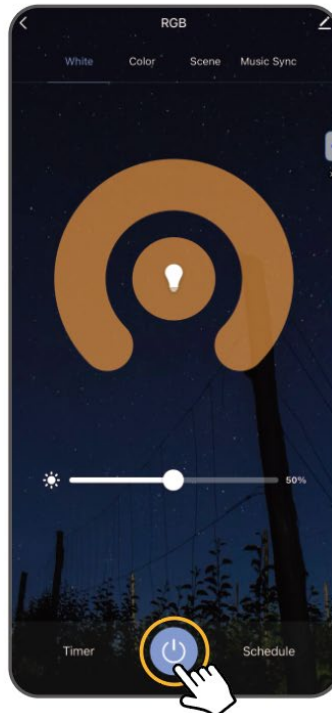


#### Open Control Panel

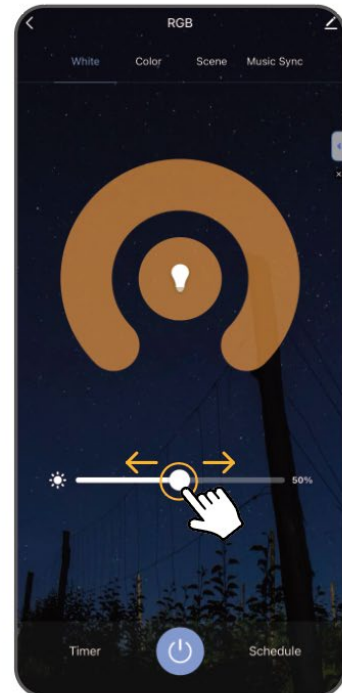
Tap the device to open the detailed control panel.



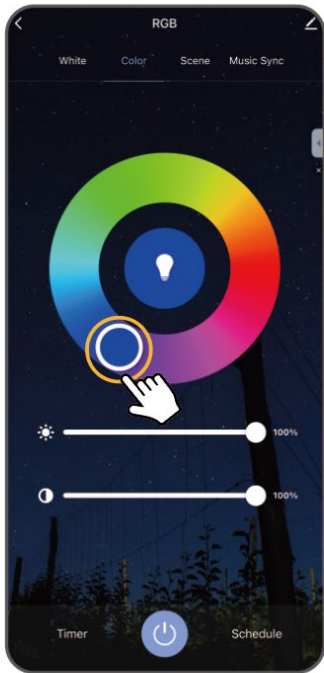
Turn On



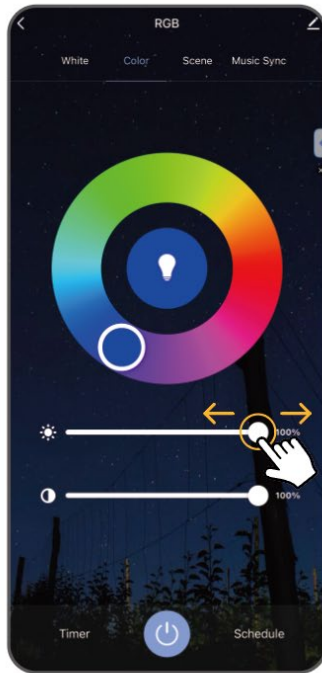
Turn Off



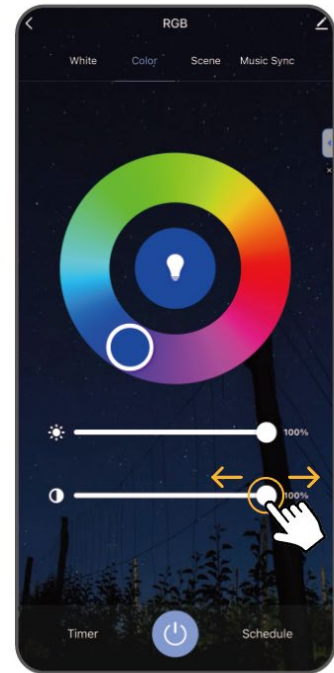
Brightness Adjustment  
(White Light)



**RGB Color Selection**



**Brightness Adjustment**

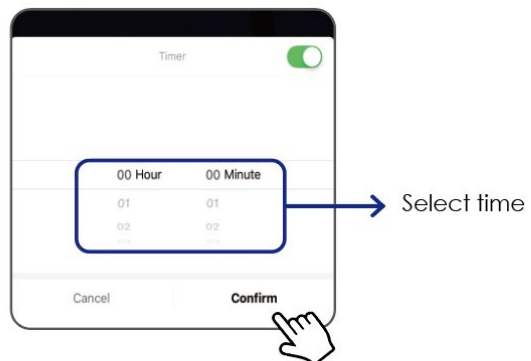


**Saturation Adjustment**



### Timer

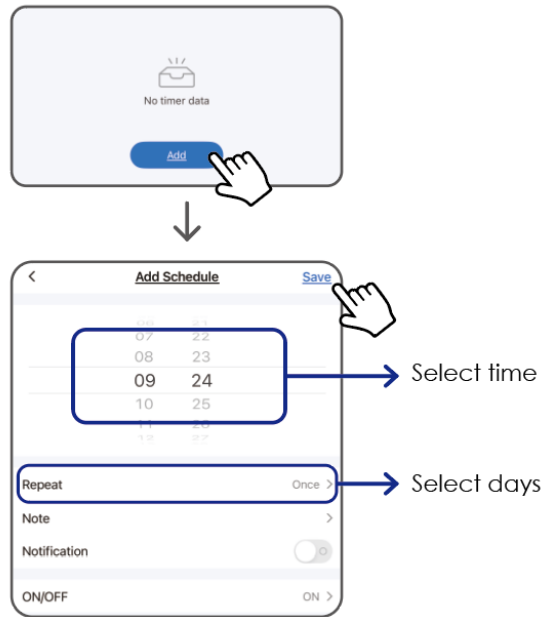
Set a countdown to automatically turn the device on or off.





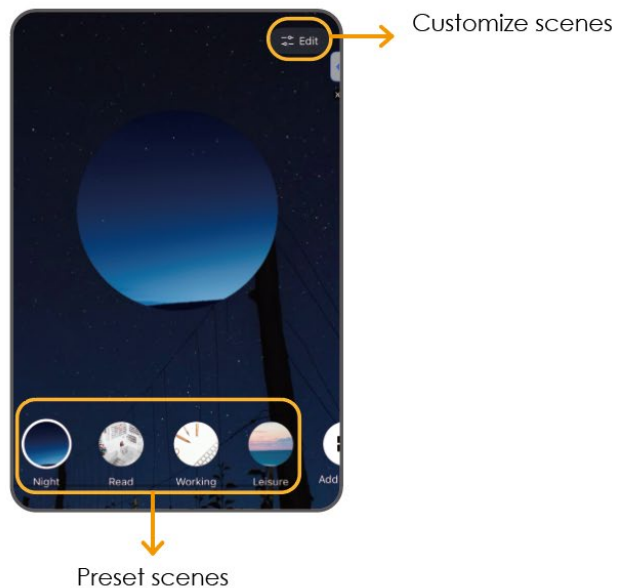
### Schedule

Set specific times and days of the week for automatic switching.



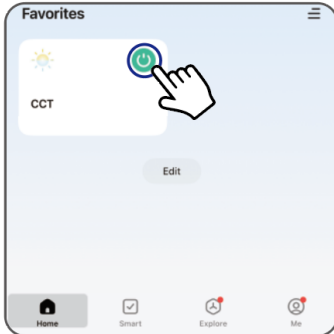
### Scenes

Select preset scenes or create your own.



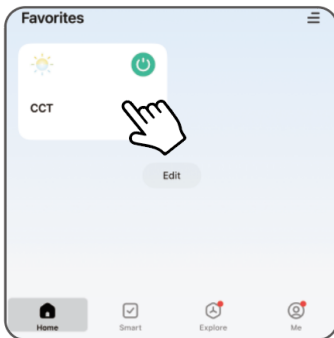


### 5.1.4 For CCT light



#### Turn On and Off

Turn the device on and off directly from the home page.

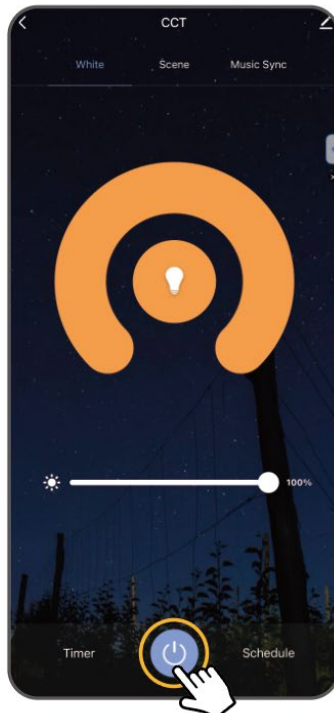


#### Open Control Panel

Tap the device to open the detailed control panel.



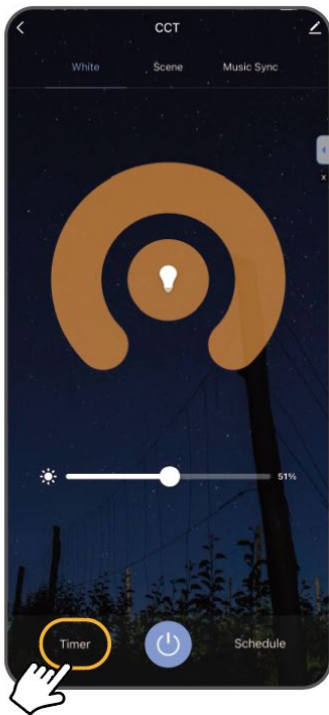
Turn On/Off



Turn Off



Brightness Adjustment (White)

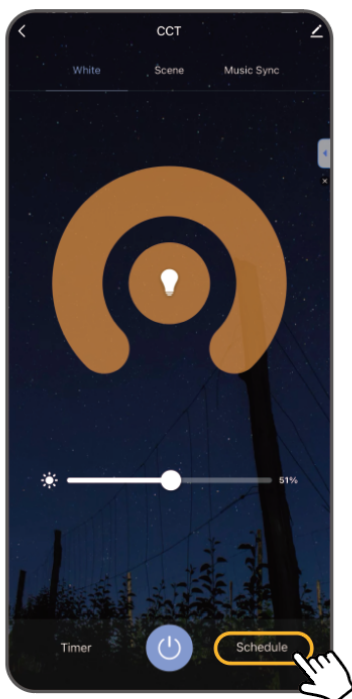


### Timer

Set a countdown to automatically turn the device on or off.

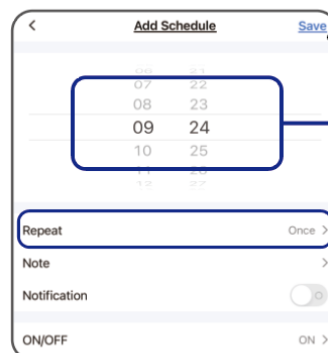
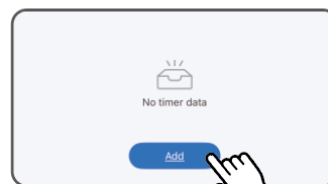


Select time



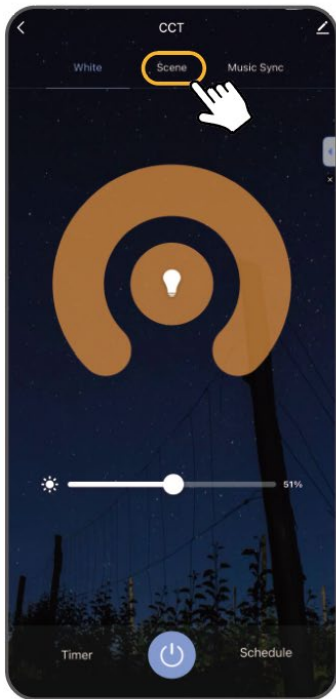
### Schedule

Set specific times and days of the week for automatic switching.



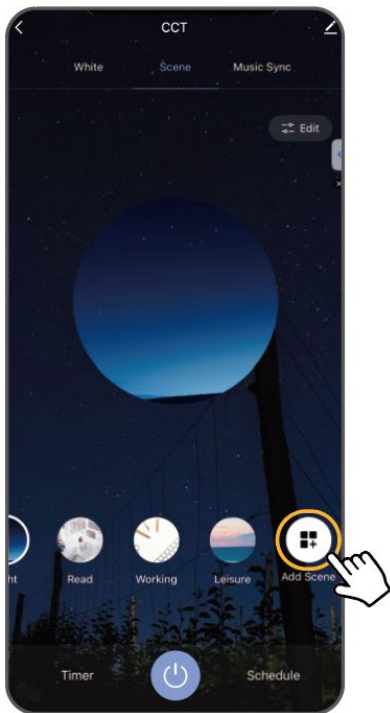
Select time

Select days



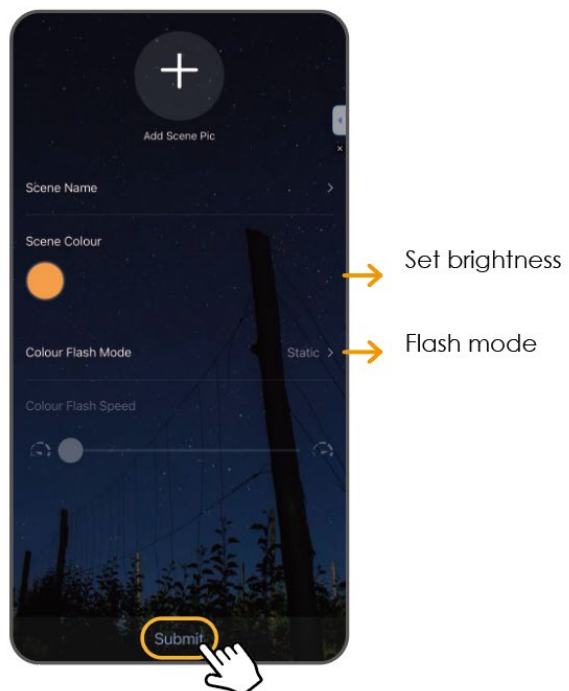
## Scenes

Select preset scenes or create your own.



## Add Custom Scenes

Set name, brightness, flash mode, and speed, then tap "Submit" to save.

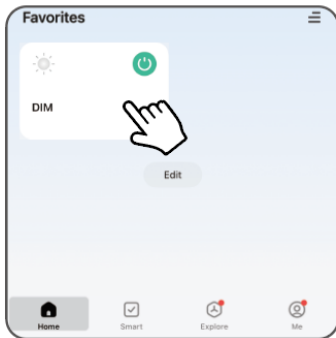


### 5.1.5 For DIM light



#### Turn On and Off

Turn the device on and off directly from the home page.

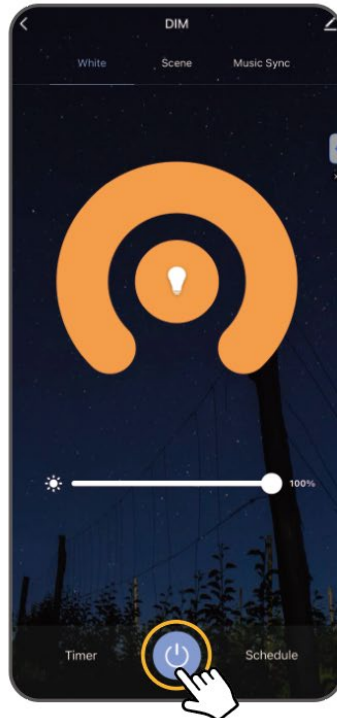


#### Open Control Panel

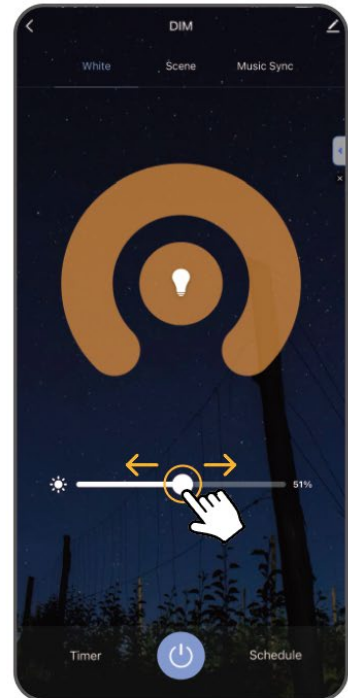
Tap the device to open the detailed control panel.



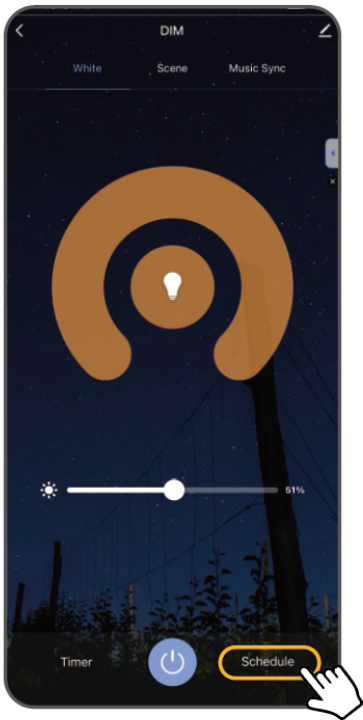
Turn On



Turn Off

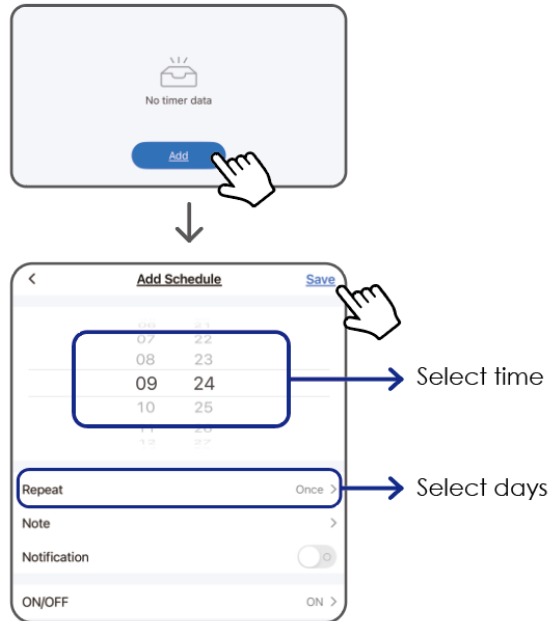


Stepless Dimming



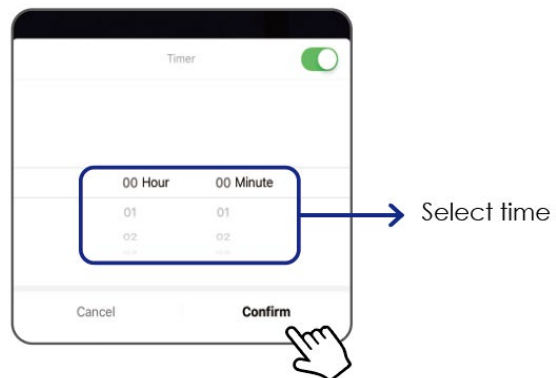
### Schedule

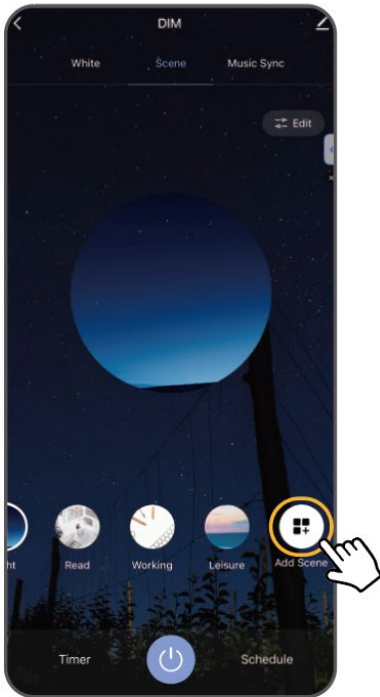
Set specific times and days of the week for automatic switching.



### Timer

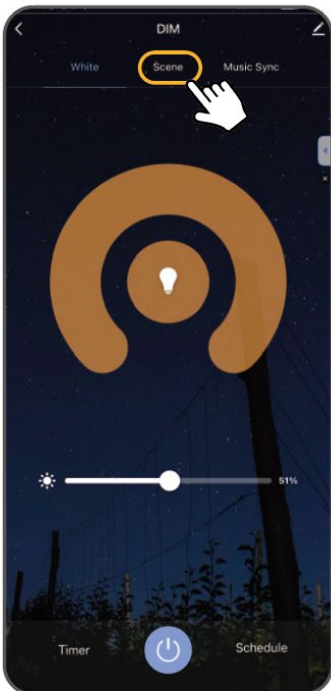
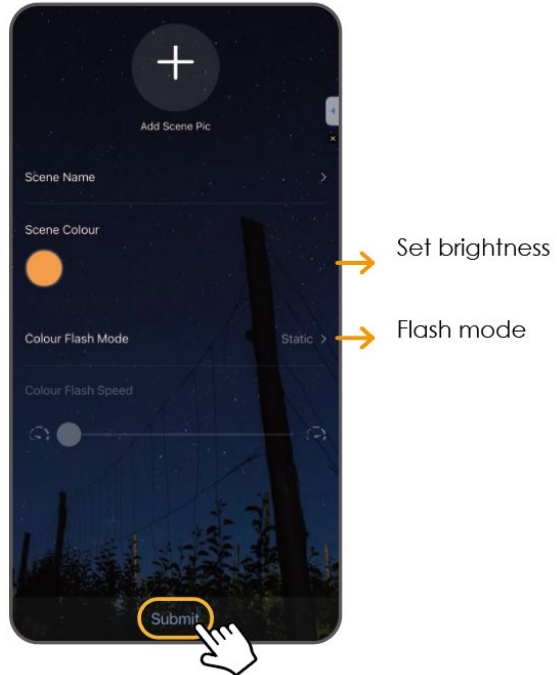
Set a countdown to automatically turn the device on or off.





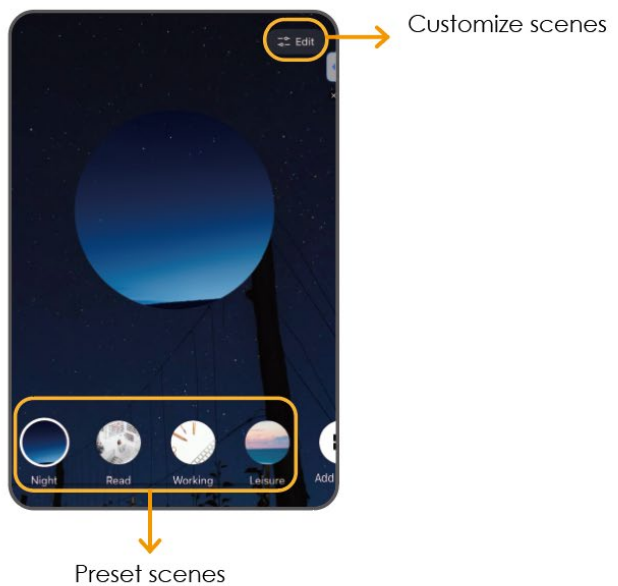
### Add Custom Scenes

Set name, brightness, flash mode, and speed, then tap "Submit" to save.



### Scenes

Select preset scenes or create your own.



## 5.2 Music Sync

Prerequisite: The Alexa or Google Home App is already installed and set up.



## 5.3 Voice Control Setup

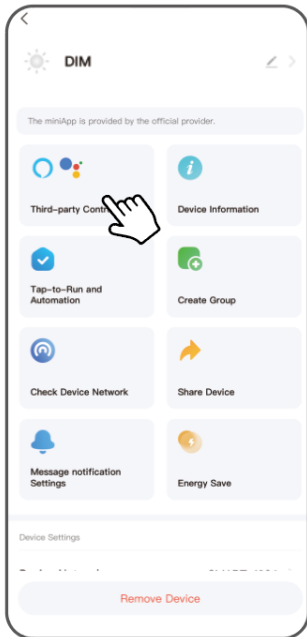
Prerequisite: The Alexa or Google Home App is already installed and set up.



### Step 1: Open Settings

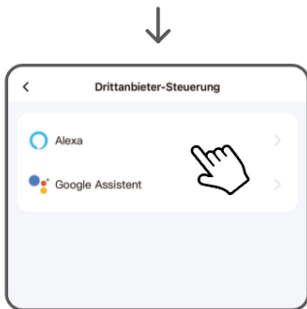
Click the Edit icon (pencil) in the top right corner.





### Step 2: Select Menu

Tap on 'Third-party Control'.



### Step 3: Select Service

Select the voice assistant you are using.



### Step 4: Link Account

Tap on 'LINK'.



## Step 5: Complete Setup

Tap on 'Done'.

## Voice Commands (Examples)

### Switching:

Alexa / Hey Google, turn on [device name].

Alexa / Hey Google, turn off [device name].

### Brightness:

Alexa / Hey Google, set [device name] to 50%.

Alexa / Hey Google, make [device name] 10% darker.

### Color:

Alexa / Hey Google, set [device name] to red.

Alexa / Hey Google, change [device name] to sky blue.

### Group Control:

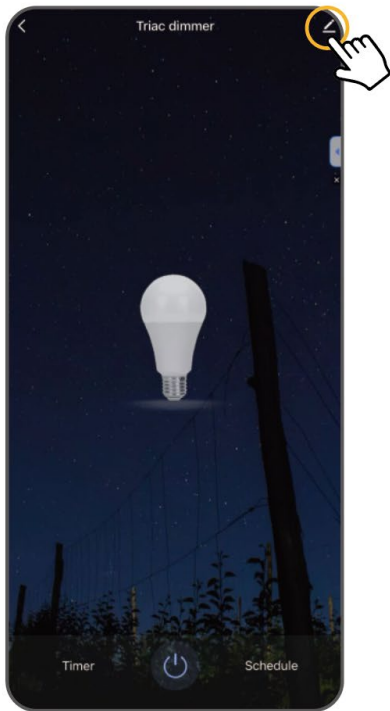
Alexa / Hey Google, turn [group name] on / off.

Alexa / Hey Google, set [group name] to 50%.

### Notes:

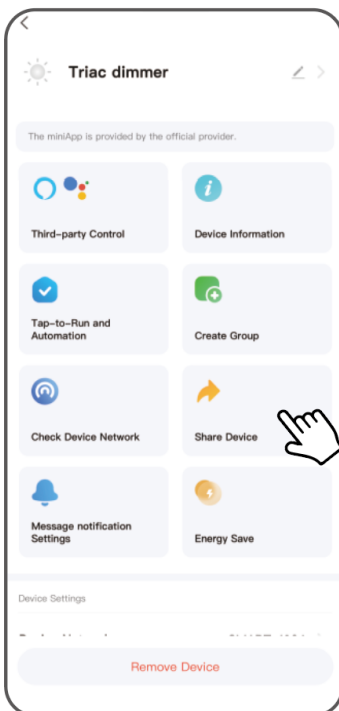
1. Replace [device name] with the name you assigned in the App (e.g., "Living Room").
2. Groups must be created in the App beforehand before voice assistants can recognize and control them.

## 5.4 Device Sharing



### Step 1: Open Settings

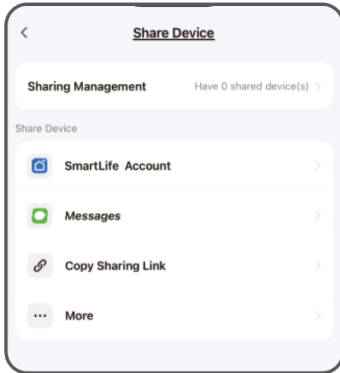
Tap the Edit icon (pencil) in the top right corner.



### Step 2: Share Device

Tap on **'Share Device'**.





### Step 3: Select Sharing Method

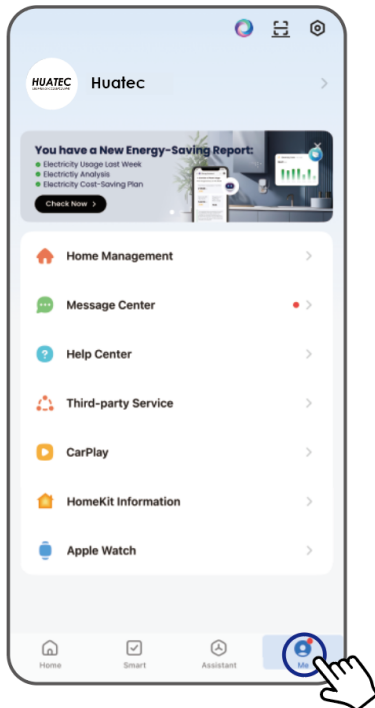
Select your preferred method (e.g., Smart Life account or copy sharing link).

#### Notes:

1. The recipient must also have the App installed and a registered account.
2. Shared users can control the device but generally cannot change basic device settings.



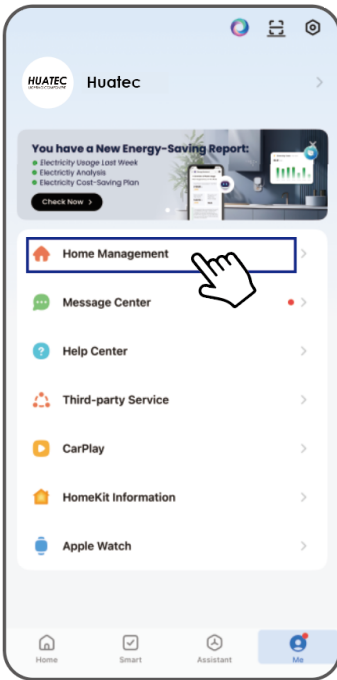
## 5.5 Home Management



### Step 1: Open 'Me'

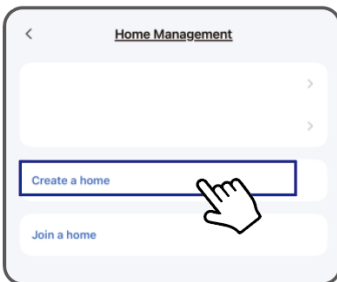
Tap on 'Me' in the bottom right corner.





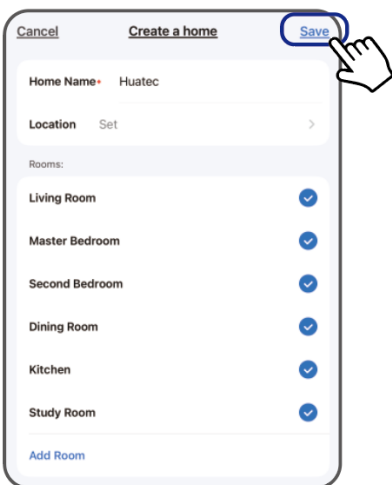
### Step 2: Select Home Management

Tap on 'Home Management'.



### Step 3: Create a Home

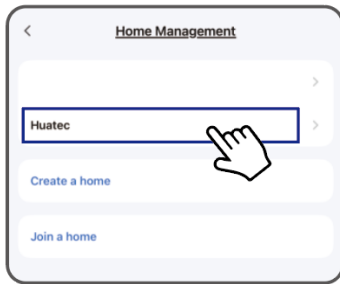
Tap on 'Create a Home'.



### Step 4: Set Up Home

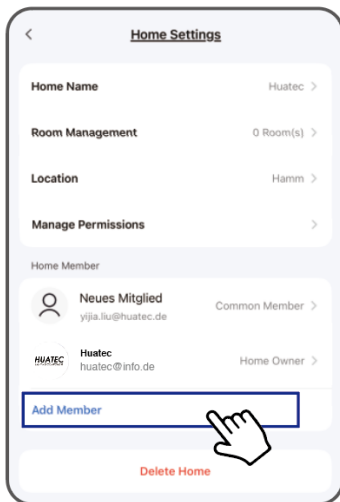
Enter the home name, select rooms, and tap 'Save' in the top right corner.





### Step 5: Select Home

Tap on the desired home.



### Step 6: Add Member

Tap on 'Add Member'.



### Step 7: Select Invitation Method

Select your preferred method (e.g., App Account or Copy) to invite family members.

#### Notes:

1. Invited members must have the App installed and a registered account before joining the home.
2. As the "Home Owner," you can decide whether new members should be General Members (control only) or Administrators (add/delete devices).

## 6. Legal & Support

### 6.1 Important notice

Download the safety instructions at [www.illuburg.de/infocenter](http://www.illuburg.de/infocenter), read them carefully and observe the listed instructions and information for proper use.

### 6.2 Disclaimer of liability

Subject to changes and errors excepted. Make sure you are using the latest version.

### 6.3 Manufacturer Information

If you have any further questions, please contact our technical support.

HuaTec GmbH

Droopweg 31

20537, Hamburg, Germany

Telefon: +49 40 236448800

E-Mail: [info@illuburg.de](mailto:info@illuburg.de)

Website: [www.illuburg.de](http://www.illuburg.de)

