

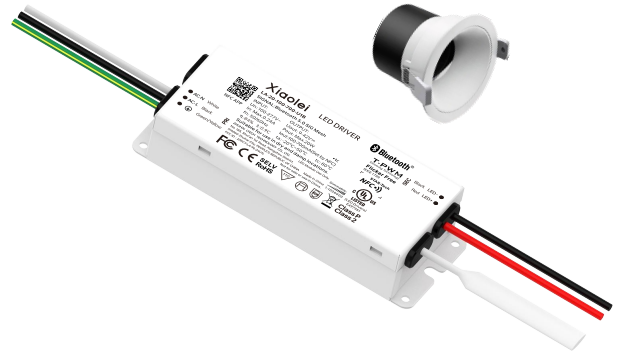
## Intelligent LED Driver(Constant Current)

- Metal housing for efficient heat dissipation;
- Compact size for easy concealed installation;
- Wide input voltage range: 100-277 VAC;
- Power parameters can be adjusted via NFC using a mobile app, enabling data interaction with the driver;
- Bluetooth 5.0 SIG Mesh communication protocol for robust networking capabilities, ensuring reliability and stability;
- Supports local Bluetooth control via the L-Home app on iOS and Android devices;
- Supports remote control via smart gateways such as SP-GW-4S, SP-GW-6S, and SP-GW-12S;
- Dimming range: 0-100%; LED dimming starts from 0.0001%;
- Features a soft-start gradual dimming function for greater visual comfort;
- Supports online OTA firmware updates;
- Innovative thermal management technology intelligently protects power supply lifespan;
- Over-temperature, over-voltage, overload, and short-circuit protection with automatic recovery;
- IP20 rating, suitable for indoor LED lighting fixtures;
- Lifespan of up to 100,000 hours under normal use;
- Certified to UL Class 2 and Class P standards;
- Compliant with IEEE 1789 and UL 8750 standards;
- 5-year warranty;

\* Not for sale or use in China.



The certification icon represents undergoing certification applications only, and final certification qualification subject to actual product.



## Technical Specs

Model	LA-10-100-450-U1B		LA-20-100-700-U1B	
Features	Output Type	Constant current		
	Dimming Interface	Bluetooth 5.0 SIG Mesh		
	Output Feature	Isolation		
	Protection Grade	IP20		
	Insulation Grade	Class II (Suitable for class I / II / III light fixtures)		
OUTPUT	Output Voltage	9-42V $\overline{=}$		
	Maximum Output Voltage	$\leq 50V \overline{=}$		
	Output Current Range	100-450mA (Set higher current via mobile APP NFC; step value down to 1mA; Default: 100mA)	100-700mA (Set higher current via mobile APP NFC; step value down to 1mA; Default: 100mA)	
	Output Power Range	0.9-10W	0.9-20W	
	Dimming Range	0-100%, down to 0.0001% (Set More levels can be set via mobile APP NFC; Default: 0.01%)		
	LF Current Ripple	$< 5\%$ ((Maximum current for non dimming state)		
	Current Accuracy	$\pm 5\%$		
	PWM Frequency	$\leq 3600\text{Hz}$		
INPUT	AC Voltage Range	100-277V~		
	Rated Voltage	115V~/230V~/277V~		
	Frequency	50/60Hz		
	Input Current	Max. 0.11A/115V~, Max.0.06A/230V~, Max. 0.055A/277V~(at full load)	Max. 0.21A/115V~, Max.0.11A/230V~, Max. 0.1A/277V~(at full load)	
	Power Factor	PF $\geq 0.95$ /115V~, PF $\geq 0.9$ /230V~, PF $\geq 0.9$ /277V~(at full load)		
	THD	115V~@THD $\leq 10\%$ , 230V~@THD $\leq 15\%$ , 277V~@THD $\leq 20\%$ (at full load)		
	Efficiency (Typ.)	80%(at full load)		84%(at full load)
	Inrush Current	Cold start 15A (Test twidth=152us tested under 50% Ipeak)/230V~		
	Anti Surge	L-N: 2KV L,N-FG: 4KV		
	Leakage Current	Max.0.5mA		
ENVIRONMENT	Working Temperature	ta: -20°C ~ 50°C tc: 75°C	ta: -20°C ~ 50°C tc: 80°C	
	Working Humidity	20~95%RH, non-condensing		
	Storage Temperature/Humidity	-40~80°C/10~95%RH		
	Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$ (-20°C~50°C)		
	Vibration	10-500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively		
PROTECTION	Overload Protection	Automatically protect the device when the load exceeds 102% of the rated power. Automatically recover once load is reduced		
	Overheat Protection	Intelligently adjust or turn off the current output if the PCB temperature $\geq 110^{\circ}\text{C}$ . When the PCB temperature $< 90^{\circ}\text{C}$ , automatically recover normal output		
	Overvoltage Protection	Automatically protect the device when voltage exceeds the no-load voltage. It can be recovered automatically		
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically		
SAFETY & EMC	Withstand Voltage	I/P-O/P:3750V~/1min/ $< 5\text{mA}$ , I/P-FG:1750V~/1min/ $< 5\text{mA}$ , O/P-FG:500V~/1min/ $< 5\text{mA}$ , Signal-FG: 500V~/1min/ $< 5\text{mA}$ ①		
	Insulation Resistance	I/P-O/P: 100M $\Omega$ /500V~/1min/25°C/70%RH		
	Safety Standards	CE	European Union	EN61347-1, EN61347-2-13, EN62384
		UL	America	UL8750, UL1310, Class P
		CUL	Canada	CSAC22.2 No.250.13
	EMC Emission	FCC	America	FCC part15B
		CE	European Union	EN55015, ENIEC61000-3-2, EN61000-3-3, EN61547
EMC Immunity	EN61000-4-2,3,4,5,6,8,11,EN61547			
	ErP	Flicker/Stroboscopic Effect	IEEE1789	Meet IEEE 1789 standard/High frequency exemption level
DF		CIESVM	PstLM $\leq 1.0$ , SVM $\leq 0.4$	
OTHERS	Weight(N.W.)	275g $\pm 10\text{g}$		
	Dimensions	118 $\times$ 43 $\times$ 25mm(L $\times$ W $\times$ H)		

①Note: During the I/P-FG withstand voltage test, the gas discharge tube located on the input terminal cover of the driver must be temporarily removed to prevent the functional activation of the gas discharge tube inside the driver (see IEC 60598-1-10.2). After the test is completed, the gas discharge tube must be reinstalled to restore the surge protection function of the power line to ground and ensure reliable contact.

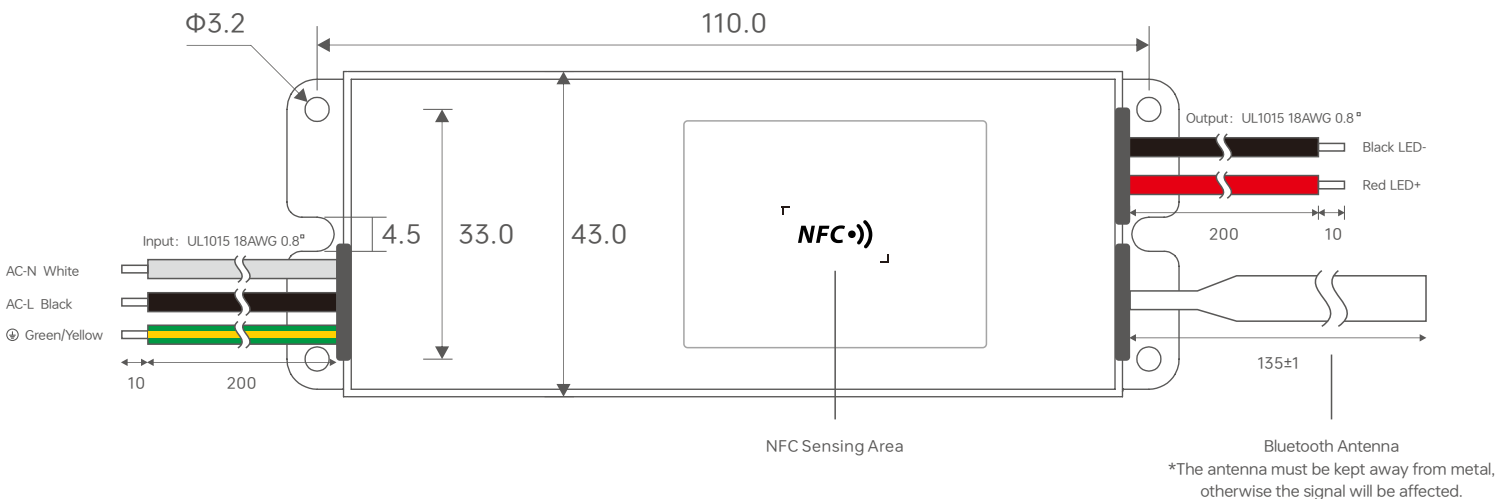
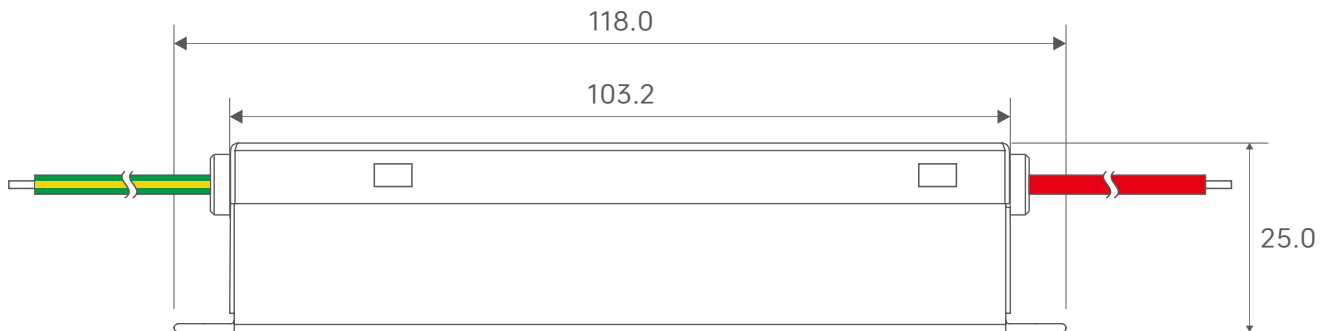
## Typical Current Corresponding Parameter Table

Model	The typical 8 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 100-450mA adjustable in 1mA step								
LA-10-100-450-U1B	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-40Vdc	9-33Vdc	9-28.5Vdc	9-25Vdc	9-22Vdc
	Output Power	0.9-4.2W	1.35-6.3W	1.8-8.4W	2.25-10W	2.7-9.9W	3.15-9.975W	3.6-10W	4.05-9.9W

Model	The typical 13 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 100-700mA adjustable in 1mA step								
LA-20-100-700-U1B	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
	Output Power	0.9-4.2W	1.35-6.3W	1.8-8.4W	2.25-10.5W	2.7-12.6W	3.15-14.7W	3.6-16.8W	4.05-18.9W
	Output Current	500mA	550mA	600mA	650mA	700mA	/		
	Output Voltage	9-40Vdc	9-37Vdc	9-34Vdc	9-31Vdc	9-29Vdc			
	Output Power	4.5-20W	4.5-20.35W	4.5-20.4W	4.5-20.15W	4.5-19.95W			

## Product Size

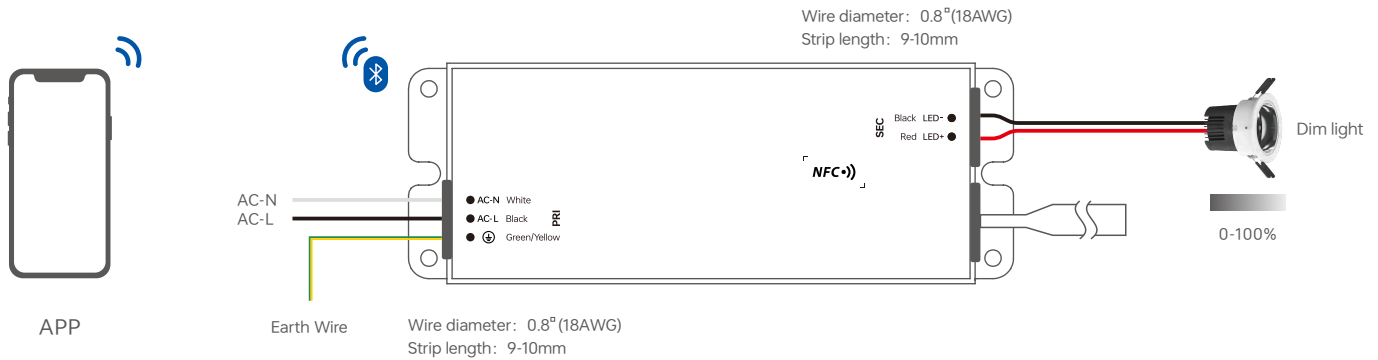
Unit:mm



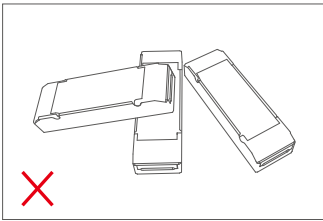
\*The antenna must be kept away from metal, otherwise the signal will be affected.

## Connectivity Diagram

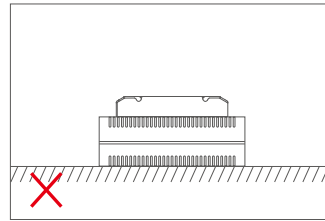
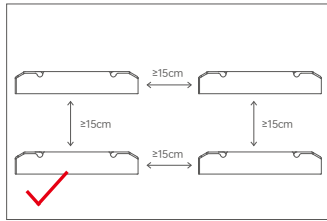
### Wireless Connection Methods



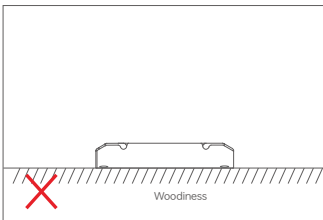
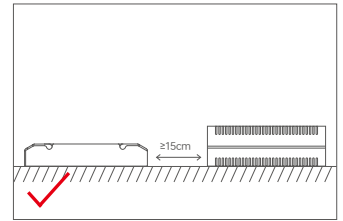
## Installation Precautions



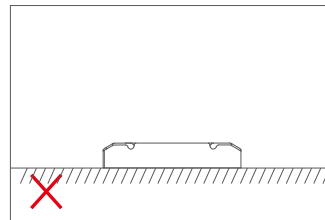
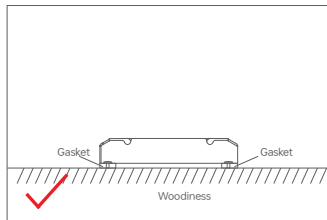
Please do not stack the products. The distance between two products should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and the lifespan of the products.



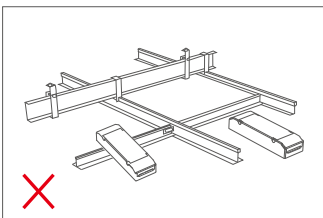
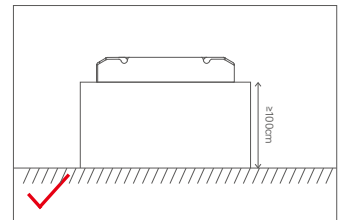
Please do not place the products on the floor. The distance between the product and the floor should be  $\geq 100\text{cm}$  so as to avoid signal interference.



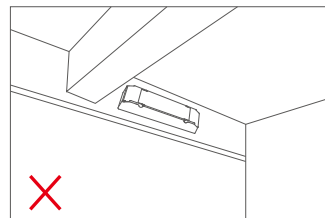
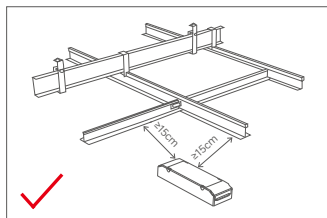
Do not fix the product tightly against the wooden board with screws. Please add a washer  $\geq 7\text{mm}$  thick under the mounting screws to leave a gap for effective heat dissipation, so as to avoid affecting the heat dissipation and service life of the product.



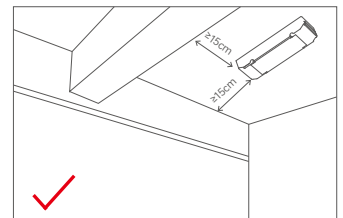
Please do not place the products on the floor. The distance between the product and the floor should be  $\geq 100\text{cm}$  so as to avoid signal interference.



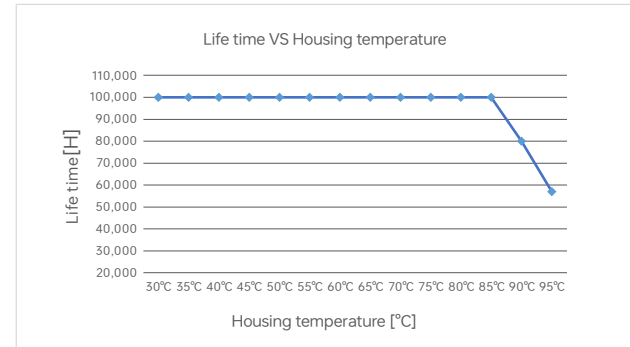
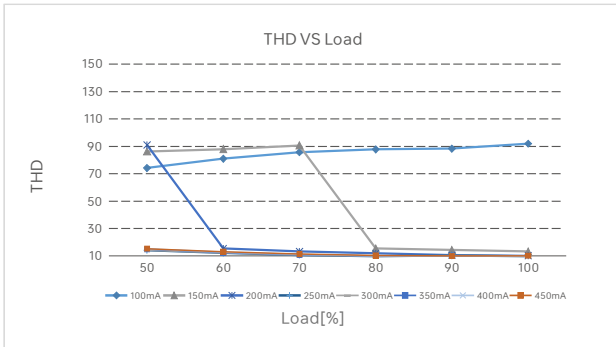
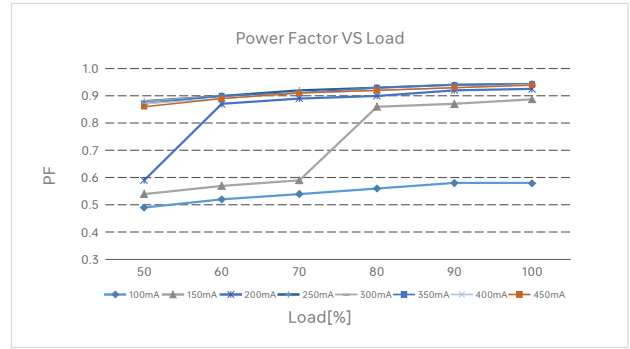
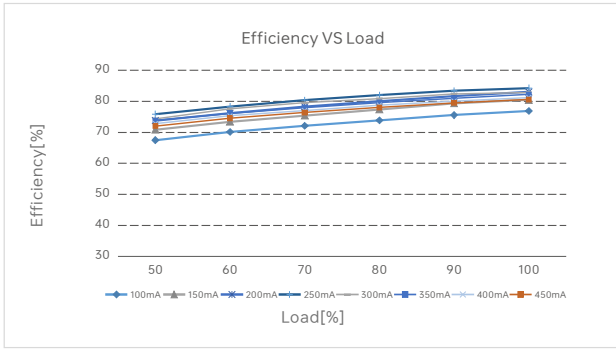
Do not allow the product to come into large-area contact with metal objects (e.g. keel frames). The separation distance shall be  $\geq 15\text{cm}$  to avoid signal interference affecting operation.



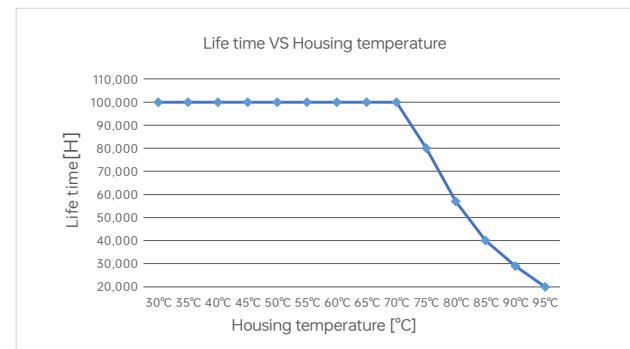
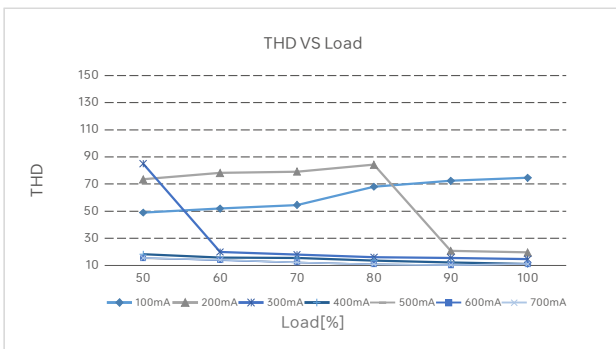
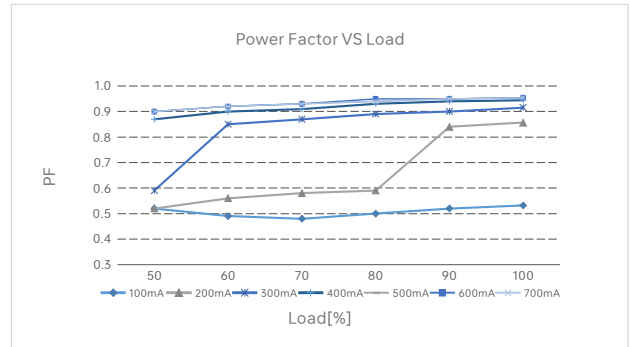
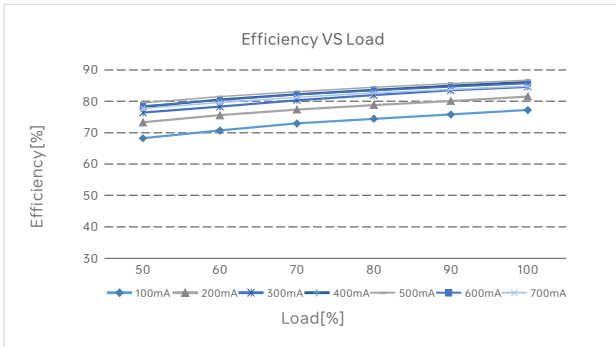
Please do not install the products on beams or near the corners. The distance between the product and the beam or the corner should be  $\geq 15\text{cm}$  so as to avoid signal interference.



## Relationship Diagrams



LA-10-100-450-U1B



LA-20-100-700-U1B

## Surge Current & Corresponding Miniature Circuit Breaker (MCB) Load Capacity Table

MCB Model	B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
Maximum Load Capacity	20	26	32	40	50	23	30	37	47	58	27	34	42	53	66

Remarks:

1. Test Conditions: Cold start 15A(Test twidth=152us tested under 50% Ipeak)/230V~.
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3. It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined based on field conditions.
4. If the ambient temperature exceeds 30°C or multiple MCBs are installed side by side, the number of installed drivers must be reduced and recalculated accordingly.
5. Electricians typically use Type B MCBs for residential lighting and Type C MCBs for commercial lighting applications.
6. Different testing equipment may yield variations in measured current peaks and pulse widths. Always use professional-grade instruments for accurate testing.

## Flicker Test Sheet

IEEE 1789

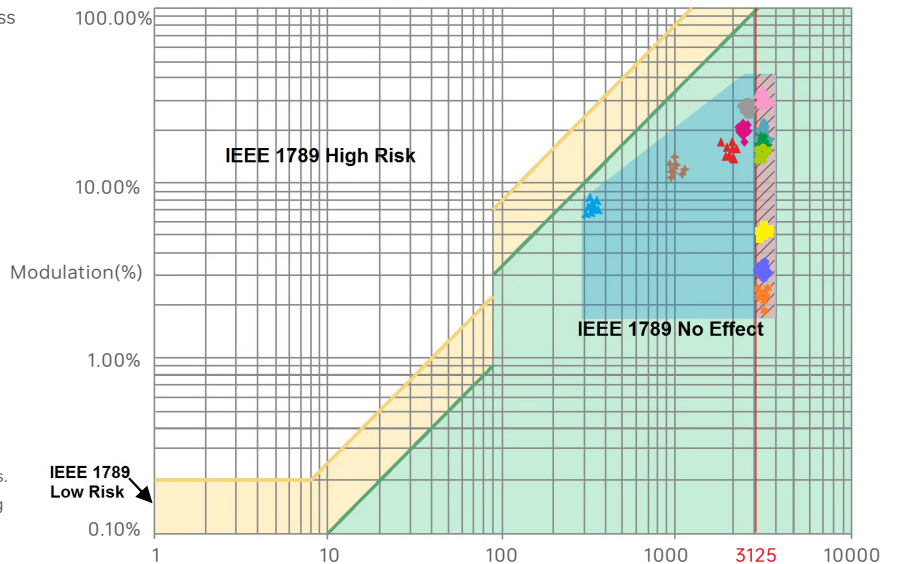
Limit of modulation in low risk area	
Waveform frequency of optical output	limit (%)
$f \leq 8\text{Hz}$	0.2
$8\text{Hz} < f \leq 90\text{Hz}$	$0.025 \times f$
$90\text{Hz} < f \leq 1250\text{Hz}$	$0.08 \times f$
$f > 1250\text{Hz}$	Exemption assessment
Limit of modulation in no effect area	
Waveform frequency of optical output	limit (%)
$f \leq 10\text{Hz}$	0.1
$10\text{Hz} < f \leq 90\text{Hz}$	$0.01 \times f$
$90\text{Hz} < f \leq 3125\text{Hz}$	$(0.08/2.5) \times f$
$f > 3125\text{Hz}$	Exemption assessment (High frequency exemption)

Brightness

- ▲ 0.1%
- ◆ 1%
- ▲ 5%
- ◆ 10%
- 20%
- ▲ 30%
- 40%
- ★ 50%
- 60%
- 70%
- 80%
- ★ 90%
- ◆ 100%

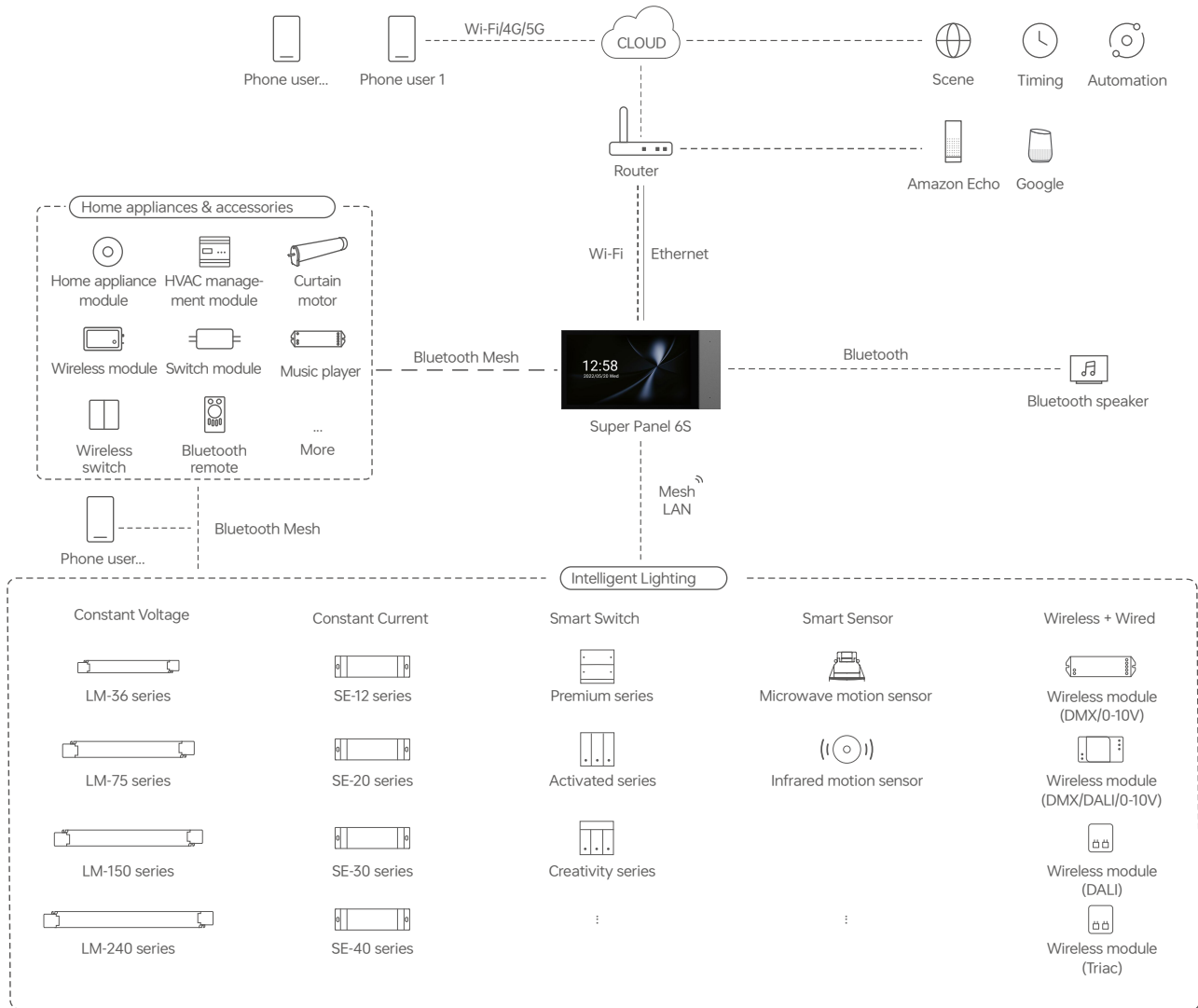
Modulation Area Diagram

High Frequency Exemption Area Diagram



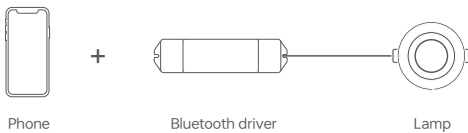
Marks in the right chart were tested results of different current ranges. The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

## Recommend Applications

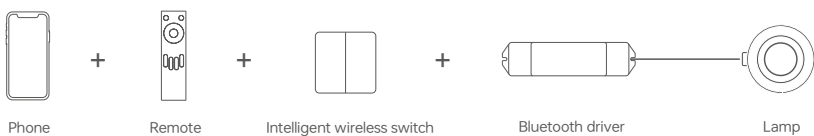


## Recommend Applications

1. Achieve fast dimming control.



2. Both App and remote can control the driver after connecting the remote to the driver with App.



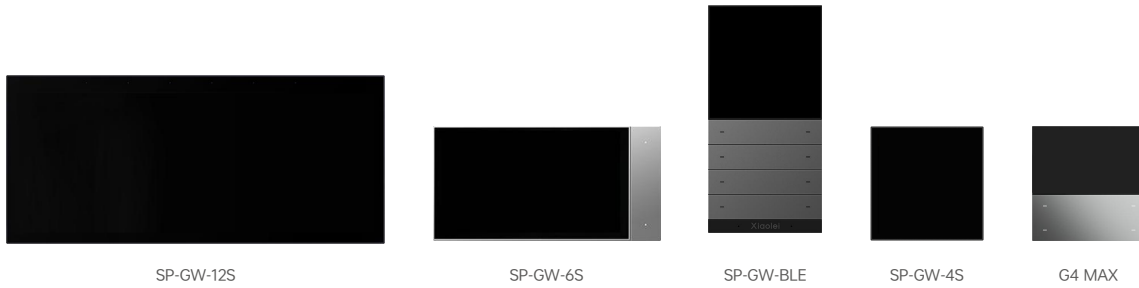
3. Both App and Super Panel 6S can control the driver simultaneously after connecting the Super Panel 6S to the driver with App. By connecting the Super Panel to network, you are allowed to control the driver, cloud scenes and automation remotely with App.



4. More applications of intelligent control are waiting for you to set up.

## List of Compatible Devices

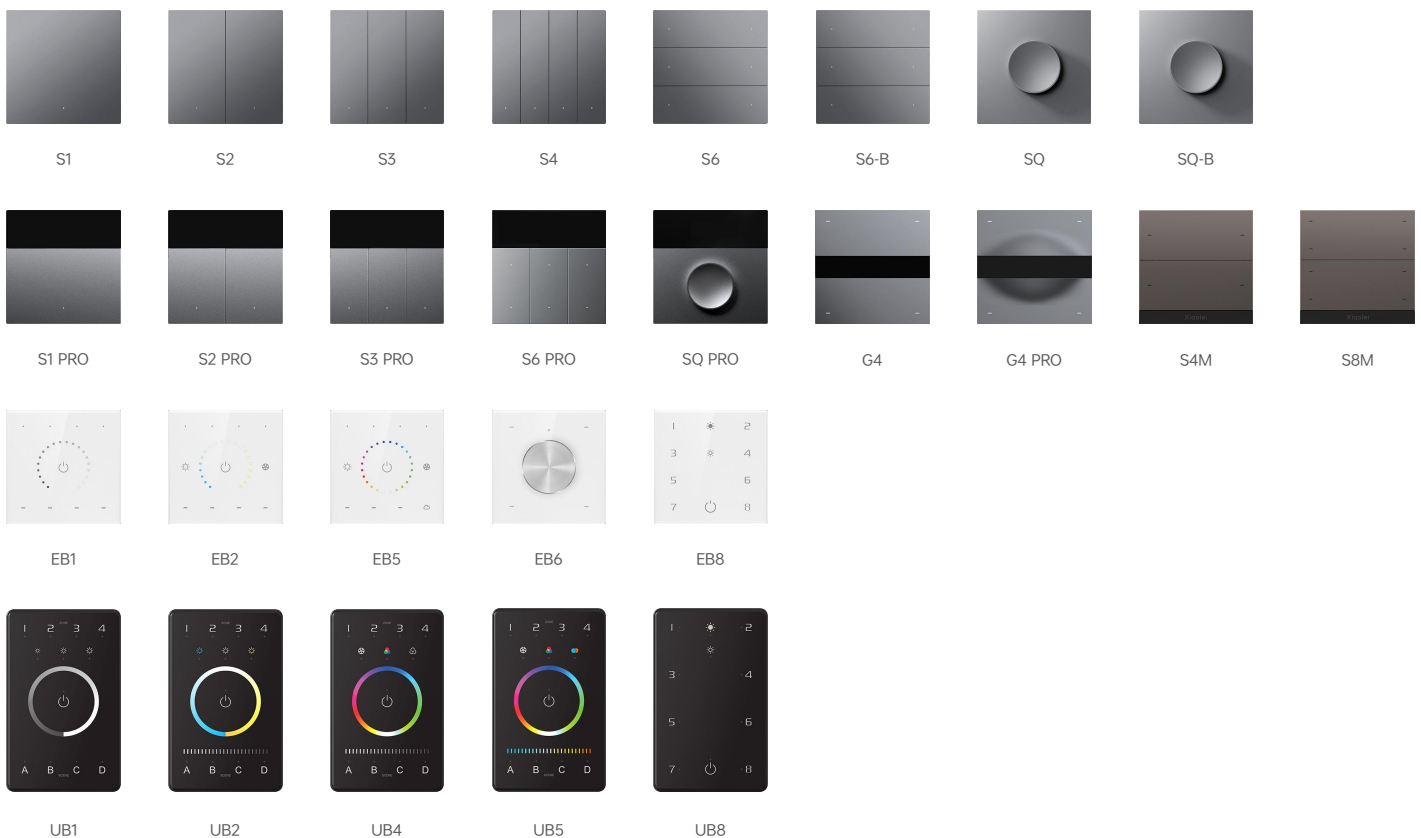
**Smart Gateway:** Serves as the control center of a smart home, enabling interconnection between Bluetooth devices and the cloud, as well as managing and controlling scenes and automation. It realizes remote control of smart devices such as Bluetooth-driven power supplies and switch panels.



**CG-KIT:** Enables the access of Bluetooth-driven power supplies to Apple Home via HomeKit, and also to all IoT platforms supporting the standard Matter protocol through Matter Bridge, including Apple Home, Google Home, Amazon Alexa, Samsung SmartThings, etc.



**Smart Switch:** Can control the on/off, dimming and color tuning of Bluetooth-driven power supplies. When used with a smart gateway, it can realize functions such as App remote control, scene linkage/automation.



**Remote Control:** Can control the on/off, dimming and color tuning of Bluetooth-driven power supplies. When used with a smart gateway, it can realize functions such as scene linkage.



## Use with Bluetooth L-Home APP

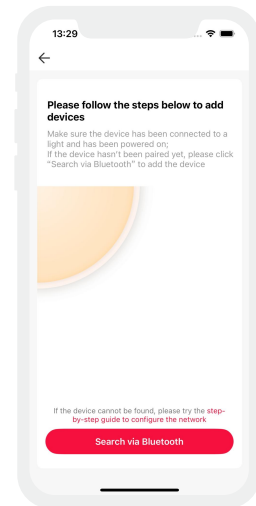
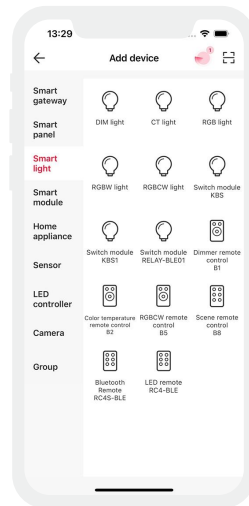
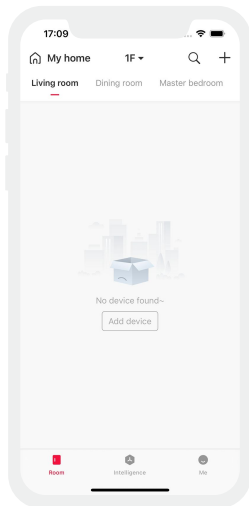
### 1. Register an account

The App is available on iOS or Android devices. Scan the QR code below with you mobile phone and follow the prompts to complete the App installation. Open the App to log in or register an account.



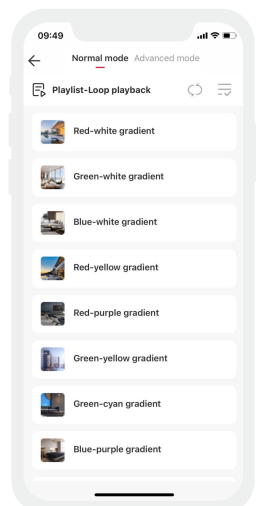
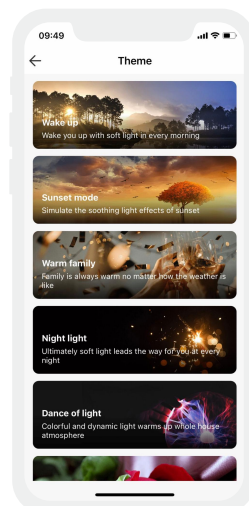
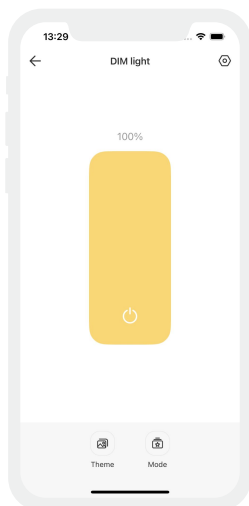
### 2. Paring instructions

Open the APP and create a home if you are a new user. Click “+” icon in the upper right corner and access the “Add Device” list, then follow the prompts to add the device. Pick “Smart lighting-DIM light” from the list and follow the prompts to power on the device firstly. Make sure the device is not connected to the network. Then click “Bluetooth Search” and follow the prompts to add the device.



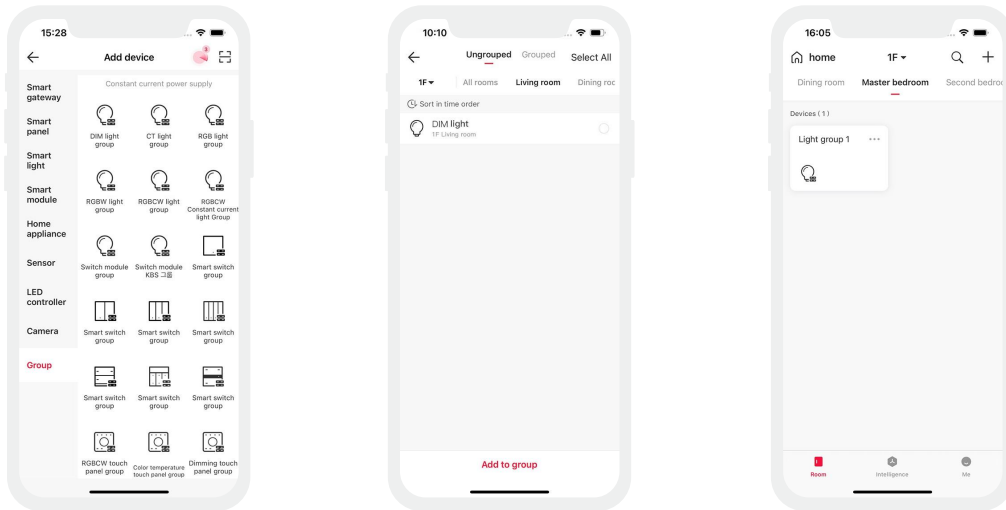
### 3. Control interface settings

After pairing up your device, go to the control interface. You'll be able to achieve your desired lighting effects by changing brightness and color temperature. Click “Theme” and you'll easily switch to multiple theme lighting effects with one tap. Click “Mode” and the App provides you editable advanced modes. Customize dynamic modes to put you into a more colorful life.



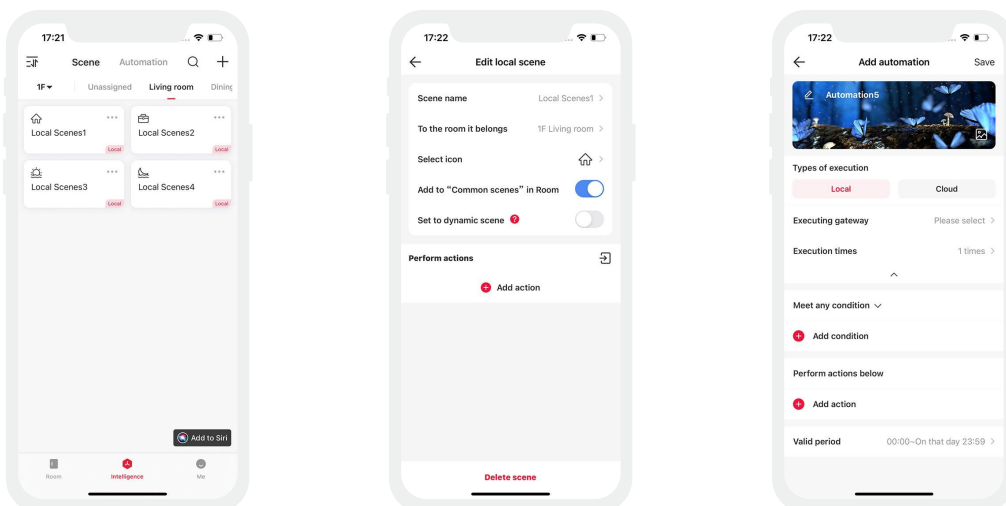
## 4. Light groups

Users are able to combine the same type of light fixtures into a group to control them simultaneously. Once you create the group, you can set the dim level more easily. Pick "Group-DIM light group" from the list. Follow the prompts to rename the group and click "Next" to pick the lights you are going to group together and click "Save".



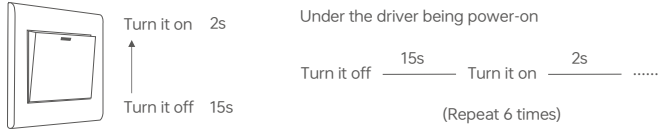
## 5. Advanced functions

This driver can be linked up with gateway function devices (such as Super Panel 12S) to achieve the advanced functions from local scenes and cloud scenes to automation.



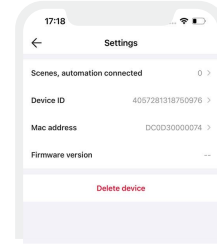
## Reset the Device (Reset to Factory defaults)

Method 1: Ensure the driver is connected to the light fixture and is in a constantly lit state. Use a switch to continuously power on and off the driver 6 times (each power-off time is 15 seconds, and power-on time is 2 seconds). After the sixth power-on time of 2 seconds, the light fixture will flash 3 times, indicating that the driver has been restored to the factory settings.



Method 3: Power off the device, open the NFC Lighting APP and tap Read/Write Smart Power Supply on the home page. On the Parameter Editing page, tap Restore Factory Settings; a write button will pop up on the interface. After a successful write, power the device back on and it will be restored to factory settings.

Method 2: Ensure the device is powered on and online, open the L-Home APP, locate the device and access its settings interface, then tap the Delete Device button. When the interface prompts "Deletion Successful", it indicates the device has been restored to factory settings.



## More Features

### STAR-Tech

- It has achieved an innovative breakthrough of no power-on required and no on-site debugging required. Staff can deploy smart home solutions in advance, preconfigure network access, grouping, scenarios, and other settings in the early stage, which greatly shortens the project cycle and reduces project costs.

### Device Replacement

- When a device is damaged, lost, or offline, you can select a device of the same model to replace it. The new device will synchronize the configuration of the old one, including name, group, mode, scene, automation, and more.

### Device Log

- Record the operation logs of the device.

### Fade Time

- Power-on fading time: The fading time for the light to go from off to on when the device is powered on.
- Light-on fading time: The fading time for the light to go from off to on when the light fixture is turned on.
- Light-off fading time: The fading time for the light to go from on to off when the light fixture is turned off.
- Scene fading time: The fading time for the light's brightness and color during scene switching.

### Power-On State

- The state maintained by the device (full brightness / off / memory / custom) when the device is powered on.

### Dimming Depth

- The default dimming depth is 0.01%, with a maximum dimming depth of 0.0001%.

### Brightness Range

- Customizable adjustable brightness range.

## FAQs

1. What should I do if device addition fails?

- 1.1 Ensure the device is powered on normally and in an activated state;
- 1.2 Ensure the device to be added has not been added to any other account. If it has, manually restore it to factory settings;
- 1.3 Ensure the mobile phone and the device are as close as possible, with a recommended distance of no more than 20 meters;
- 1.4 If the device has been forcibly deleted, manually restore it to factory settings first, then add the device again.

2. What should I do if the device goes offline?

- 2.1 Please check if the device is powered on normally;
- 2.2 Please check if the router is working properly and the network is smooth;
- 2.3 If using remote control, please check if the mobile phone network is working properly and the network is smooth.

3. How to perform remote control / set up cloud scenes?

To use remote control / add and set up cloud scenes, it is necessary to use the company's super panel together.

4. How to Share a Device?

Please go to "My" -> "Family Management", select the family for which you want to share devices, then click "Add Member". Follow the prompts to add the family member or friend with whom you want to share the device to this family, and the sharing process will be completed.

5. Inconsistent dimming for light films or groups in the same area?

There may be differences between hardware of different models. It is necessary to use the same model for group dimming to achieve better dimming consistency.

## Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iPhone 8 and later that are compatible with iOS 13 or higher).



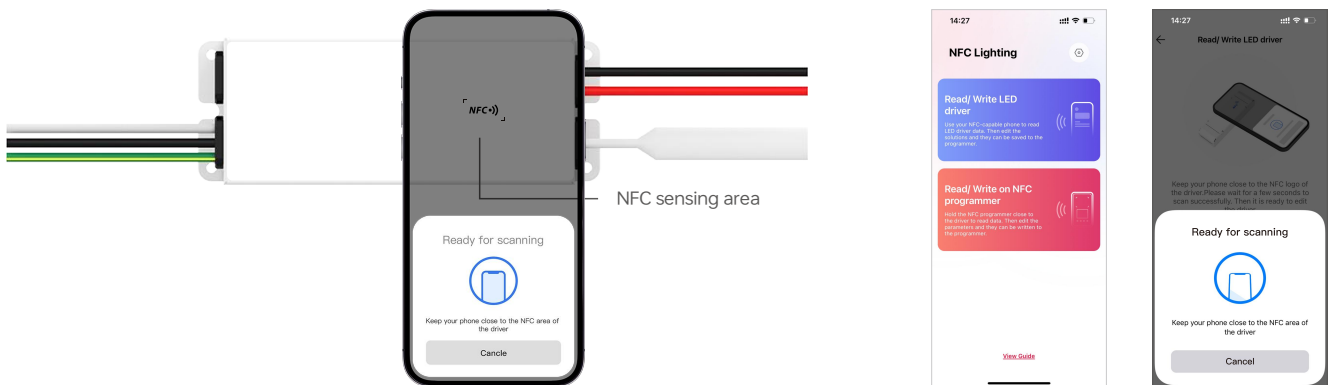
\* Before you begin setting the parameters of the driver, please make sure the driver is powered off .

## Read/Write the LED driver

Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver.

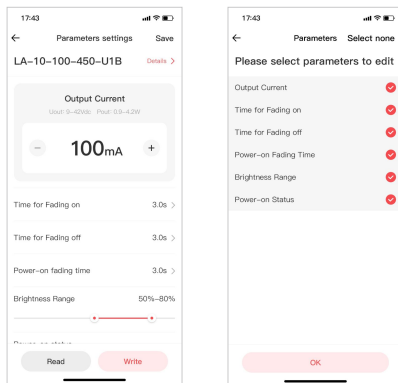
### 1. Read the LED driver

On the APP home page, click **[Read/Write LED driver]** , then keep the programmer's sensing area close to the NFC sensing area of the driver to read the driver parameters.



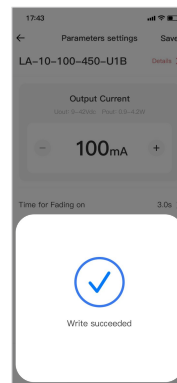
### 2. Edit parameters

Click on [Parameter Management] to edit more advanced parameters such as Output current, Time for Fading on, Time for Fading off, Power-on Fading Time, Brightness Range, and Power-on Status .



### 3. Write to the drive

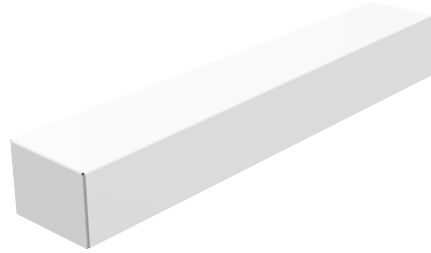
After completing the parameter settings, click **[Write]** in the upper right corner, and keep the programmer's sensing area close to the NFC sensing area of the driver, so the parameters can be written to the driver



## Packaging Specifications

Model	LA-10-100-450-U1B、LA-20-100-700-U1B
Packaging Box Dimensions	152×60×35mm (L×W×H)

## Packaging Image



Inner Packaging Box

## Transportation and Storage

### 1. Transportation

Products can be shipped via vehicles, boats and planes.

During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.

### 2. Storage

The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.

## Attentions

- Products shall be installed by qualified professionals.
  - LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
  - Good heat dissipation will prolong the working life of products. Please ensure good ventilation.
  - Please check if the working voltage used complies with the parameter requirements of products.
  - The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
  - Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
  - If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.
- \* This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.

## Warranty Agreement

- Warranty periods from the date of delivery: 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by LTECH.

1. Repair or replacement provided is the only remedy for customers. LTECH is not liable for any incidental or consequential damage unless it is within the law.
2. LTECH has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

## LED智能调光驱动器(恒流型)

- 金属外壳，易于散热快；
  - 体积小巧，易于安装隐蔽；
  - 超宽电压输入100-277V~；
  - 使用手机APP通过NFC可更改电源参数，实现驱动器数据交互功能；
  - Bluetooth 5.0 SIG Mesh通信协议，组网能力强，可靠稳定
  - 支持iOS和安卓智能设备通过L-Home APP蓝牙本地控制；
  - 支持SP-GW-4S、SP-GW-6S、SP-GW-12S等智能网关远程控制；
  - 调光范围0-100%，LED从0.0001%开始调光；
  - 带软启动渐亮功能，让人眼视觉更舒服；
  - 支持线上OTA升级设备固件
  - 创新的热管理技术，智能保护电源寿命；
  - 过温、过压、过载、短路保护，可自动恢复；
  - IP20，适用于室内LED灯具；
  - 常规使用下寿命可达10万小时；
  - 通过了UL Class 2, Class P认证；
  - 符合IEEE1789、UL8750标准；
  - 5年保修期；
- \* 本产品禁止在中国境内销售使用。



**T-PWM**  
超深度调光技术

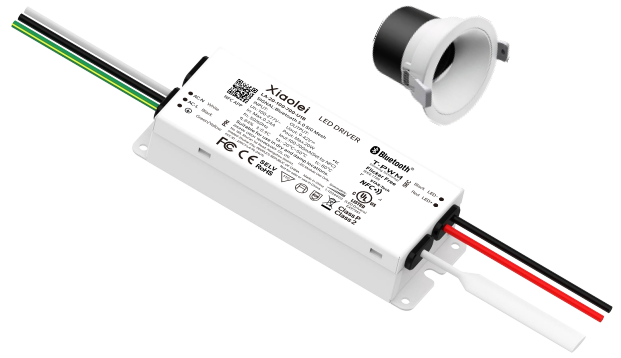
无频闪  
IEEE1789  
高频豁免考核级别

Dimmable:  
1:1000000



Class 2

Class P



## 技术参数

型号	LA-10-100-450-U1B		LA-20-100-700-U1B	
特征	输出类型	恒流		
	调光接口	Bluetooth 5.0 SIG Mesh		
	输出特征	隔离		
	防护等级	IP20		
	绝缘等级	II类(适用于室内I、II、III类灯具)		
输出	输出电压	9-42V $\overline{=}$		
	最大输出电压	$\leq 50V\overline{=}$		
	工作电流范围	100-450mA(通过手机APP NFC设置更多电流, 步进值低至1mA; 默认:100mA)	100-700mA(通过手机APP NFC设置更多电流, 步进值低至1mA; 默认:100mA)	
	负载功率范围	0.9W-10W	0.9W-20W	
	调光范围	0-100%, 调光深度: Max. 0.0001%(通过手机APP NFC设置更多档位, 默认:0.01%)		
	电流纹波	$< 5\%$ (非调光状态)		
	电流精度	$\pm 5\%$		
	PWM调光频率	$\leq 3600\text{Hz}$		
输入	交流电压范围	100-277V~		
	额定电压	115V~/230V~/277V~		
	频率范围	50/60Hz		
	输入电流	Max. 0.11A/115V~, Max.0.06A/230V~, Max. 0.055A/277V~(满载)	Max. 0.21A/115V~, Max.0.11A/230V~, Max. 0.1A/277V~(满载)	
	功率因数	PF $\geq 0.95$ /115V~, PF $\geq 0.9$ /230V~, PF $\geq 0.9$ /277V~(满载)		
	谐波THD	115V~@THD $\leq 10\%$ , 230V~@THD $\leq 15\%$ , 277V~@THD $\leq 20\%$ (满载)		
	效率(Typ.)	80%(满载)	84%(满载)	
	浪涌电流	冷启动, 15A(在50%Ipeak下测twidth=102us)@230Vac		
抗浪涌	L-N: 2KV L,N-FG: 4KV			
漏电流	Max.0.5mA			
环境	工作温度	ta: -20°C~50°C tc: 75°C	ta: -20°C~50°C tc: 80°C	
	工作湿度	20~95%RH, 无冷凝		
	储存温度/湿度	-40~80°C/10~95%RH		
	温度系数	$\pm 0.03\%/^{\circ}\text{C}$ (-20°C~50°C)		
	耐振动	10-500Hz, 2G 12分钟/周期, X, Y, Z轴各72分钟		
保护	过载保护	负载超过额定功率 $\geq 1.02$ 倍时自动保护, 减轻负载自动恢复		
	过温保护	根据PCB温度超标情况( $\geq 110^{\circ}\text{C}$ ), 智能调节电流输出或关闭, 可自动恢复; PCB温度 $< 90^{\circ}\text{C}$ 时, 可自动恢复正常输出		
	过压保护	超过空载电压值进入保护, 可自行恢复		
	短路保护	输出线路短路进入打嗝模式, 可自动恢复		
安规和电磁规格	耐压	输入对输出: 3750V~/1 min / $< 5\text{mA}$ , 输入对地(FG): 1750V~/1 min / $< 5\text{mA}$ , 输出对地(FG): 500V~/1 min / $< 5\text{mA}$ , 信号对地(FG): 500V~/1 min / $< 5\text{mA}$ ①		
	绝缘阻抗	输入对输出: 100M $\Omega$ /500V~/1 min /25°C/70%RH		
	安全规范	CE	欧盟	EN61347-1, EN61347-2-13, EN62384
		UL	美国	UL8750, UL1310, Class P
	电磁兼容发射	CUL	加拿大	CSAC22.2 No.250.13
FCC		美国	FCC part15	
电磁兼容抗扰度	CE	欧盟	EN55015, ENIEC61000-3-2, EN61000-3-3, EN61547	
ErP	频闪/频闪效应	IEEE1789	满足无影响/高频豁免考核级别	
		CIESVM	PstLM $\leq 1.0$ , SVM $\leq 0.4$	
	DF	相位因素	DF $\geq 0.9$	
其他	产品重量	275g $\pm 10\text{g}$		
	产品尺寸	118 $\times 43 \times 25\text{mm}$ (L $\times$ W $\times$ H)		

①备注:当输入对地(FG)进行耐压测试时, 位于驱动器输入端的气体放电管需要被临时性地移除, 以防止驱动器内部的气体放电管功能性动作(参见 IEC 60598-1-10.2)。待测试完成后, 必须被重新安装以恢复电力线对地的浪涌保护功能, 并且确保可靠性接触。

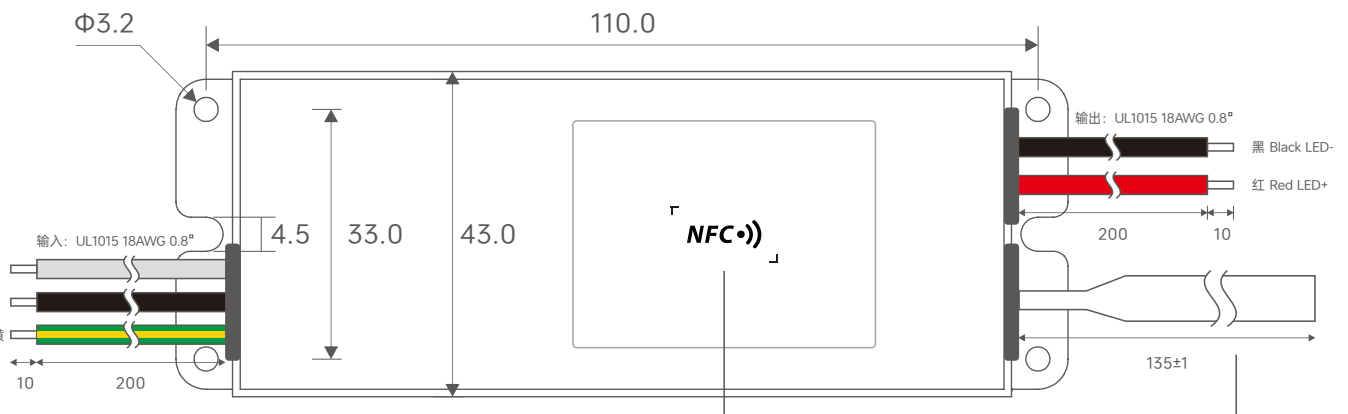
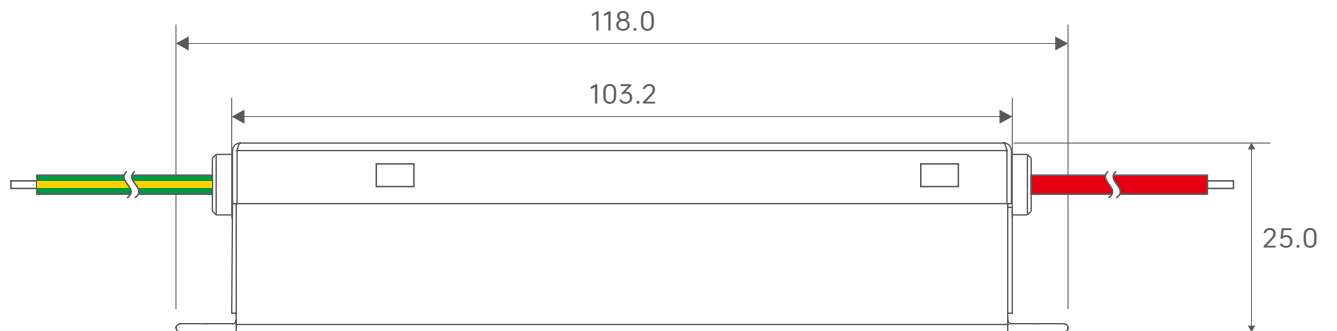
## 典型电流对应参数表

型号	典型8组电流数据供选型参考, 均可通过手机APP NFC设置更多电流, 可设置范围在100-450mA, 电流步进值低至1mA								
LA-10-100-450-U1B	输出电流	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA
	输出电压	9-42Vdc	9-42Vdc	9-42Vdc	9-40Vdc	9-33Vdc	9-28.5Vdc	9-25Vdc	9-22Vdc
	输出功率	0.9-4.2W	1.35-6.3W	1.8-8.4W	2.25-10W	2.7-9.9W	3.15-9.975W	3.6-10W	4.05-9.9W

型号	典型13组电流数据供选型参考, 均可通过手机APP NFC设置更多电流, 可设置范围在100-700mA, 电流步进值低至1mA								
LA-20-100-700-U1B	输出电流	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA
	输出电压	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc	9-42Vdc
	输出功率	0.9-4.2W	1.35-6.3W	1.8-8.4W	2.25-10.5W	2.7-12.6W	3.15-14.7W	3.6-16.8W	4.05-18.9W
	输出电流	500mA	550mA	600mA	650mA	700mA	/		
	输出电压	9-40Vdc	9-37Vdc	9-34Vdc	9-31Vdc	9-29Vdc			
	输出功率	4.5-20W	4.5-20.35W	4.5-20.4W	4.5-20.15W	4.5-19.95W			

## 尺寸图

单位: mm



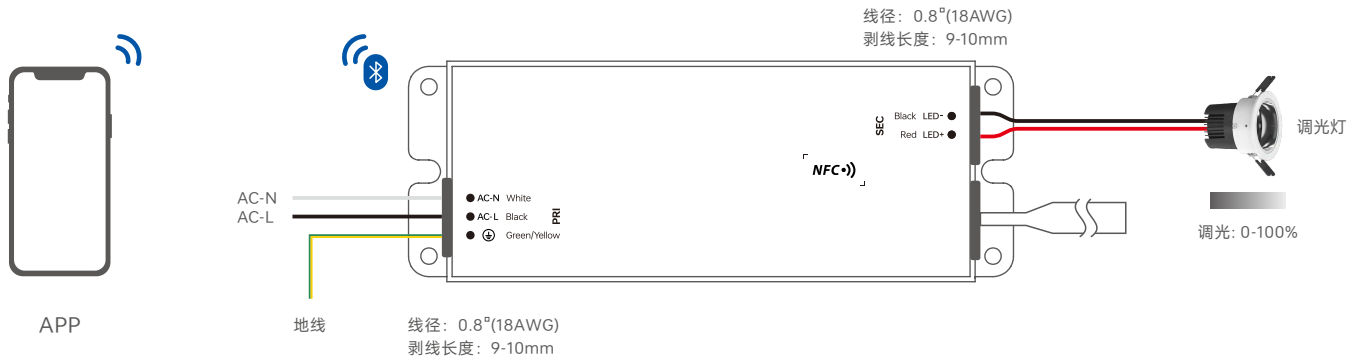
NFC感应区域

蓝牙天线

\*天线不能靠近金属, 否则影响信号

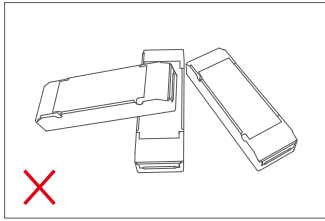
## 接线应用图

### 无线 连接方式

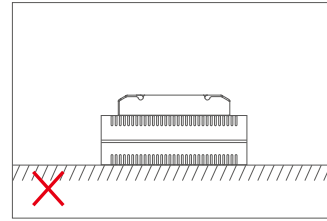
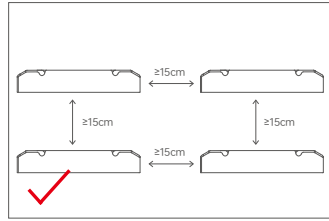


\*通过APP蓝牙入网控制

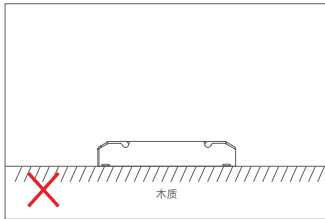
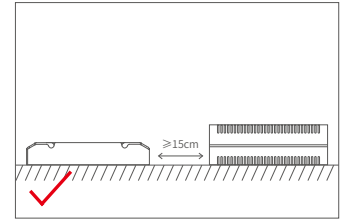
## 安装注意事项



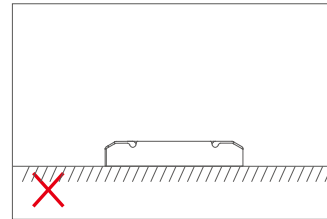
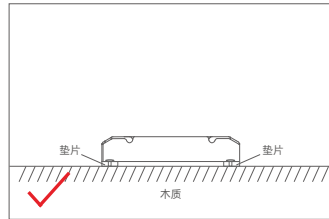
请勿将产品堆叠摆放，产品与产品间隔距离应 $\geq 15\text{cm}$ ，避免影响产品散热和使用寿命。



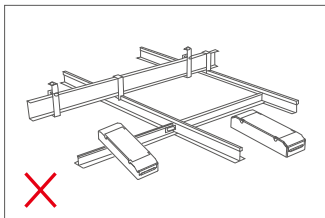
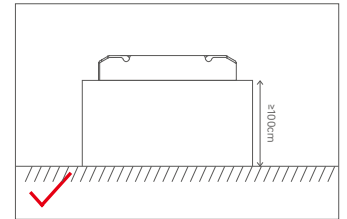
请勿将产品置于电源上方，产品与电源间隔距离应 $\geq 15\text{cm}$ ，避免影响产品散热而减少使用寿命。



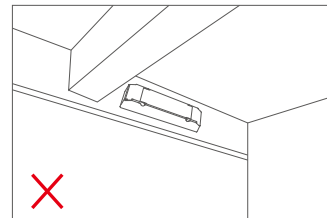
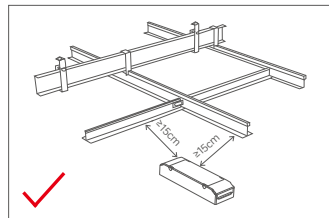
请勿将产品螺丝固定紧贴于木板，应在固定螺丝下增加 $\geq 7\text{mm}$ 的垫片，留点空隙可以有效散热，避免影响产品散热和使用寿命。



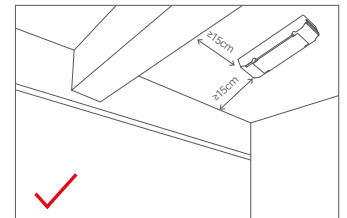
请勿将产品放置在地面上。产品与地面之间的距离应 $\geq 100\text{cm}$ ，以免信号干扰影响使用。



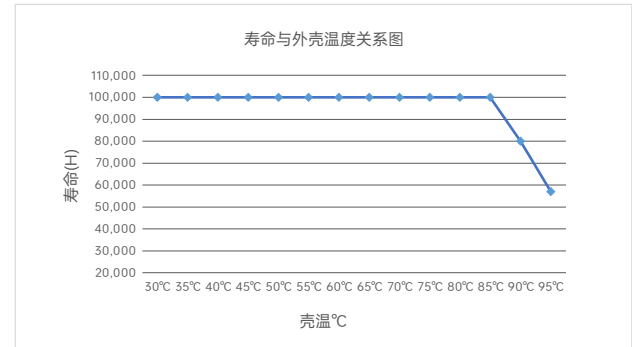
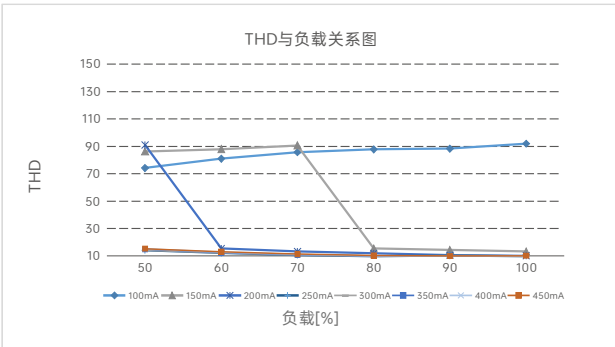
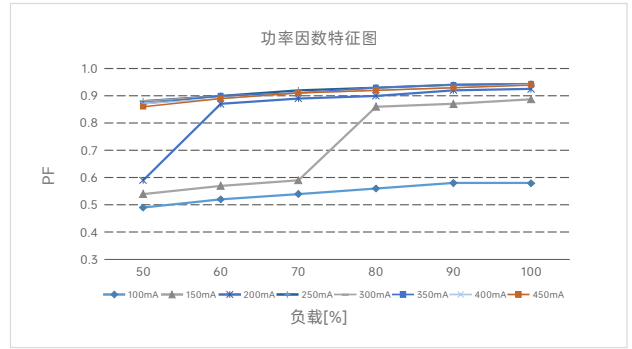
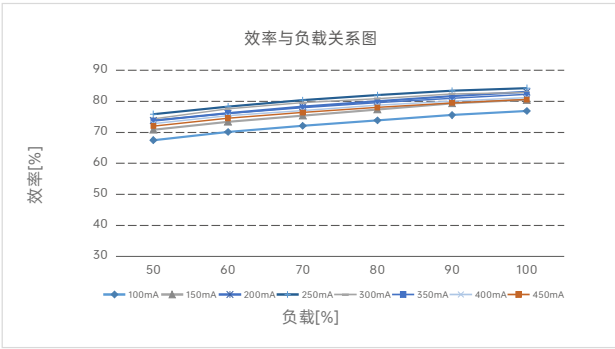
请勿将产品大面积接触金属物体(如: 龙骨架), 间隔距离应 $\geq 15\text{cm}$ ，以免信号干扰影响使用。



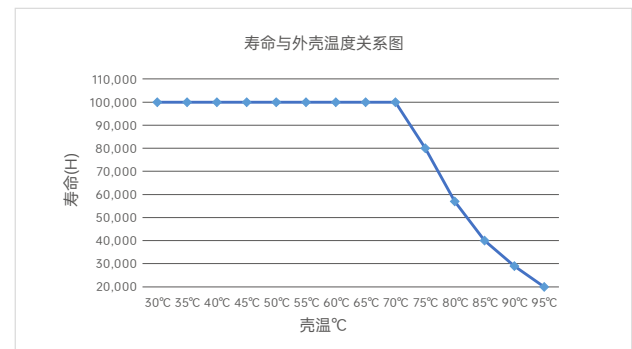
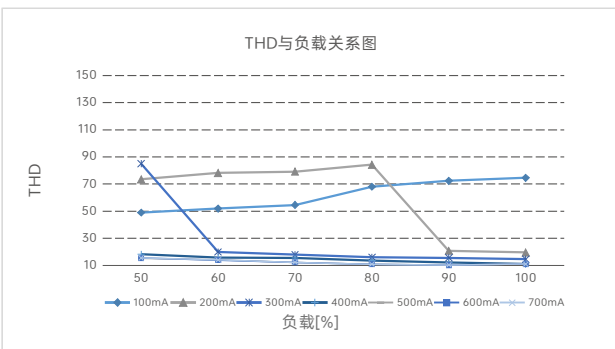
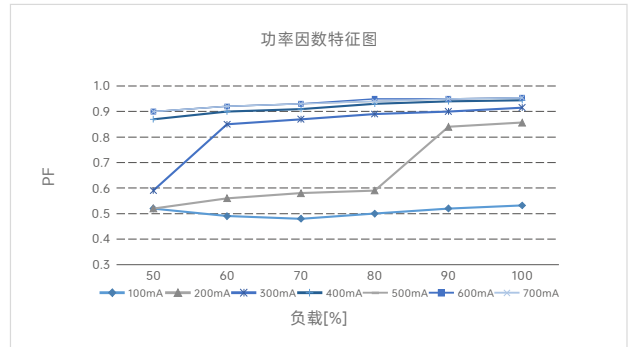
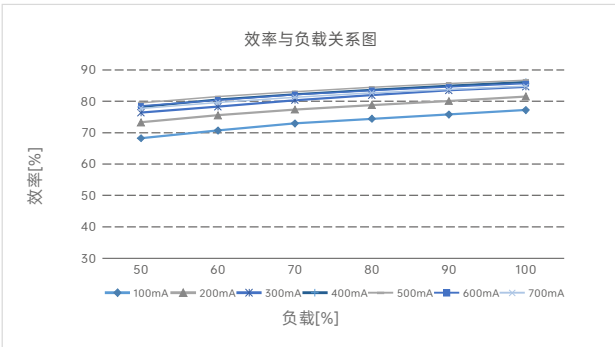
请勿将产品安装在横梁、墙角等位置，间隔距离应 $\geq 15\text{cm}$ ，以免信号干扰影响使用。



关系图表



LA-10-100-450-U1B



LA-20-100-700-U1B

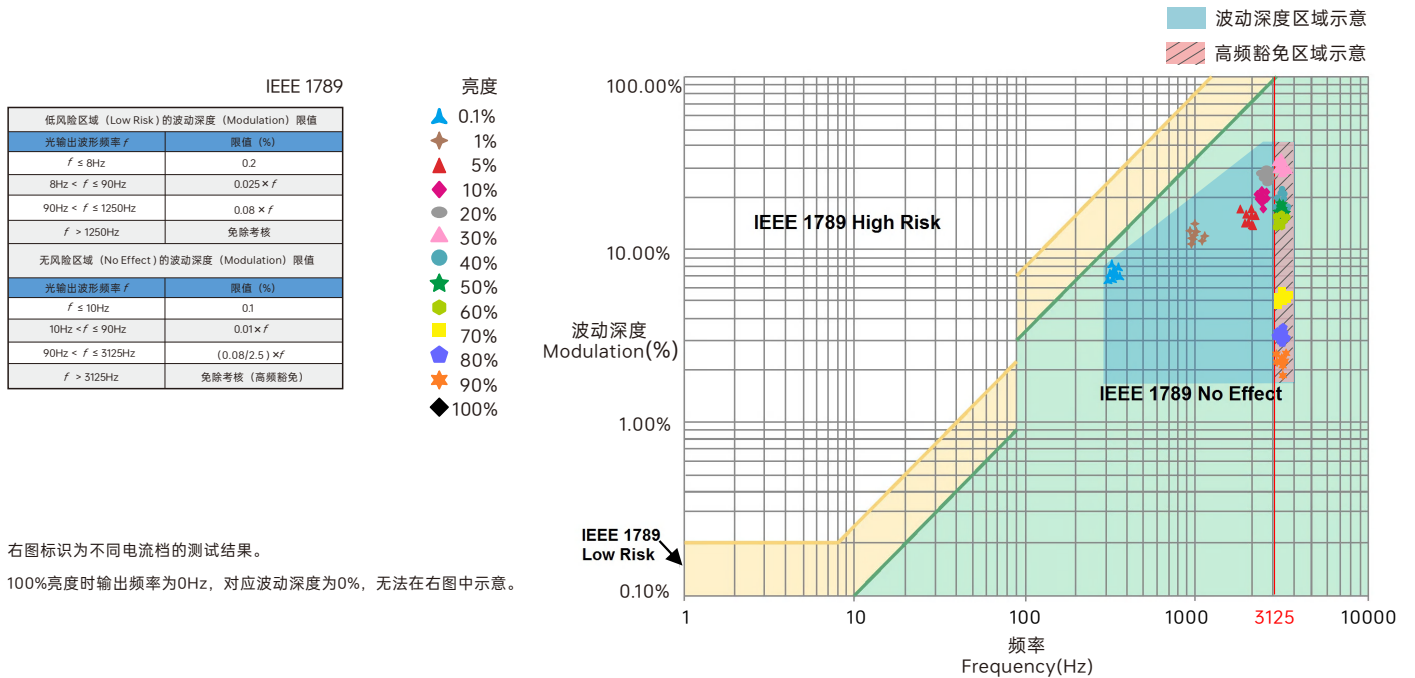
## 浪涌电流&对应的微型断路器(MCB)下挂载的数量对应表

微型断路器型号	B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
最大带载数量	20	26	32	40	50	23	30	37	47	58	27	34	42	53	66

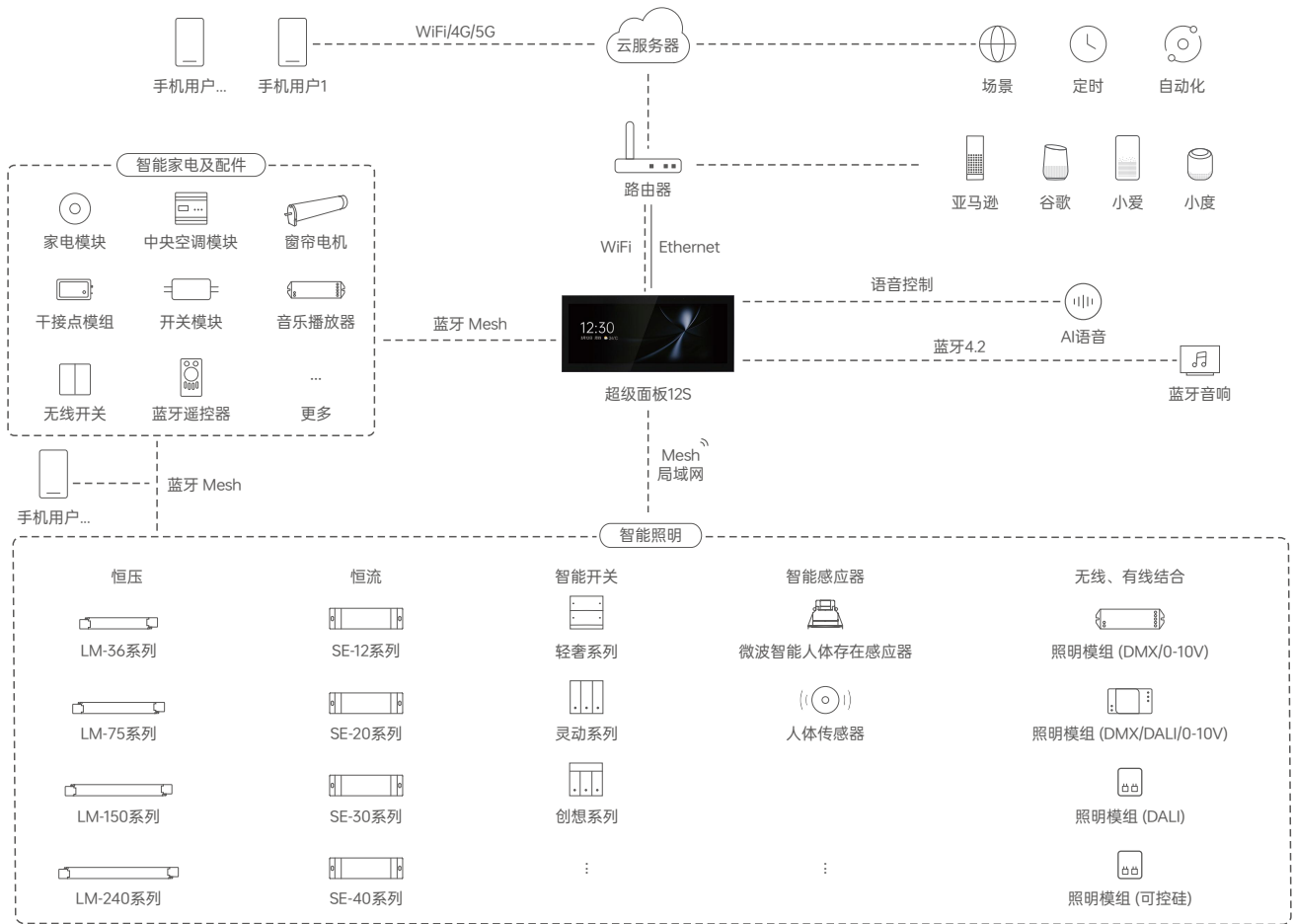
备注:

1. 本数据测试条件: 冷启动, 15A(在50%peak下测试twidth=152us)/230V~
2. 对于不同品牌和型号的微型断路器, 驱动器的数量会有所不同;
3. 现场安装时建议不要超过上述数量, 具体负载量以现场安装为准;
4. 当微型断路器的安装环境温度超过30°C或多个微型断路器并排安装时, 安装的驱动器数量将减少, 这需要重新计算;
5. 电工通常考虑将B型MCB用于家用照明, 将C型MCB用于商业照明;
6. 不同仪器设备测试出来的电流峰值和脉冲宽度有差异, 请使用专业仪器设备测试;

## 频闪测试表

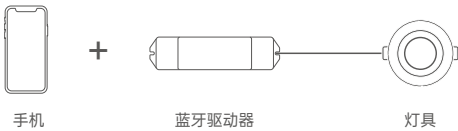


## 系统图

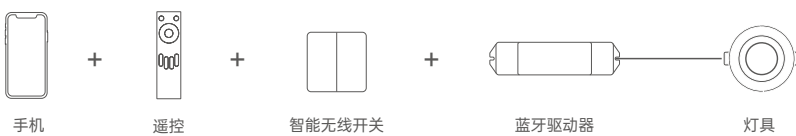


## 推荐应用控制方式

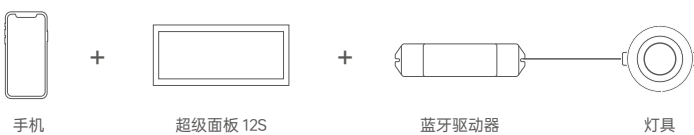
1、快速实现本地调光。



2、通过APP设置遥控关联驱动后，可实现APP与遥控两种控制方式控制驱动。



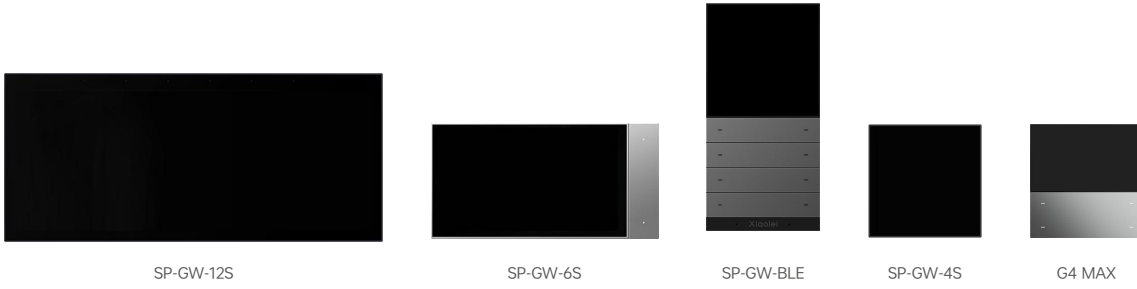
3、通过APP设置面板关联驱动，可实现APP与面板同时控制。并能够通过面板联网，可实现APP远程控制驱动，云场景，自动化联动功能。



4、.....智能控制，更多应用搭配等你来设置。

## 可搭配的设备清单

智能网关：是智能家庭控制中心，用于蓝牙设备和云端之间的互联互通，以及管理和控制场景和自动化，实现远程控制蓝牙驱动电源，开关面板等智能设备。

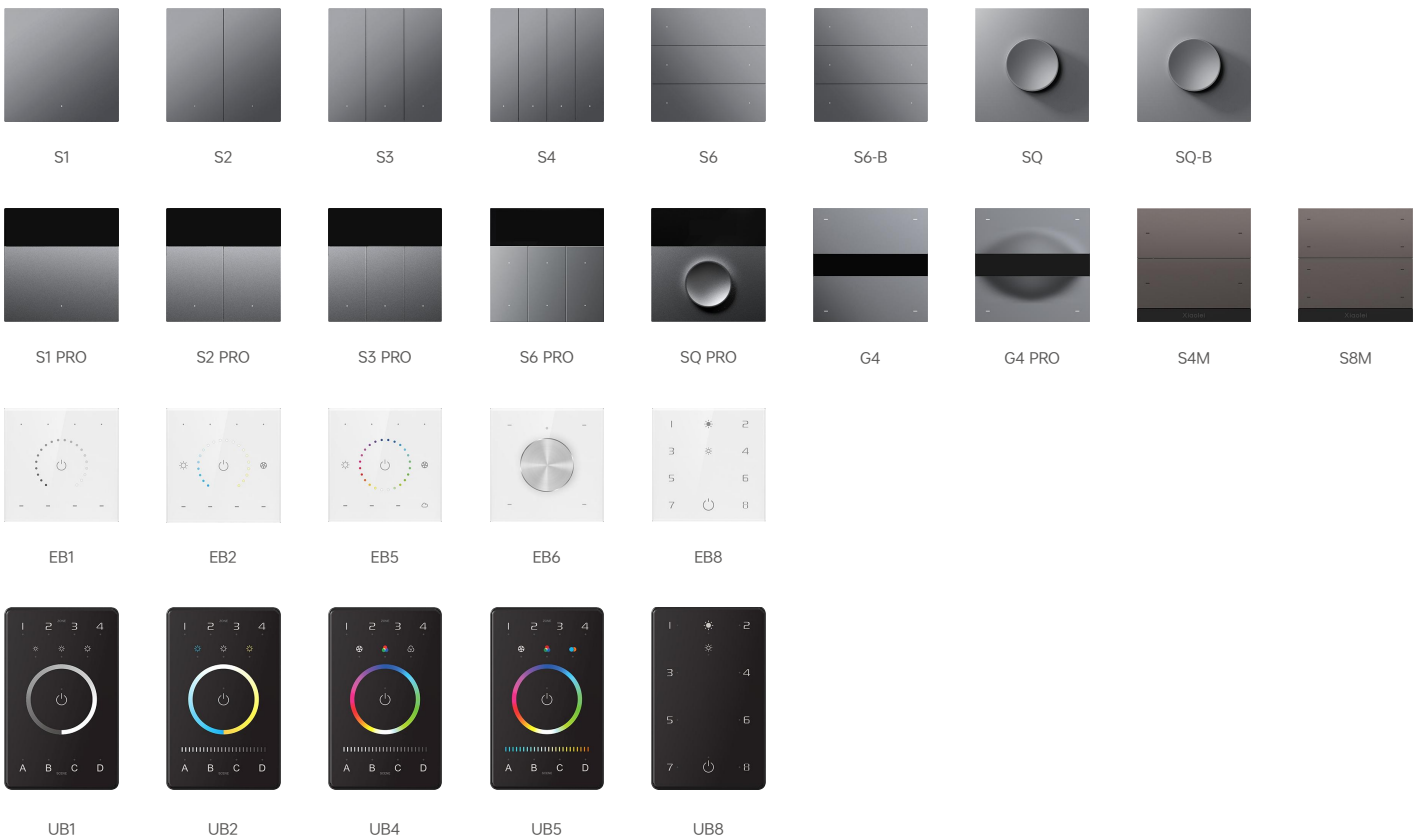


CG-KIT：可以把蓝牙驱动电源通过HomeKit接入 Apple Home，也可以通过Matter Bridge的方式接入所有支持标准Matter协议的IOT平台，包括Apple Home, Google Home, Amazon Alexa, Samsung Smart Things等。



CG-KIT

智能面板：可控制蓝牙驱动电源开/关，调光调色；支持本地场景等功能。



遥控器：可控制蓝牙驱动电源开/关，调光调色；支持本地场景等功能。



## APP操作说明

### 1. 账号注册

APP兼容iOS和Android系统，通过手机扫描下方二维码，按提示完成APP安装,安装后即可进行登录/注册操作。



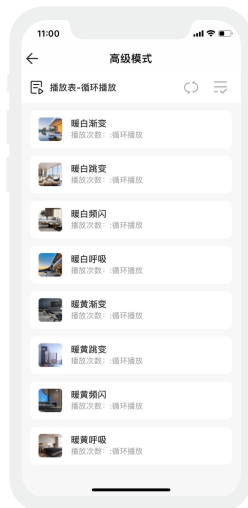
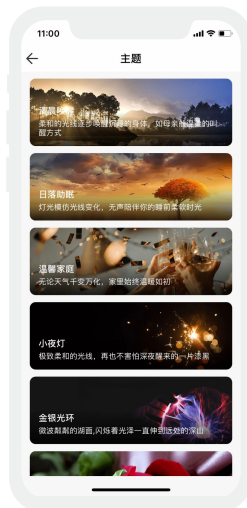
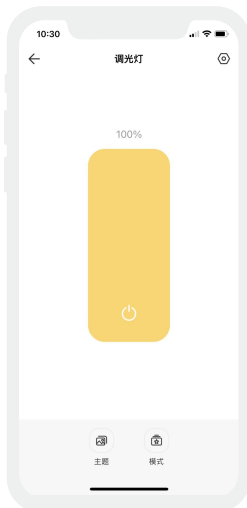
### 2. 配对操作

新用户创建家庭后，点击右上角“+”进入添加设备列表，选择“智能照明-调光灯”后，按照界面提示，先将设备接通电源，确保设备处于未入网状态。点击“蓝牙搜索”后，按照提示完成添加设备。



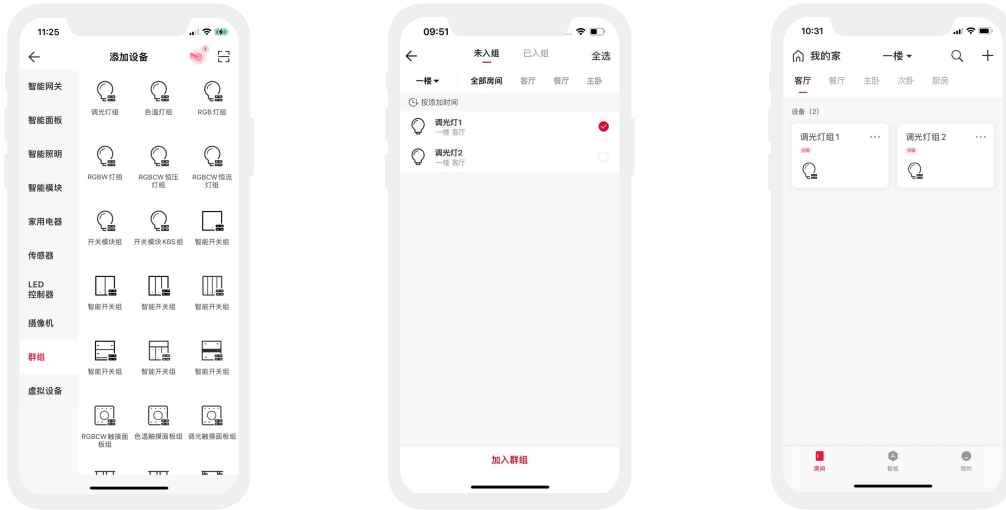
### 3. 控制界面设置

配对完成后，进入控制界面，可以通过调节亮度达到想要的灯光效果。点击“主题”，进入【主题】界面，可一键切换多种主题灯光效果。点击“模式”，具有可编辑的高级模式。自定义动态模式，让您的生活更加丰富多彩。



## 4. 灯具群组

同类型的灯具可以组成群组，用户可以对群组进行调光等操作，操作更便利。在添加设备列表中选择“群组—调光灯组”，按照界面提示编辑灯组名称后，点击“下一步”，勾选您要组成群组的设备，点击“加入群组”即可。



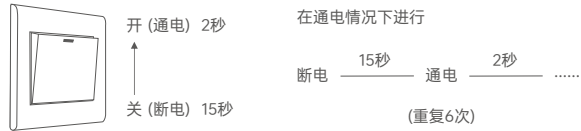
## 5. 高级功能

本产品可以通过与具有网关功能的设备联动，如超级面板12S。可实现本地场景、云场景、自动化等高级功能。



## 重置设备 (恢复出厂设置)

方法一：确保驱动已接灯具且处于常亮状态下，使用开关让驱动连续断通电6次（每次断电时间15秒，通电2秒），第六次通电2秒后，灯具闪烁3次，即表示驱动已恢复到出厂设置状态。



方法二：确保设备已接通电源且处于在线状态，打开L-Home APP，找到该设备并进入其设置界面，点击“删除设备”按钮。当界面提示“删除成功”时，即表示已恢复到出厂设置。



方法三：将设备断电，打开NFC Lighting APP，点击首页“读/写智能电源”后，在“编辑参数”页点击“恢复出厂设置”，界面弹出写入按钮，写入成功后，将设备重新上电，设备即恢复到出厂设置状态。

## 更多功能

### 星际技术

- 实现了免通电、免现场调试的创新突破。工作人员可以在前期提前部署智能家居方案，预设入网、分组、场景等，极大地缩短了工程周期，降低了工程成本。（使用L-Home APP通过NFC感应设置）

### 设备替换

- 当设备损坏、丢失或离线时，可以选择同型号设备进行替换。新设备将同步旧设备的配置，包括名称、群组、模式、场景、自动化等。

### 设备日志

- 记录设备的操作日志。

### 渐变时间

- 通电渐变时间：当设备通电时，灯光由灭到亮的渐变时间
- 开灯渐变时间：当打开灯具时，灯光由灭到亮的渐变时间
- 关灯渐变时间：当关闭灯具时，灯光由亮到灭的渐变时间
- 场景切换时间：场景切换中，灯光亮度，颜色的渐变时间

### 通电状态

- 当设备通电时，设备保持的状态（全亮/不亮/记忆/自定义）

### 调光深度

- 默认为万分之一，最高可实现百万分之一的调光深度。

### 亮度范围

- 自定义可调节的亮度范围。

## 常见问题

### 1. 设备添加失败怎么办？

- 1.1 确保设备正常通电，并且处于激活状态；
- 1.2 需要添加的设备未被其他账号添加过，如被添加过，请手动恢复出厂；
- 1.3 确保手机与设备两者尽量靠近，建议不超过20米；
- 1.4 如设备已被强制删除，请手动恢复出厂，然后重新添加设备。

### 2. 设备离线怎么办？

- 2.1 请检查设备是否正常通电；
- 2.2 请检查路由器是否工作正常，网络畅通；
- 2.3 如使用远程控制，请检查手机网络是否工作正常，网络畅通。

### 3. 如何远程控制/云场景设置？

如需远程控制/添加云场景设置，需搭配本司超级面板方可使用。

### 4. 如何共享设备？

请在“我的”-“家庭管理”，进入需要共享的家庭，点击“添加成员”，请按提示将需要设备共享的家人/朋友加入该家庭即完成共享。

### 5. 用于灯膜或同一个区域群组调光不一致？

不同型号硬件之间会有差异，需要用同一型号群组调光以达到更好的调光一致性。

## 搭配 NFC Lighting APP 使用

通过手机扫描下方二维码，按提示完成APP安装。

(因性能需求，要求手机型号苹果：iPhone 8及以上、且操作系统iOS13及以上； 安卓：具备NFC功能机型)



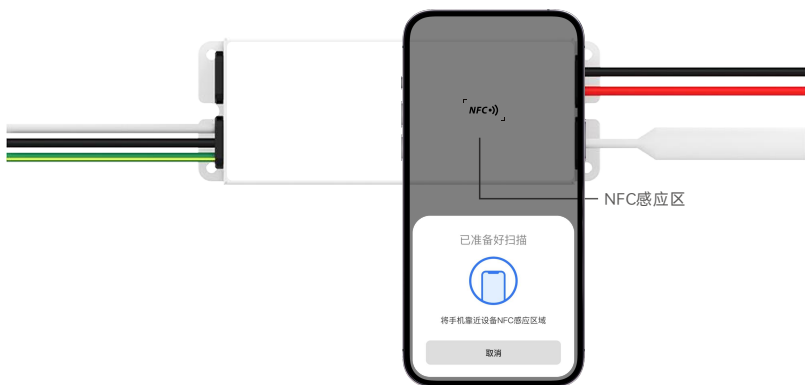
\* 设置驱动器参数时，必须在驱动器断电情况下进行操作。

## 读/写智能电源

使用手机，通过NFC读取驱动器信息，根据需求设置参数后，可直接写入驱动器。

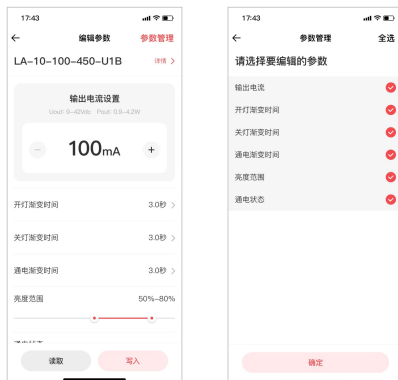
### 1. 读取驱动器

在APP“首页”点击【读/写智能电源】，将手机感应区域靠近驱动器NFC感应区，读取驱动器参数。



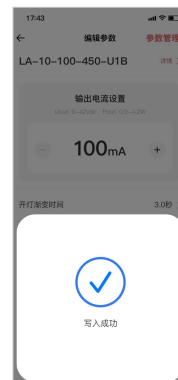
### 2. 编辑参数

点击【参数管理】可编辑输出电流、开灯渐变时间、关灯渐变时间、通电渐变时间、通电状态等更多高级参数。



### 3. 写入驱动器

参数设置完成后，点击【写入】，将手机感应区域靠近驱动器NFC感应区，即可写入驱动器成功修改参数。



## 包装规格

型号	LA-10-100-450-U1B、LA-20-100-700-U1B
包装盒尺寸	152×60×35mm (L×W×H)

## 包装样式图



内包装盒

## 运输和贮存

### 1.运输

产品适用车、船、飞机交通运输工具运输。

在运输中，应使用遮篷进行防雨和防晒，并保持文明装卸，不应有剧烈振动、撞击等。

### 2.贮存

贮存符合I类环境的规定。贮存期限超过6个月的产品建议重新检验，合格后方可使用。

## 注意事项

- 请由具有专业资格的人员进行调试安装。
- 雷特产品（专有型号除外）不能防水，需避免日晒雨淋，如安装在户外，请用防水箱和防雷装置。
- 良好的散热条件会延长产品的使用寿命，请把产品安装在通风良好的环境。
- 请检查使用的工作电压是否符合产品的参数要求。
- 使用的电线直径大小必须能够负载连接的LED灯具，并确保接线牢固。
- 通电调试前，应确保所有接线正确，以避免因接线错误而导致灯具损坏。
- 如果发生故障，请勿私自维修；如有疑问，请联系供应商。

\* 本说明书的内容如有变更，恕不另行通知。若内容与您使用的功能有所不同，则以实物为准。如有疑问，请与供应商联系。

## 保修条例

- 自出厂之日起保修服务期为5年。
- 在保修服务期内出现产品质量问题雷特科技将给予免费修理或更换服务。

非保修条例：

属下列情况不在免费保修或更换服务范围之内：

- 已经超出保修服务期；
- 过高电压、超负载、操作不当等人为造成的损坏；
- 产品外形严重损坏或变形；
- 自然灾害以及人力不可抗拒原因造成的损坏；
- 产品保修标签和产品唯一条形码损坏；
- 无雷特科技签订的合同或发票凭证。

1. 修理或更换是雷特科技对客户唯一的补救措施。雷特科技不承担任何附带引起的损害赔偿，除非在适用法律范围之内。

2. 雷特科技享有修正或调整本保修条款的权利，并以书面形式发布为准。