

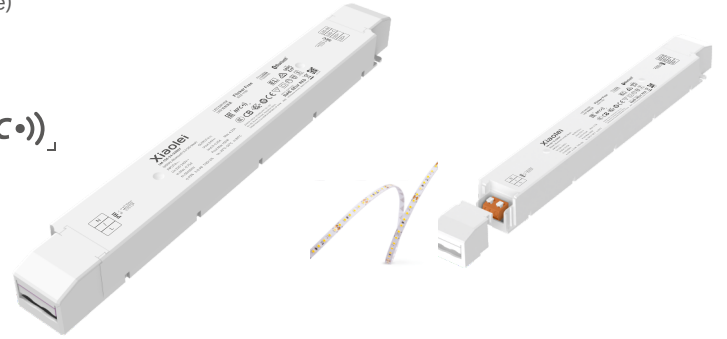
## Intelligent Tunable White LED Driver (Constant Voltage)

- The housing is made of V0 flame-retardant PC material, sourced from SAMSUNG/COVESTRO.
- Features a tool-free clamshell design with detachable end caps, allowing length adjustment as needed.
- The gradient time, PWM, color temperature range, etc. can be changed through NFC via the mobile phone APP to achieve the data interaction function of the driver.
- Bluetooth 5.0 SIG Mesh with high networking capability are reliable and stable.
- Support control iOS or Android devices through Bluetooth connection. It is equipped with a soft-start gradually brightening.
- Function, making the visual experience more comfortable for the human eye.
- Provides two-channel independent SELV outputs.
- Supports deep dimming from 0-100%, with a minimum dimming level of 0.0001%.
- Color temperature range is configurable from 1000K to 10000K, with a default range of 2700K to 6500K.
- High-efficiency driver with 93% efficiency, power factor > 0.98, and THD < 6%.
- In compliance with the EU ERP Directive, standby power consumption is below 0.5W.
- Equipped with an advanced thermal management system to protect internal components.
- Includes protections against overheating, overload, short circuit, and open circuit.
- Suitable for Class I / II / III indoor luminaires.
- Designed for a service life exceeding 100,000 hours under normal operating conditions.
- 5-year warranty (Rubycon capacitor).



Flicker-Free  
IEEE 1789  
Achieve the exemption level.

Dimmable:  
1:1000000



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



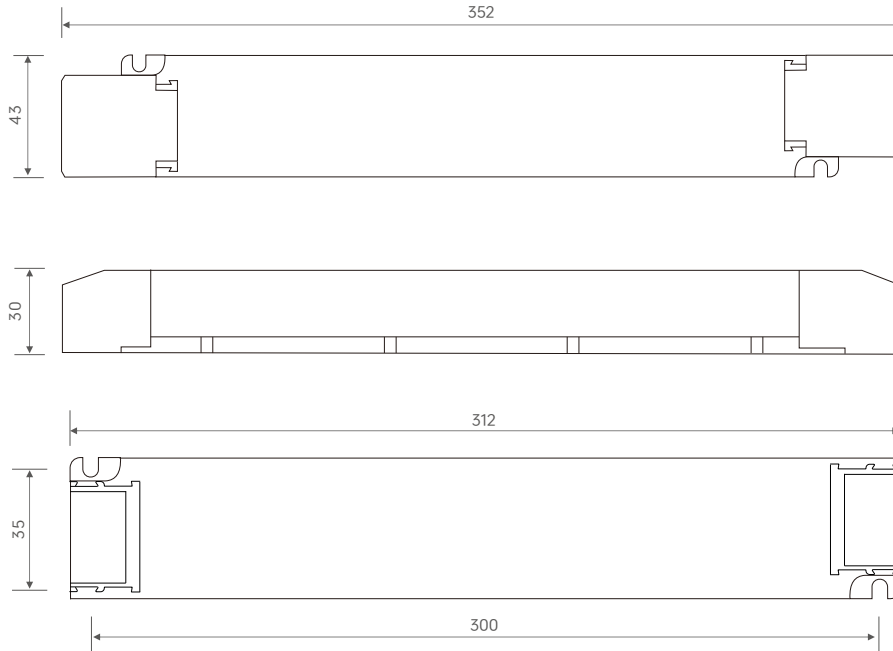
## Technical Specs

Model	LM-150-24-G2B2F	LM-150-12-G2B2F		
Features	Output Type	Constant Voltage		
	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	24V $\overline{=}$	12V $\overline{=}$	
	Output Voltage Range	24V $\pm$ 0.5V $\overline{=}$	12V $\pm$ 0.5V $\overline{=}$	
	Output Current	Max. 6.25A	Max. 12.5A	
	Output Power	Max. 150W		
	Output Power Range	0~150W		
	Strobe Level	High frequency exemption level		
	Dimming Range	0~100%, down to 0.0001%		
	Overload Power Limitation	$\geq$ 102%		
	Ripple	Switch ripple $\leq$ 200mV, noise $\leq$ 500mV	Switch ripple $\leq$ 200mV, noise $\leq$ 800mV	
	PWM Frequency	300-22000Hz		
INPUT	AC Voltage Range	220-240V~		
	DC Voltage Range	220-240V $\overline{=}$ (EMI needs to be evaluated after the luminaire is installed)		
	Frequency	50/60Hz		
	Input Current	Max. 0.75A/230V~		
	Power Factor	PF>0.98/230V~ (at full load)		
	THD	THD<6%@ 230V~ (at full load)		
	Efficiency (Typ.)	93%	92%	
	Standby Power Loss	< 0.5W		
	Inrush Current	Cold start 45.6A(Test twidth=500us tested under 50% Ipeak)/230V~		
	Anti Surge	L-N: 2KV		
Leakage Current	Max. 0.5mA			
ENVIRONMENT	Working Temperature	ta: -20 ~ 50°C tc: 85°C		
	Working Humidity	20 ~ 95%RH, non-condensing		
	Storage Temperature/Humidity	-40 ~ 80°C, 10~95%RH		
	Temperature Coefficient	$\pm$ 0.03%/°C(0-50°C)		
	Vibration	10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively		
PROTECTION	Overload Protection	Shut down the output when rated power $\geq$ 102%, auto recovers		
	Overheat Protection	Intelligently adjust or turn off the output current if the PCB temperature $\geq$ 110°C, and recover automatically		
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically		
	Overvoltage Protection	Shut down the output when no-load voltage $\geq$ 28V, and recover automatically	Shut down the output when no-load voltage $\geq$ 16V, and recover automatically	
	Withstand Voltage	I/P-O/P: 3750V~		
SAFETY & EMC	Insulation Resistance	I/P-O/P: 100M $\Omega$ /500VDC/25°C/70%RH		
	SafetyStandards	CCC	China	GB19510.1, GB19510.14, GB19510.213
		TUV	Germany	EN61347-1, EN61347-2-13, EN62493
		CB	CB MEMBER STATES	IEC61347-1, IEC61347-2-13
		CE	European Union	EN61347-1, EN61347-2-13, EN62384
		KC	Korea	KC61347-1, KC61347-2-13
		EAC	Russia	IEC61347-1, IEC61347-2-13
		RCM	Australia	AS 61347-1, AS 61347-2-13
		ENEC	Europe	EN61347-1, EN61347-2-13, EN62384
	BIS	Europe	EN61347-1, EN61347-2-13, EN62384	
	EMC Emission	CCC	China	GB/T17743, GB17625.1
		CE	European Union	EN55015, EN61000-3-2, EN61000-3-3, EN61547
		KC	Korea	KN15, KN61547
		EAC	Russia	IEC62493, IEC61547, EH55015
		RCM	Australia	EN55015, EN61000-3-2, EN61000-3-3, EN61547
ErP		Power Consumption	Networked standby	< 0.5W(After shutdown by command)
		Flicker/Stroboscopic Effect	No-load power consumption	No no-load mode
	IEEEE1789		Meet IEEE 1789 standard/High frequency exemption level	
	CIE SVM		PstLM $\leq$ 1.0, SVM $\leq$ 0.4	
DF	Phase factor	DF $\geq$ 0.9		
OTHERS	Weight(N.W.)	430g $\pm$ 10g		
	Dimensions	352 $\times$ 43 $\times$ 30mm(L $\times$ W $\times$ H)		

This driver is suitable for connecting to resistor-limited LED fixtures (e.g., LED strips). If connected to fixtures with built-in constant-current ICs, it may generate instantaneous surge currents dozens of times higher, triggering overload protection (hiccup-mode flickering). For such fixtures (e.g., MR16 bulbs, buried lights, wall washers, constant-current rigid strips), please specify during ordering to enable firmware reprogramming.

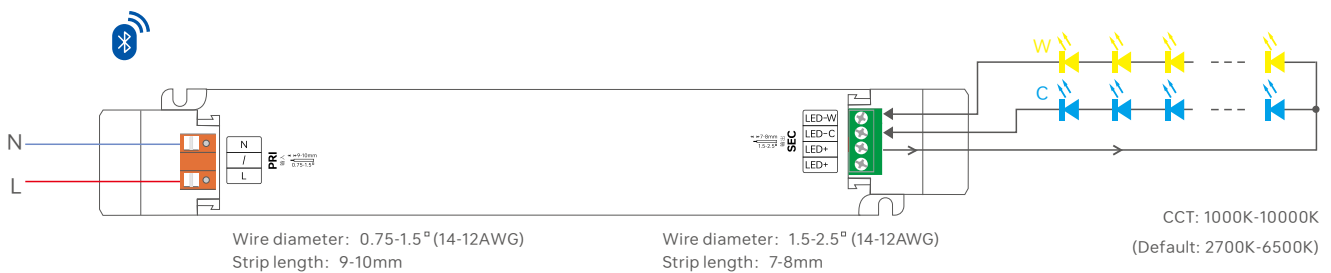
## Product Size

Unit: mm



## Wiring Diagram

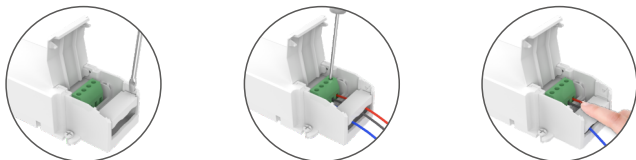
### Wireless connection method



\* Control through Bluetooth network access via the APP

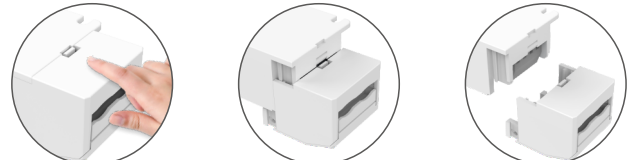
## Protective Housing Application Diagram

### Tension plate



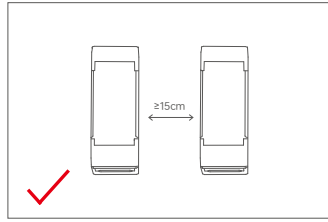
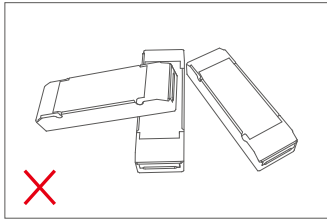
1. Pry up the protecting housing in the side plate position with a tool.
2. Connect to electrical wires with a screwdriver as wiring diagram shows.
3. Press down the tension plate to fix the the electrical wires, then close the protective housing.

### Remove the protective housing

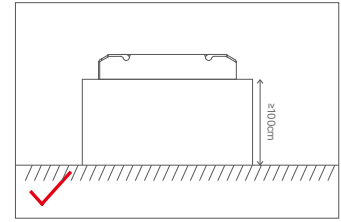
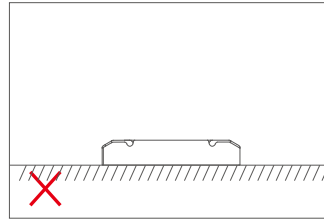


Pull the housing left and right from the bottom to remove it.

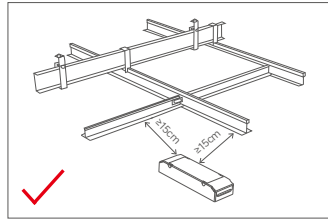
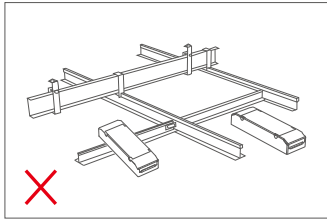
## Installation Precautions



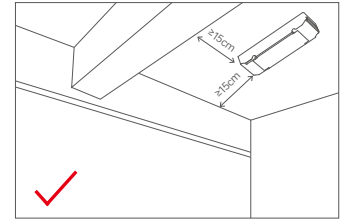
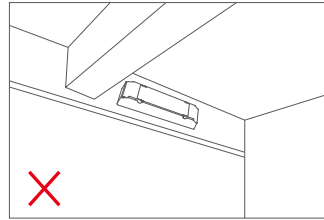
Please do not stack the products. The distance between two products should be  $\geq 15\text{cm}$  so as not to affect heat dissipation and the lifespan of the products.



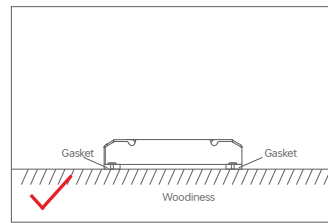
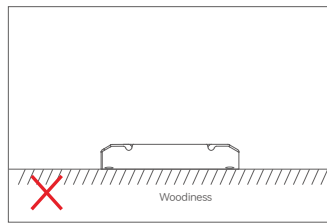
Please do not place the products on the floor. The distance between the product and the floor should be  $\geq 100\text{cm}$  so as to avoid signal interference.



Please do not place the products near a large area of metal objects (such as metal stud ceilings). The distance between the product and the metal object should be  $\geq 15\text{cm}$  so as to avoid signal interference.

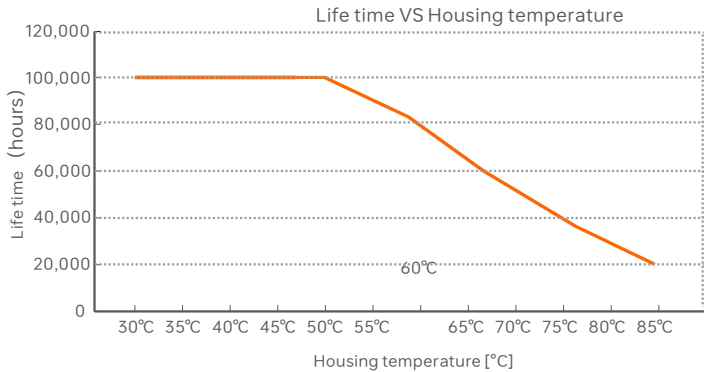
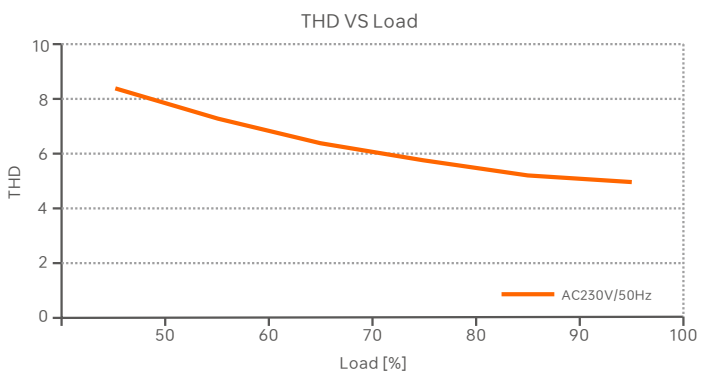
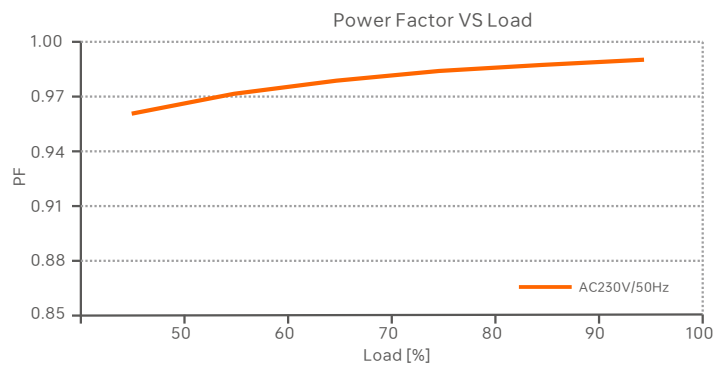
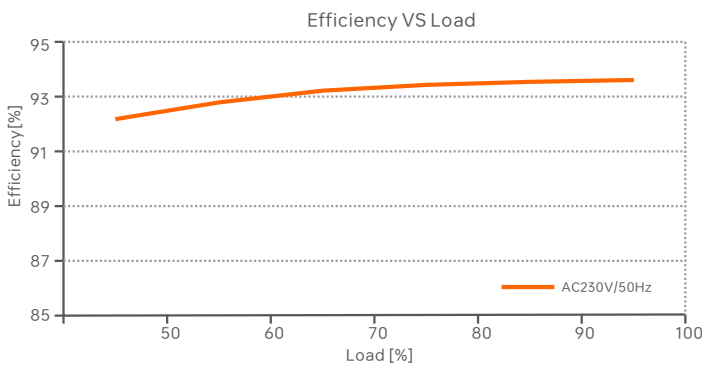


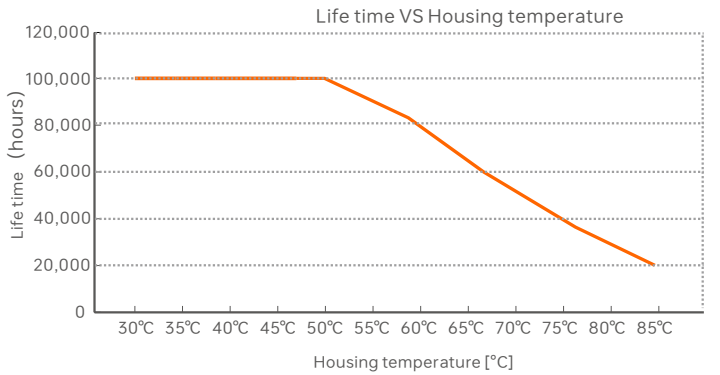
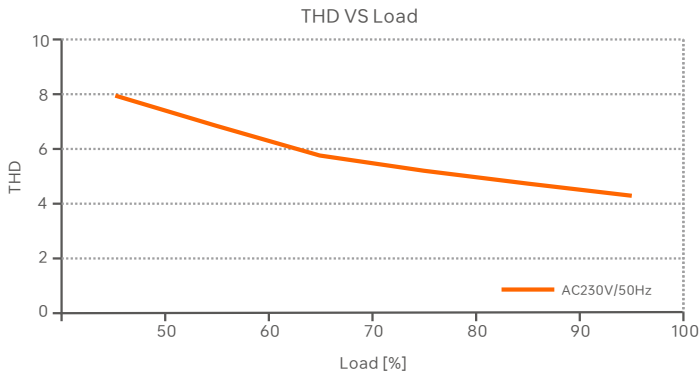
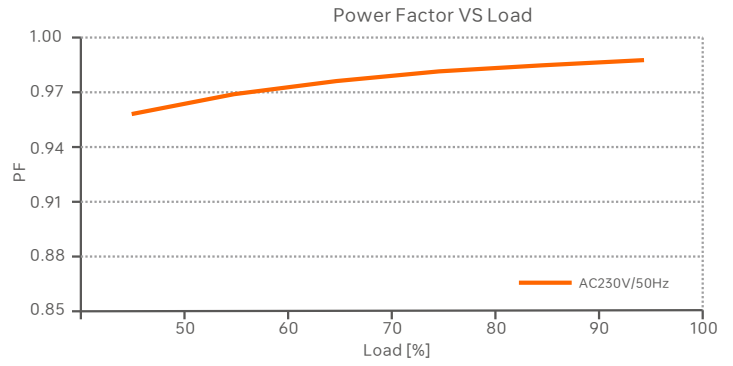
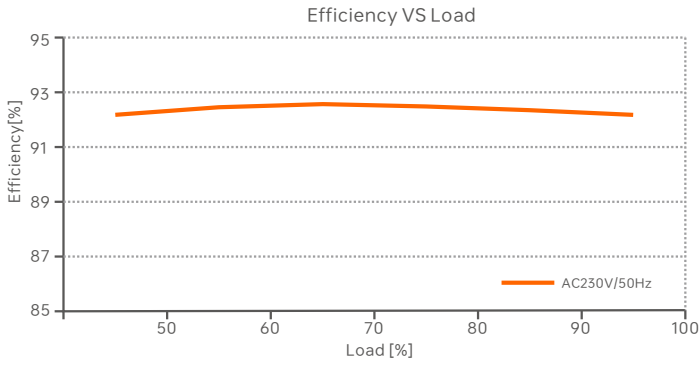
Please do not install the products on beams or near the corners. The distance between the product and the beam or the corner should be  $\geq 15\text{cm}$  so as to avoid signal interference.



Do not fix the product screws tightly against the wooden board. Instead, add a washer with a thickness of  $\geq 7\text{mm}$  under the fixing screws. Leaving some gaps can effectively dissipate heat, preventing any impact on the product's heat dissipation performance and service life.

## Relationship Diagrams





LM-150-12-G2D2F

## 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	4	5	6	8	11	7	9	11	14	18	9	11	15	20	26

Remarks:

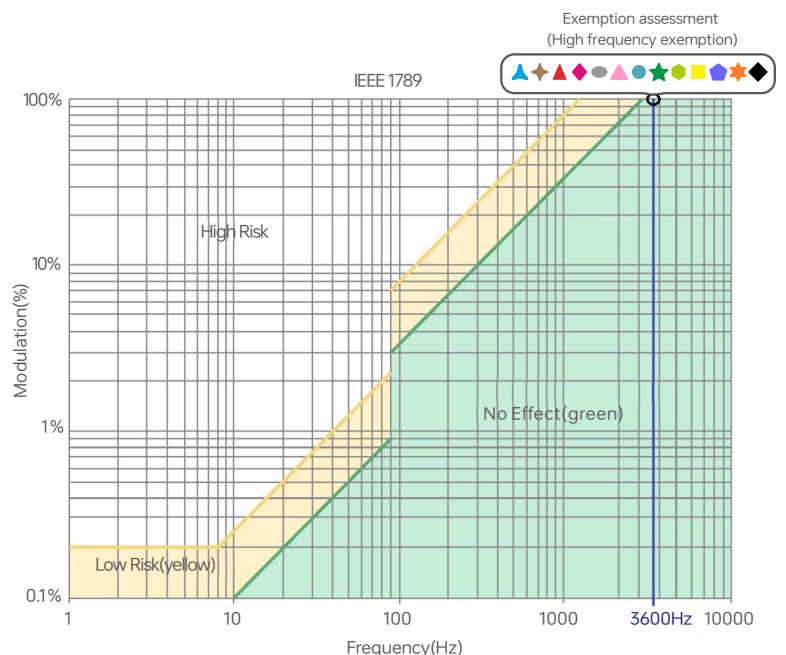
1. Test Conditions: Cold start 45.6A (Test twidth=500us tested under 50% Ipeak)/230V~
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3. It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined 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 Table

IEEE 1789	
Limit Value of Modulation in Low Risk Areas	
Waveform frequency of Optical output (f)	Limit value (%)
f ≤ 8Hz	0.2
8Hz < f ≤ 90Hz	0.025 × f
90Hz < f ≤ 1250Hz	0.08 × f
f > 1250Hz	Exemption assessment
Limit Value of Modulation in No Effect Areas	
Waveform frequency of Optical output (f)	Limit value (%)
f ≤ 10Hz	0.1
10Hz < f ≤ 90Hz	0.01 × f
90Hz < f ≤ 3125Hz	(0.08/2.5) × f
f > 3125Hz	Exemption assessment (High frequency exemption)

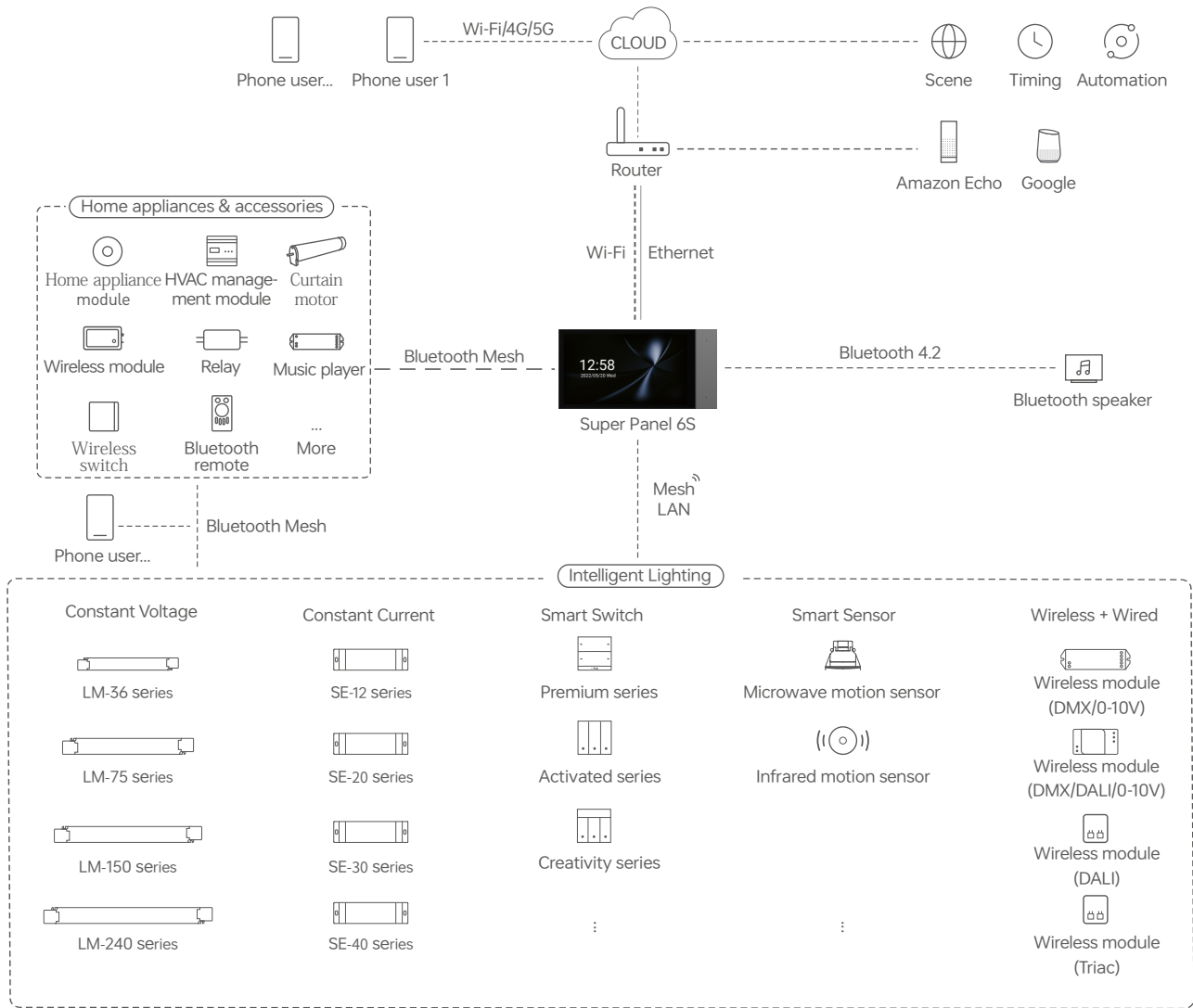
Brightness

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



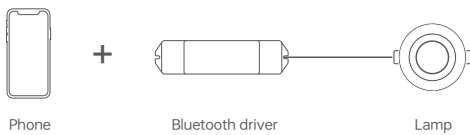
Marks in the right chart are tested results of different current levels. The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

## Recommend Applications

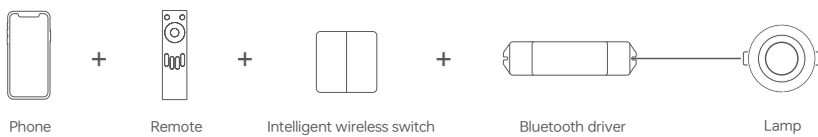


## Recommend Applications

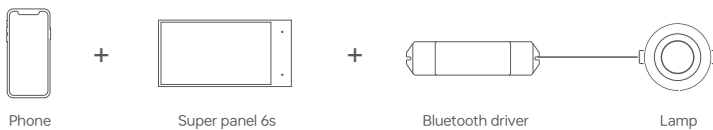
1. Achieve fast dimming control.



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.

## Use with Bluetooth L-Home APP

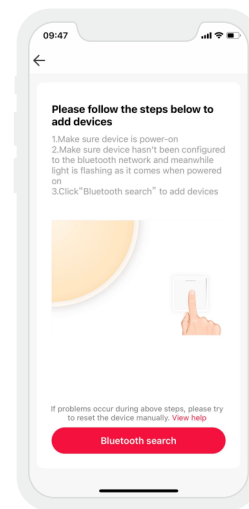
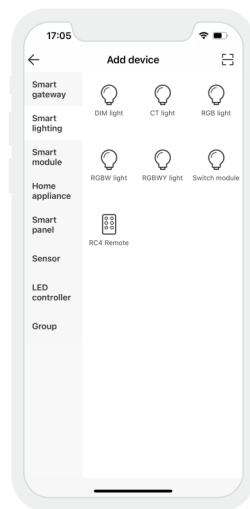
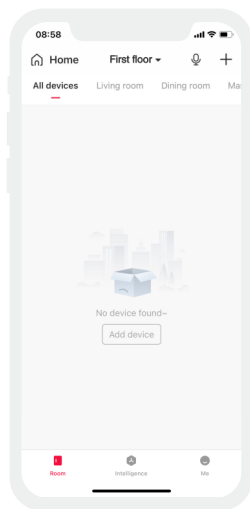
### 1. Register an account

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



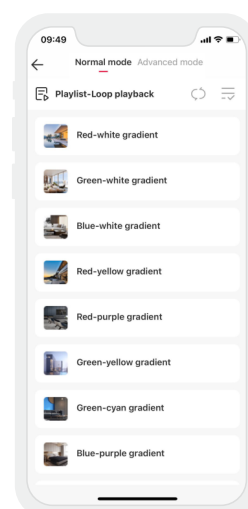
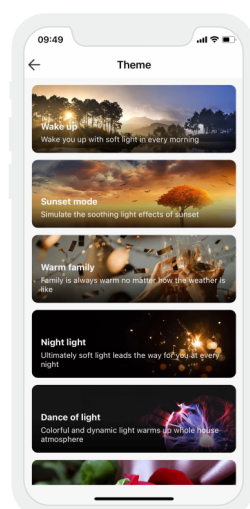
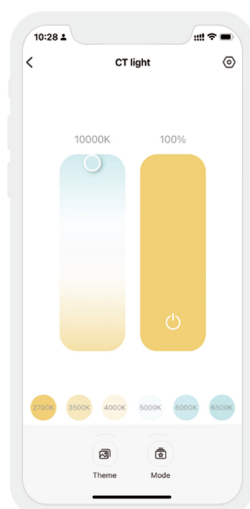
### 2. Pairing instructions

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.



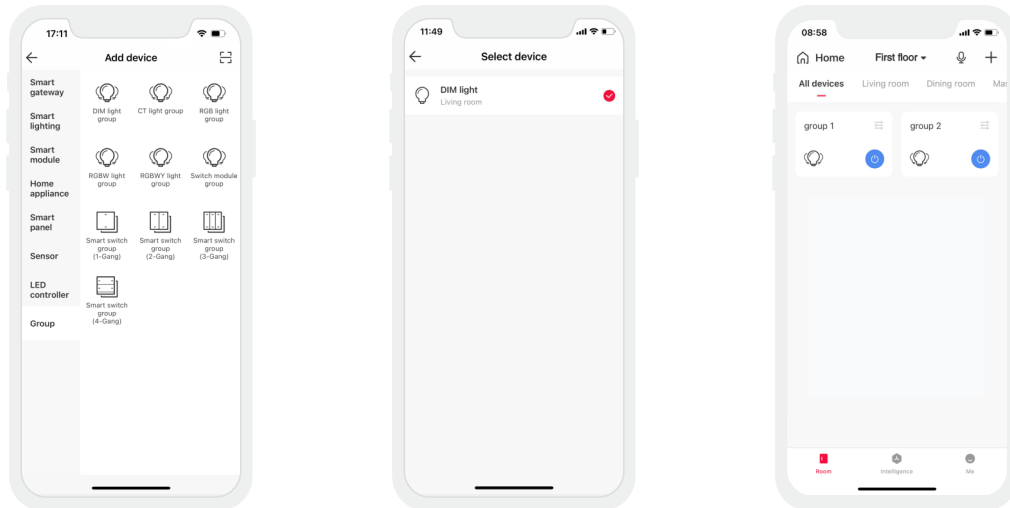
### 3. Control interface settings

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.



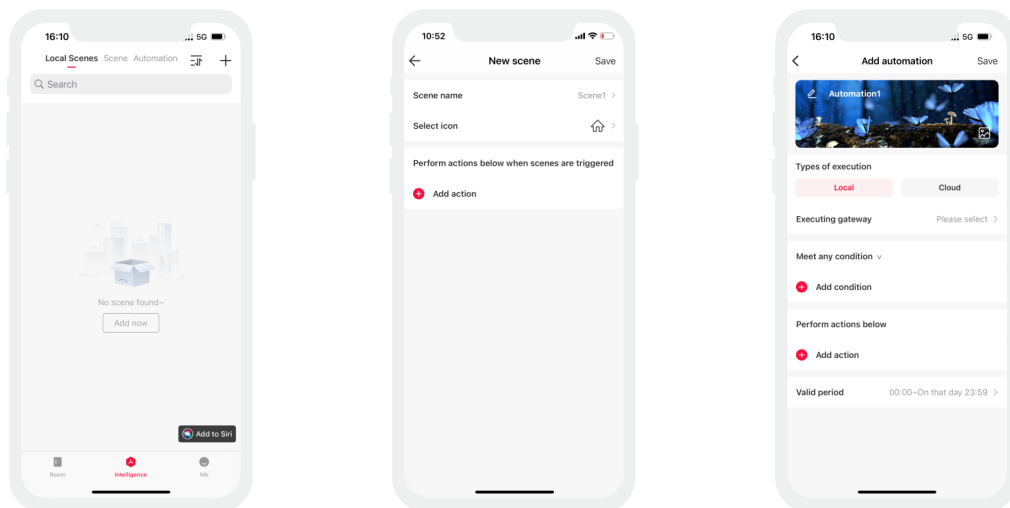
## 4. Light groups

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".



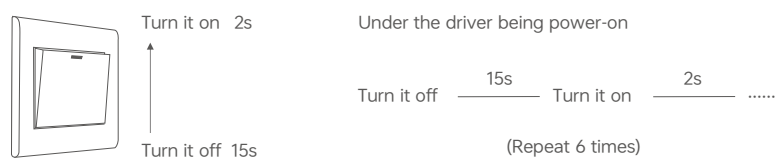
## 5. Advanced functions

This driver can be linked up with gateway function devices (such as Super Panel 6S) to achieve the advanced functions from local scenes and cloud scenes to automation.



## Reset The Device (Reset to factory defaults)

Make sure the driver is well-connected to a lamp and the lamp is on, turn it off with the switch and after 15s turn it on. After 2s, turn it off again. Repeat the same operation 6 times. When the lamp flashes 5 times, reset the device to factory defaults successfully.



## 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).



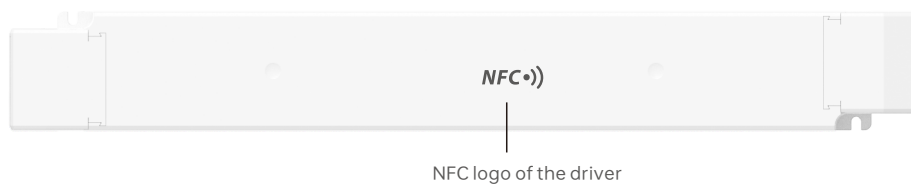
\* Before you begin setting the parameters of the driver, please make sure the driver is powered off.

### 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 logo of the driver to read the driver parameters.

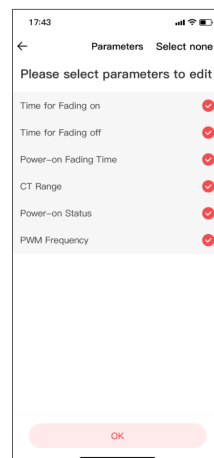
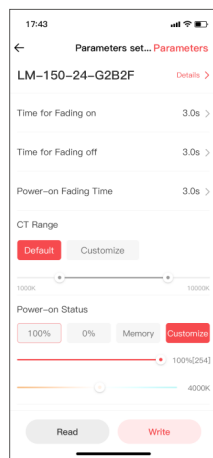
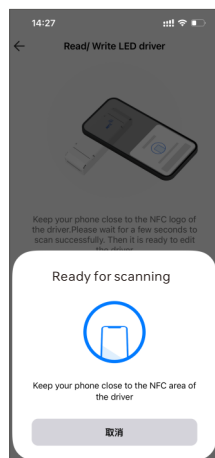


#### 2. Edit parameters

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

#### 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 logo of the driver, so the parameters can be written to the driver



## Flicker Test Table

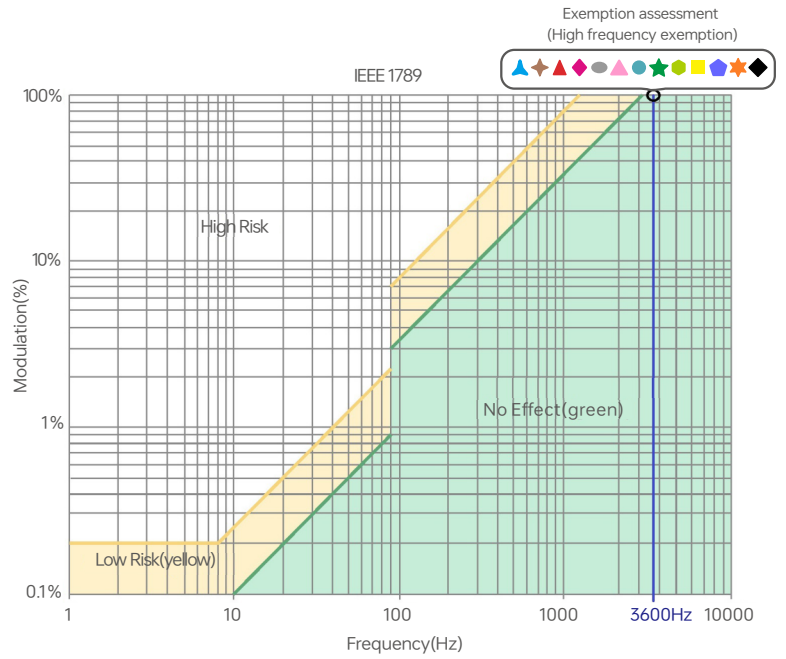
IEEE 1789

Limit Value of Modulation in Low Risk Areas	
Waveform frequency of Optical output (f)	Limit value (%)
$f \leq 8\text{Hz}$	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 Value of Modulation in No Effect Areas	
Waveform frequency of Optical output (f)	Limit value (%)
$f \leq 10\text{Hz}$	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%

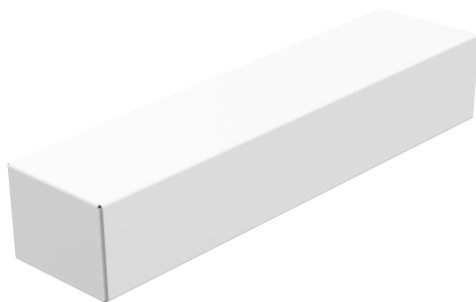
Marks in the right chart are tested results of different current levels. The output frequency is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.



## Packaging specification

Model	LM-150-24-G2B2F、LM-150-12-G2B2F
Packaging box size	370×340×93mm(L×W×H)
Quantity	10PCS per layer 2 layers per box 20PCS per box
Weight	0.43kg/PC;9.4kg±5%/box

## Packaging style drawing



Inner packaging box



Full box packaging

## 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

- Product installation and commissioning should be done by a qualified professional.
- 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.

## Update Log

Version	Updated Time	Update Content	Updated by
A0	2025.06.06	Original version	Li Haipeng