LTECH

LM-150-24-G4K3

DMX/RDM
DALI/PUSH

Intelligent Full Color RGBW LED Driver (Constant Voltage)

- Small size and light weight. The housing is made from V0 flame retardant PC materials that SAMSUNG/COVESTRO uses.
- The clamshell design and screwless type for strain-relief. The design of dismountable end cap allows you to adjust the length of housing depending on your needs.
- Dimming from 0~100%, down to 0.1%.
- Dimming interface: DMX512/RDM, DALI-2 DT6/DT8, Push.
- Energy-efficient driver: Effeciency 93%, PF>0.98, THD<6%.
- Comply with the EU's ErP Directive, stand-by power consumption<0.5W.
- The secure and reliable design for signal isolation.
- Innovative thermal management technology intelligently protects the life of the LED driver.
- Overheat, overvoltage, overload, short circuit protection and automatic recovery.
- Up to 50,000-hour life time.
- 5-year warranty (Rubycon capacitor).

RDM
DMX

Flicker-free
IEEE 1789
Achieve the high frequency exemption level

0~100% dimming range

Dimmable:
0.1%-100%

RGBW color light adjustment

The certification icon represents on-going certification applications only, and final certification qualification is subject to actual products.

DMX/RDM DALI/PUSH

0.1% Dimming Dept

Over Temp. Protection

Short Circuit Protection

Over Load Protection

V Over voltage protection

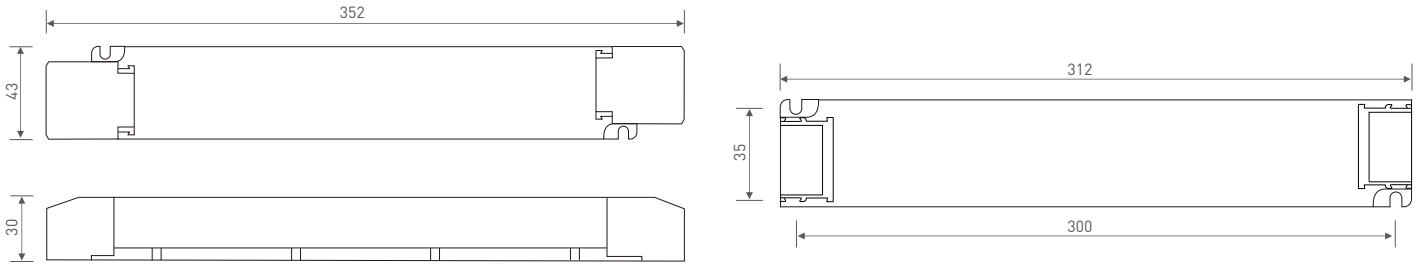
Technical Specs

Model					LM-150-24-G4K3
Features	Output Type				Constant Voltage
	Dimming Interface				DMX12/RDM, DALI-2 DT6/DT8, Push
	Output Feature				Isolation
	Protection Grade				IP20
	Insulation Grade				Class II (Suitable for class I/ II /III light fixtures)
OUTPUT	Output Voltage				24Vdc
	Output Voltage Range				24Vdc ± 0.5Vdc
	Output Current				Max. 6.25A (1.56Ax4CH)
	Output Power				Max. 150W
	Output Power Range				0~150W
	Strobe Level				High frequency exemption level
	Dimming Range				0~100%, down to 0.1%
	Overload Power Limitation				≥102%
	Ripple				Switch ripple≤150mV, noise≤300mV
	PWM Frequency				3600Hz
INPUT	DC Voltage Range				200-280Vdc
	AC Voltage Range				198-264Vac
	Rated Voltage				220-240Vac
	Frequency				50/60Hz
	Input Current				≤0.75A/230Vac
	Power Factor				PF>0.98/230Vac (at full load)
	THD				THD<6%@230Vac (at full load)
	Efficiency (typ.)				93%
	Standby power consumption				<0.5W
	Inrush Current				Cold start 45A@230Vac (Test twidth=840us tested under 50% Ipeak)
	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				±0.03%/°C (0-50°C)
	Vibration				10~500Hz, 2G 12min/1cycle, 72 min for X, Y and Z axes respectively
PROTECTION	Overheat Protection				Intelligently adjust or turn off the output current if the PCB temperature ≥110°C, and recover automatically
	Overload Protection				Shut down the output when current load≥102%, and recover automatically
	Short Circuit Protection				Enter hiccup mode if short circuit occurs, and recover automatically
	Overvoltage Protection				Shut down the output when non-load voltage≥28V, and recover automatically
SAFETY & EMC	Withstand Voltage				I/P-O/P: 3750Vac
	Isolation Resistance				I/P-O/P: 100MΩ/500VDC/25°C/70%RH
	Safety Standards	CCC	China		GB19510.1, GB19510.14
		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, EN61547
		KC	Korea		KC61347-1, KC61347-2-13
		EAC	Russia		IEC61347-1, IEC61347-2-13
		RCM	Australia		AS61347-1, AS61347-2-13
		EMEC	Europe		EN61347-1, EN61347-2-13, EN62384
		UKCA	Britain		BS EN 61347-2-13:2014+A1:2017 BS EN 61347-1:2015+A1:2021
	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
		EMEC	Europe		BS EN IEC 55015:2019/A11:2020, BS EN 61547:2009, BS EN IEC 61000-3-2:2019, BS EN 61000-3-3:2013/A1:2019
	EMC Immunity				EN61000-4-2,3,4,5,6,8,11, EN61547
	Strobe Test Standard				IEEE 1789
OTHERS	Life Time				50000 hours
	Warranty				5 years

The driver is suitable for connecting resistor current-limiting LED fixture (e.g. LED strip). The inrush current will be dozens of times increased if connecting built-in constant current IC current-limiting LED fixtures, the driver will activate the overloaded protection (hiccups flickering). When you order, please remark controlling the constant current LED fixture (e.g. MR16 lamp, underground light, LED wall washer, constant current LED strip, etc.), so that we can prepare them with special procedures.

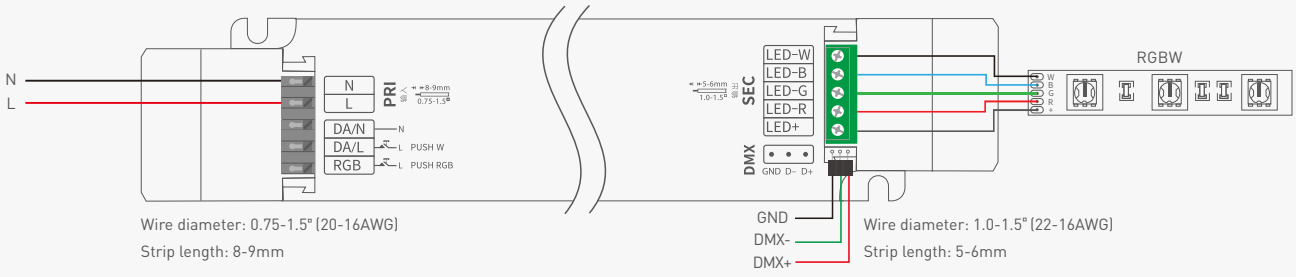
Product Size

Unit: mm



Wiring Diagram

DMX/RDM Connection

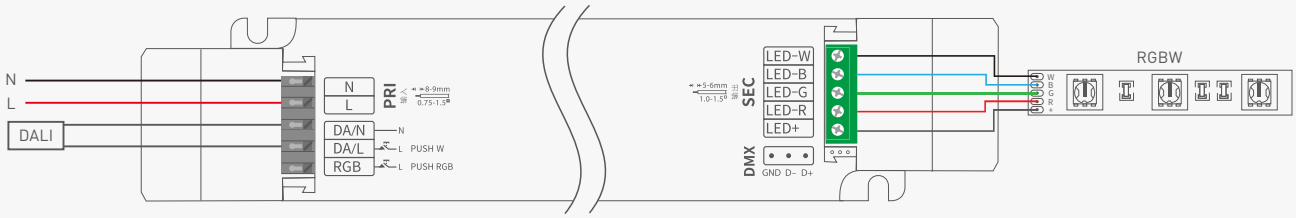


Wire diameter: 0.75-1.5² (20-16AWG)
Strip length: 8-9mm

Wire diameter: 1.0-1.5² (22-16AWG)
Strip length: 5-6mm

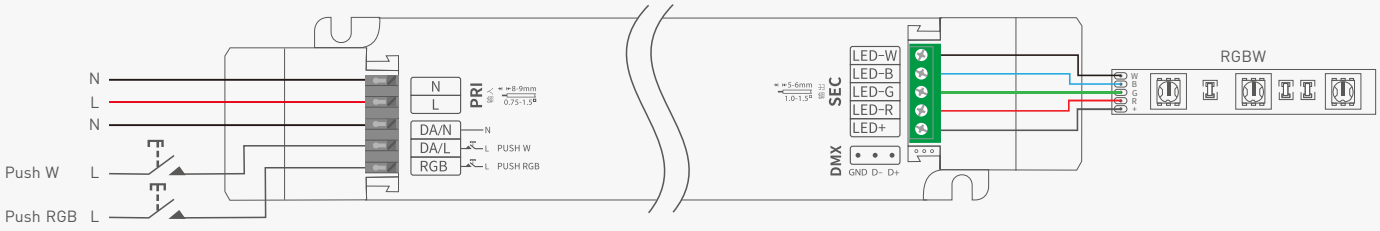
0~100% dimming range
RGBW color light adjustment

DALI Connection



0~100% dimming range
RGBW color light adjustment

Push W/RGB Connection



0~100% dimming range
RGBW color light adjustment

* Push W/RGB is invalid under DC voltage input.
* Dimming interface priority: DMX12/RGM first, DALI-2 DT6/DT8, Push W/RGB next.

Push W/RGB

Reset switch

Push W:

By pressing the button, the brightness of W and RGB light can be adjusted. You can adjust either W brightness or RGB brightness only. Toggle between W and RGB brightness adjustment by a double press on the button.

W brightness adjustment: Short press to turn on/off, long press to adjust W brightness (RGB brightness and color remain unchanged at this moment).

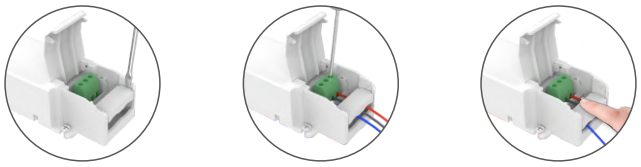
RGB brightness adjustment: Short press to turn on/off, long press to adjust RGB brightness (W brightness remains unchanged at this moment).

Push RGB:

Short press to adjust to the full brightness of RGB color and RGB light, long press to change RGB color.

Protective Housing Application Diagram

Tension plate

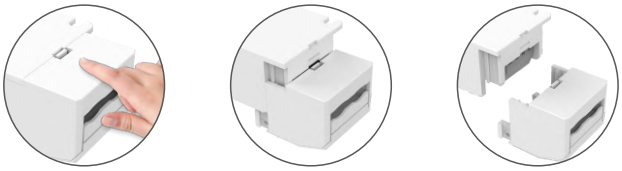


1. Pry up the protecting housing in the side plate position with a tool.

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.

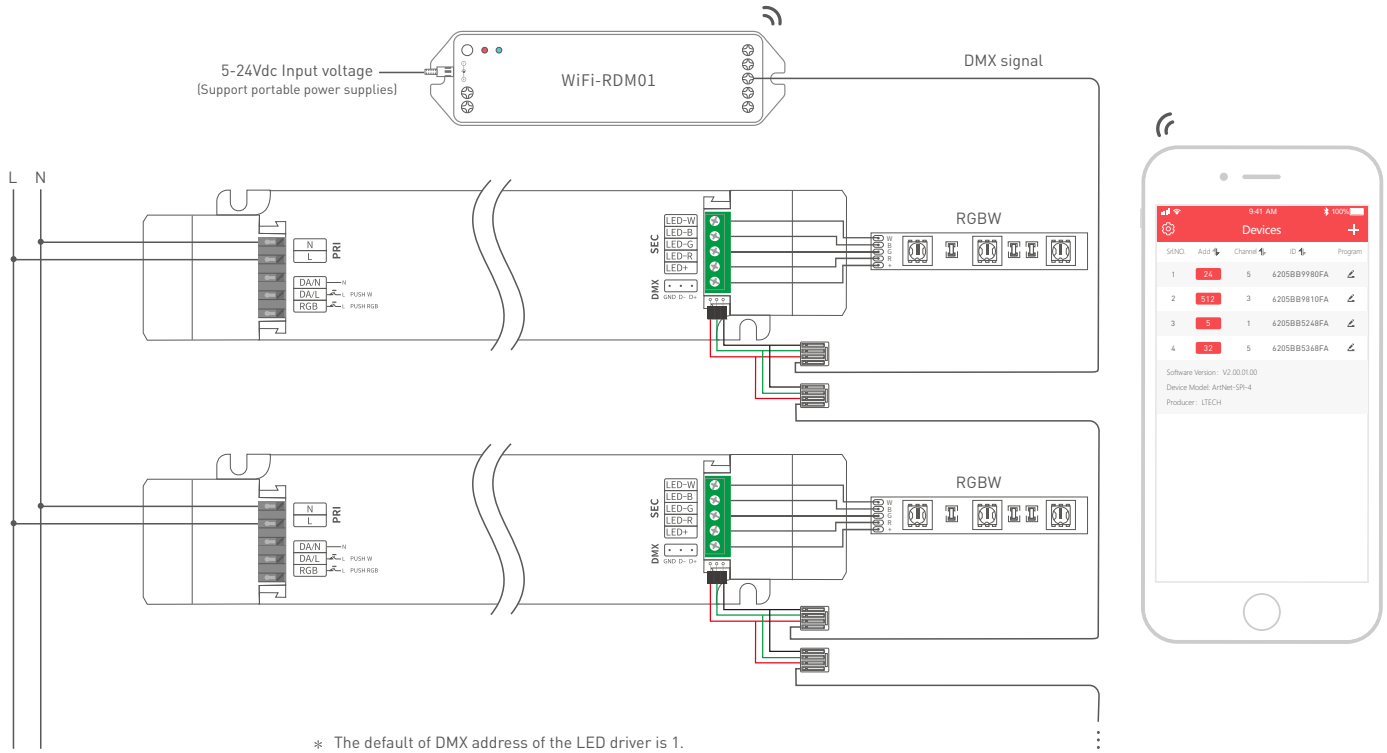
Remove the protective housing



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

DMX Address Settings

The DMX driver can work with a DMX address programmer that follows the standard RDM protocol.
It is recommended to use LTECH RDM Programmer (Model: WiFi-RDM01), which allows remote browsing, parameter setting, checking output power and modifying the current value.



∗ The default of DMX address of the LED driver is 1.

Mobile App Interface for the RDM Programmer

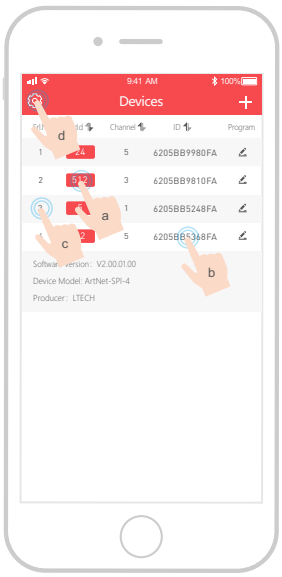
Download the App with your mobile phone and connect the RDM Programmer successfully, then you are allowed to set parameters through the APP. Please refer to the WiFi-RDM01 manual fo more details.

a. At the homepage, click "Add" of the device you are going to operate to edit the address,as shown below in the interface.

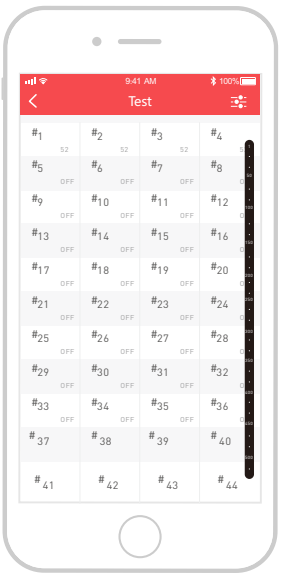
b. Click "ID" to get more details for devices.

c. Click "No" to issue an recognizing command.

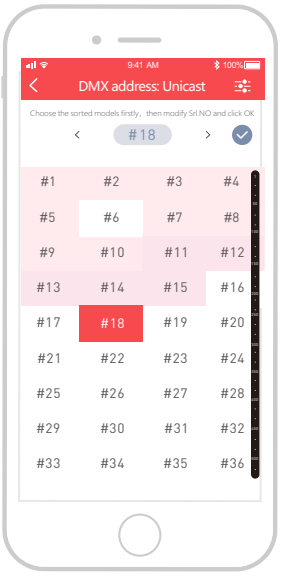
d. Click " ⚙ " in the upper left corner to access the settings which allows you to test, edit DMX addresses, set WiFi for devices and upgrade firmware.



Home page

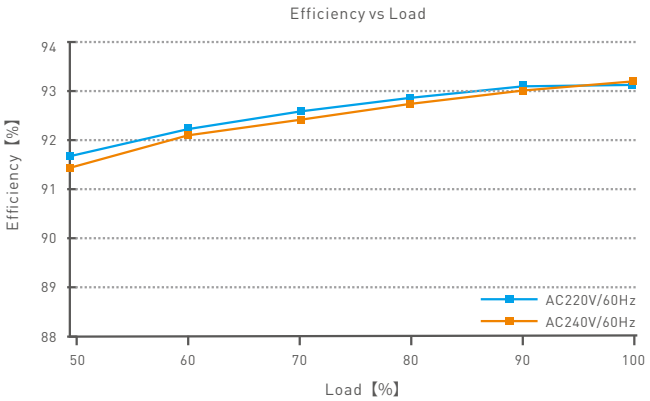


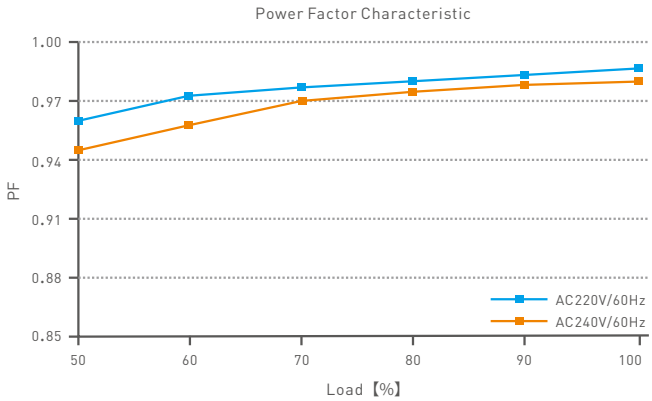
Test

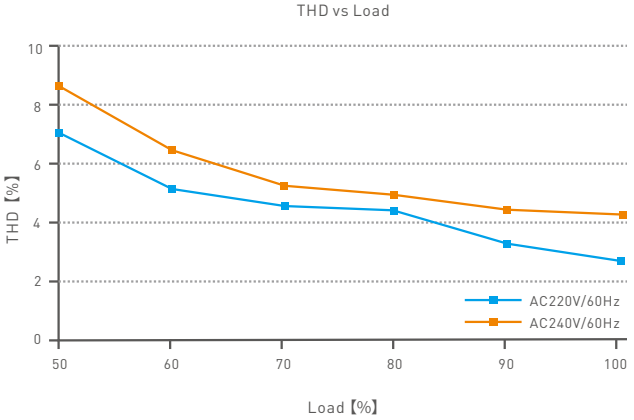


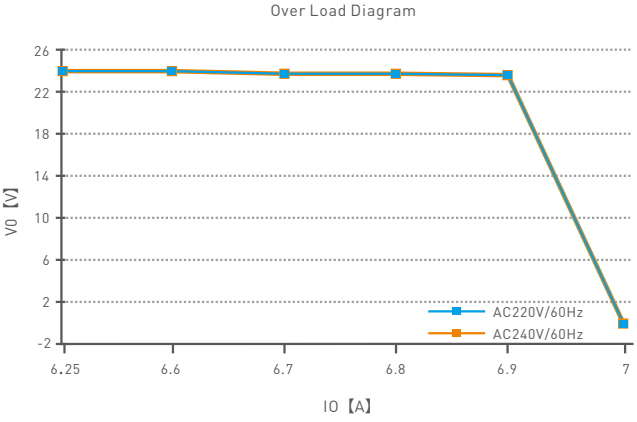
DMX address setting

Relationship Diagrams









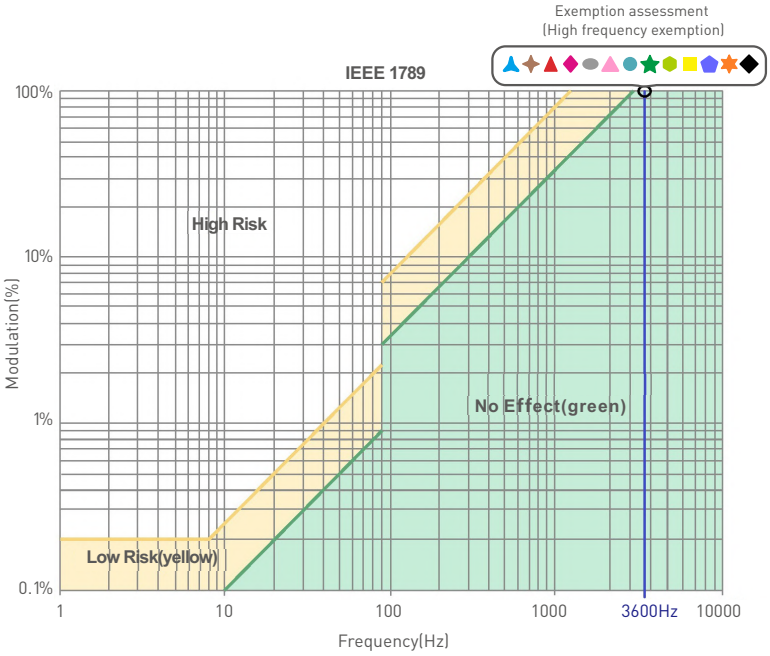
Flicker Test Table

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.

Packaging Specifications

Model	LM-150-24-G4K3
Carton Dimensions	370×340×93mm(L×W×H)
Quantity	10 PCS/Layer; 2 Layers/Carton; 20 PCS/Carton
Weight	0.43 kg/PC; 9.4 kg/Carton

Packaging Image

Inner Packaging Box

Carton 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

- Products shall be installed by qualified professionals.
- LTECH products are non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure it is mounted in a water proof enclosure.
- Good heat dissipation will extend 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	2021.08.05	Original version	Liu Weili
A1	2022.01.24	Modify the wiring application diagram	Liu Weili
A2	2022.02.28	Update output terminal wire diameter and stripping length	Liu Weili