Intelligent LED Driver(ConstantCurrent)

- Housing made from SAMSUNG/COVESTRO's V0 flame retardant PC materials.
- Ultra small, thin and lightweight, screwless end cap.
- Parameters such as output current, dimming method and other parameters via the mobile phone APP through NFC.
- Current step value as low as 1mA by NFC setting, with higher compatibility and more precision.
- 0-10V port ultra-low power consumption <0.05mA.
- T-PWM ultra-deep dimming technology, dimming depth can reach 0.01%.
- Soft-on and fade-in dimming function enhances your visual comfort.
- 0-100% full dimming without visible flicker, high frequency exemption assessment level.
- EU ERP no-load power consumption, network standby power consumption < 0.5W.
- No-load 0V output to prevent damage to LED lamps due to poor contact.
- Overheat, over voltage, overload, short circuit protection and automatic recovery.
- Suitable for ClassI/II/III indoor light fixtures.
- Normal service life can reach 100,000 hours.
- 5-year warranty (Rubycon capacitor).

4 in 1dimming
0-10V
1-10V
10V PWM
RX

DIM

T-PWM
Dimming Technology

Flicker Free
IEEE1789

Dimmable:
1:10000

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

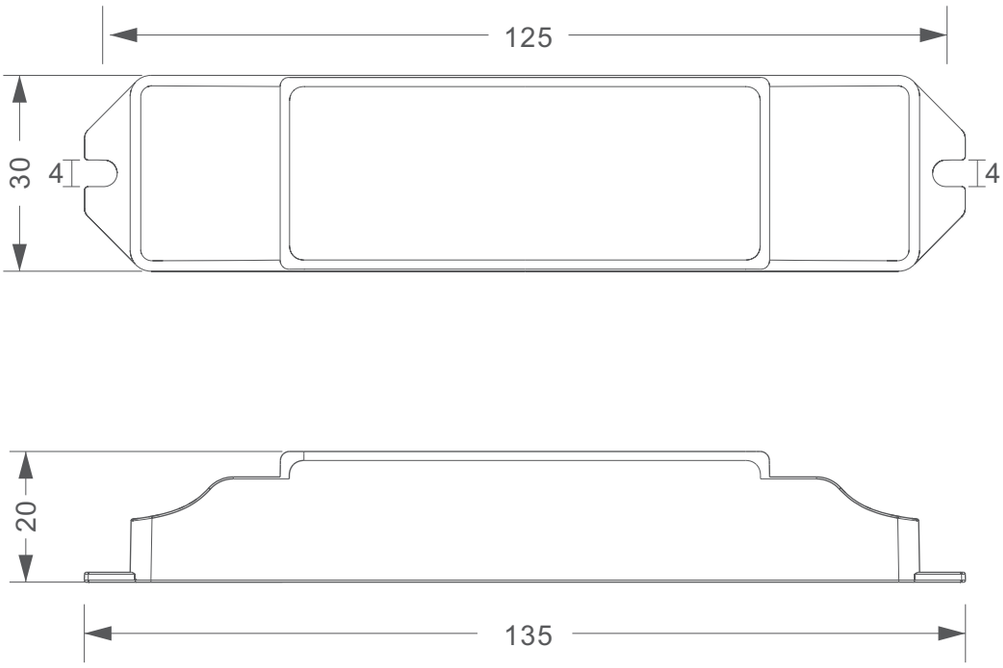
0-10V | T-PWM Dimming Technology | Flicker Free IEEE 1789 | Multi current setting | Over voltage protection | Short circuit protection | Over Load protection | Overheat Protection

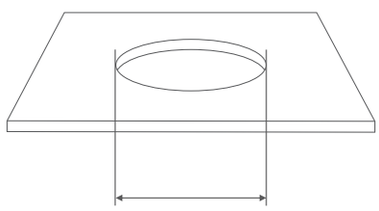
Technical Specs

Model		SE-10-100-500-W1A			SE-10-500-1000-W1A
Features	Output Type	Constant current			
	Dimming Interface	0-10V(1-10V,10V PWM,RX)			
	Output Feature	Isolation			
	Protection Grade	IP20			
	Insulation Grade	Class II (Suitable for class I/ II /III light fixtures)			
OUTPUT	Output Voltage	9-42Vdc			2-12Vdc
	Maximum output voltage	≤50Vdc			≤20Vdc
	Output Current Range	100-500mA			500-1000mA
	Output Power Range	0.9W-10W			1W-10W
	Dimming Range	0~100%, down to 0.01%			
	LF Current Ripple	< 5%(Maximum current for non dimming state)			
	Current Accuracy	±5%			
	PWM Frequency	≤3600Hz			
INPUT	DC Voltage Range	100-240Vdc			
	AC Voltage Range	100-240Vac			
	Rated Voltage	115Vac/230Vac			
	Frequency	0/50/60Hz			
	Input Current	≤0.14A/115Vac(at full load) ,≤0.07A/230Vac(at full load)			
	Power Factor	PF≥0.95/115Vac(at full load) ,PF≥0.9/230Vac(at full load)			
	THD	THD≤15%/230Vac(at full load)			
	Efficiency (Typ.)	80%(at full load)			78%(at full load)
	Inrush Current	Cold start 15A(Test twidth=102us tested under 50% Ipeak)/230Vac			
	Anti Surge	L-N:2KV			
	Leakage Current	Max.0.24mA			
ENVIRONMENT	Working Temperature	ta: -20℃ ~ 50℃ tc: 80℃			
	Working Humidity	20 ~ 95%RH, non-condensing			
	Storage Temperature/Humidity	-40 ~ 80℃/10~95%RH			
	Temperature Coefficient	±0.03%/℃(-20℃~45℃)			
	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 ≥110℃. When the PCB temperature <90℃, 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:3750Vac			
	Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25℃/70%RH			
	Safety Standards	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	AS61347-1, AS61347-2-13	
		ENEC	Europe	EN61347-1, EN61347-2-13, EN62384	
		UKCA	Britain	BSEN61347-1, BSEN61347-2-13, BSEN62493	
		BIS	India	IS15885(PART2/SEC13)	
	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	
		UKCA	Britain	BSENIEC55015, BSENIEC61000-3-2, BSEN61000-3-3, BSEN61547	
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11,EN61547			
ErP	Power Consumption	Networked standby		< 0.5W (After shutdown by command)	
		No-load power consumption		< 0.5W(When the lamp is not connected)	
	Flicker/Stroboscopic Effect	IEEE1789		Meet IEEE 1789 standard/High frequency exemption level	
		CIE SVM		PstLM≤1.0, SVM≤0.4	
	DF	Phase factor		DF≥0.9	
OTHERS	Weight(N.W.)	80g±10g			
	Dimensions	135×30×20mm(L×W×H)			

Product Size

Unit:mm

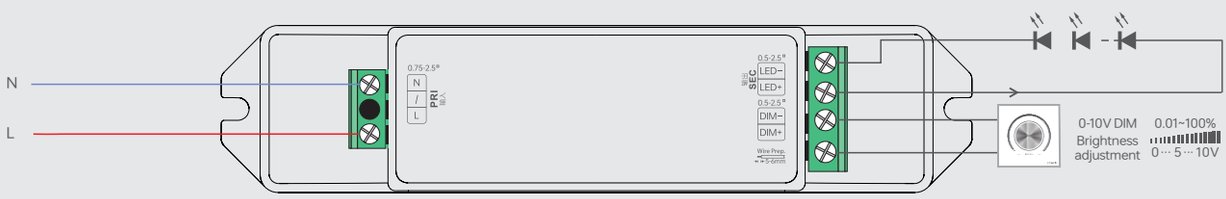




Minimum hole size: ϕ35mm(1.4")

0-10V Connection

Wiring diagram



Wire diameter:0.75-2.5²
Strip length:5mm-6mm

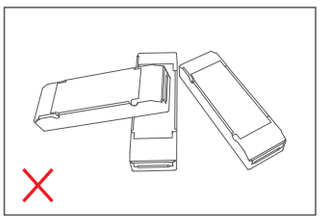
Wire diameter:0.5-2.5²
Strip length:5mm-6mm

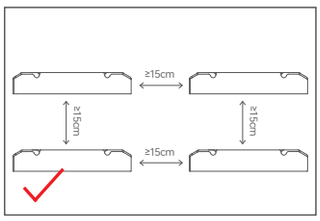
Table of Typical Corresponding Parameters for Current

Model	The typical 9 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 100-500mA adjustable in 1mA step								
SE-10-100-500-W1A	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA	500mA
	Output Voltage	9-42Vdc	9-42Vdc	9-42Vdc	9-40Vdc	9-33Vdc	9-28.5Vdc	9-25Vdc	9-22Vdc	9-20Vdc
	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	4.5-10W

Model	The typical 11 current data sets below are for reference when selecting LED fixture models. More current levels can be set by NFC using mobile APP with 500-1000mA adjustable in 1mA step										
SE-10-500-1000-W1A	Output Current	500mA	550mA	600mA	650mA	700mA	750mA	800mA	850mA	900mA	950mA	1000mA
	Output Voltage	2-12Vdc	2-12Vdc	2-12Vdc	2-12Vdc	2-12Vdc	2-12Vdc	2-12Vdc	2-12Vdc	2-11Vdc	2-10.5Vdc	2-10Vdc
	Output Power	1-6W	1.1-6.6W	1.2-7.2W	1.3-7.8W	1.4-8.4W	1.5-9W	1.6-9.6W	1.7-10.2W	1.8-9.9W	1.9-10W	2-10W

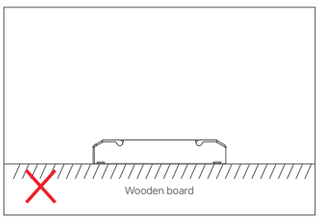
Installation Precautions

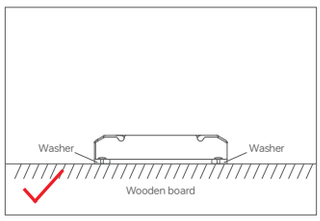




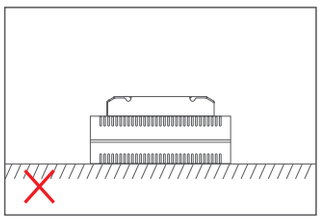
Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation and the lifespan of the products.

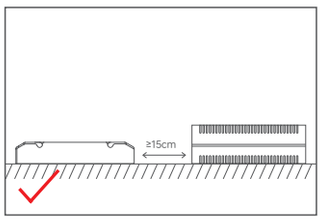
Note: The temperature within the installation area should be within the working temperature range of the products. Please do not install products inside LED fixtures to avoid temperature exceeding the working temperature that may affect the product lifetime.





Please do not fasten the product screws tightly against the wooden board. Instead, add a washer of ≥7mm under the fixing screws. Leaving a gap can effectively dissipate heat, preventing any impact on the product's heat dissipation and service life.





Please not place the products on LED drivers. The distance between the product and the driver should be ≥15cm so as not to affect heat dissipation and shorten the lifespan of the products.

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

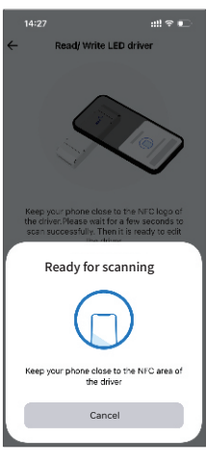
On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC logo of the driver to read the driver parameters.

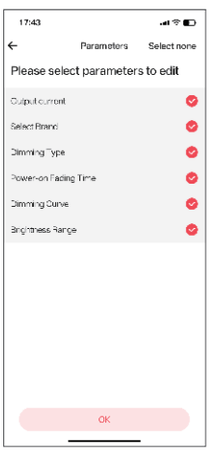
2.Edit the parameters

Click【Parameter settings】to edit the advanced parameters, like output current, choose a brand, dimming mode, low power mode, dimming curve, brightness range, etc.

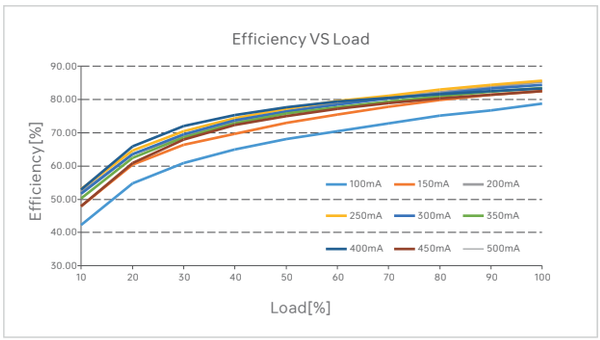
3.Write to the driver

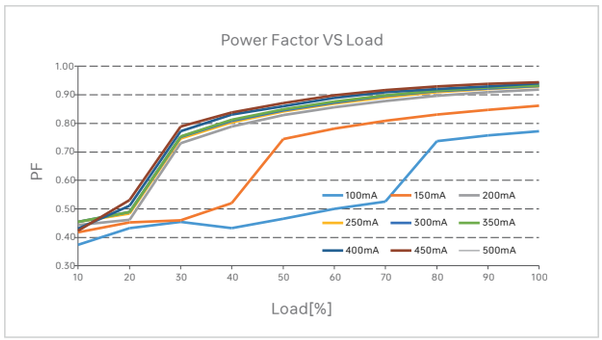
After completing the parameter settings, click 【Write】in the upper right corner, and keep the programmer's sensing area close to the NFC logo of the driver, so the parameters can be written to the driver.

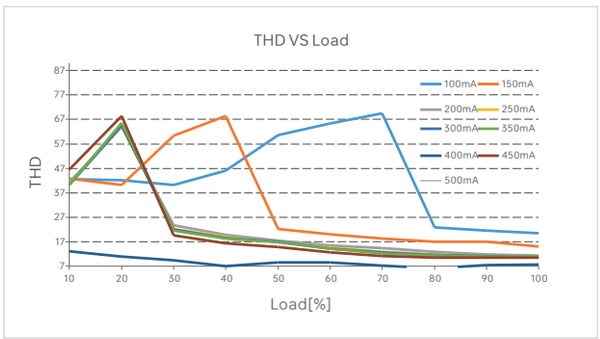


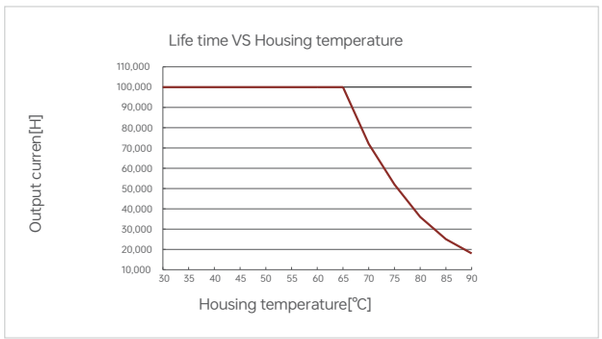


Relationship Diagrams

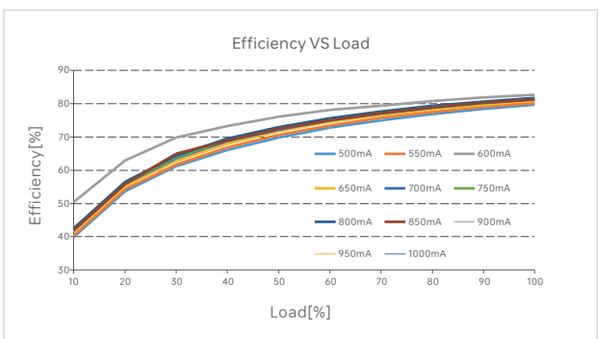


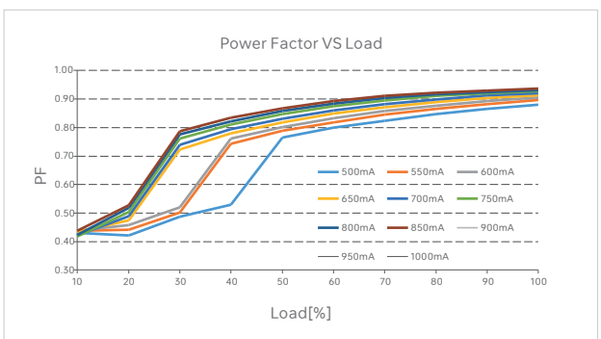


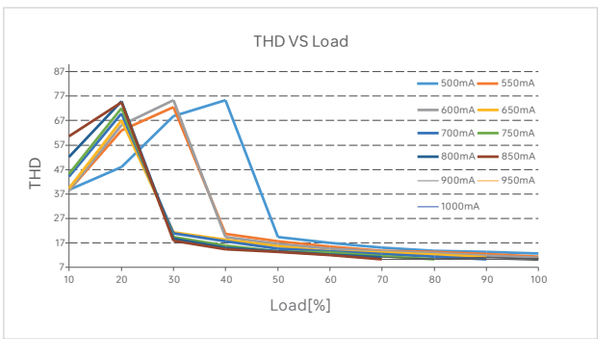


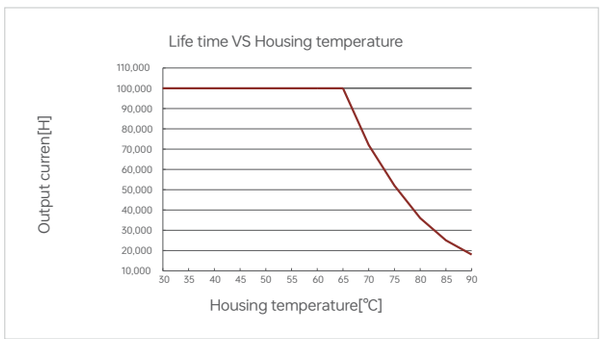


SE-10-100-500-W1A









SE-10-500-1000-W1A

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	40	23	30	37	47	58	27	34	42	53	66

Remarks:

1. Test Conditions: Cold start 15A(Test twidth=102us tested under 50% Ipeak)/230Vac
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.

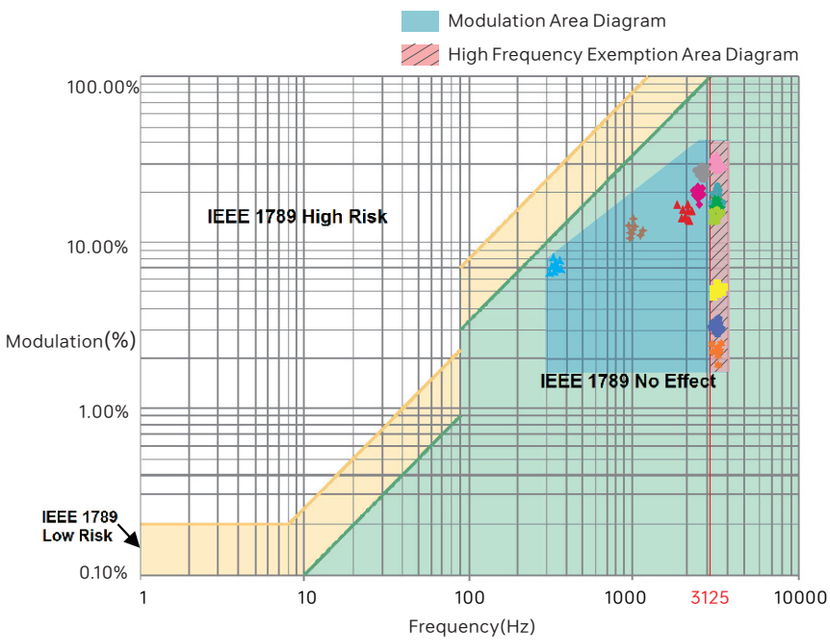
Flicker Test Sheet

IEEE 1789

Limit of modulation in low risk area	
Waveform frequency of optical output	limit (%)
$f \leq 8Hz$	0.2
$8Hz < f \leq 90Hz$	$0.025 \times f$
$90Hz < f \leq 1250Hz$	$0.08 \times f$
$f > 1250Hz$	Exemption assessment
Limit of modulation in no effect area	
Waveform frequency of optical output	limit (%)
$f \leq 10Hz$	0.1
$10Hz < f \leq 90Hz$	$0.01 \times f$
$90Hz < f \leq 3125Hz$	$(0.08/2.5) \times f$
$f > 3125Hz$	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 were tested results of different current ranges.

The output frequeny is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

Packaging Specifications

Model	SE-10-100-500-W1A/SE-10-500-1000-W1A
Carton Dimensions	350×285×180mm (L×W×H)
Quantity	30 PCS/Layer; 5Layers/Carton; 150 PCS/Carton
Weight	0.08kg/PC; 12±5% 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 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 Conten	Updated by
A0	2025.04.18	Original version	Simin Zhong