LTSYS

LF-60-500-1500-G2A2

0-10V Push DIM/CCT

Office Linear Smart Color Temperature Power Supply (Constant Current Type)

- Slim metal housing;
- Overall design complies with Zhaga standards: built-in models meet Zhaga Book 13 and Book 24 specifications, while standalone models meet Zhaga Book 24 requirements;
- Supports 0-10V, PUSH DIM/CCT, and corridor lighting dimming/color temperature adjustment;
- Supports NFC rapid programming, enabling smartphone app control via NFC to adjust output current, dimming modes, and other parameters for driver data interaction;
- NFC current setting with step increments as low as 1mA for enhanced compatibility and precision;
- Ultra-low 0-10V port consumption <0.05mA;
- T-PWM ultra-deep dimming technology achieving 0.01% dimming depth;
- 0-100% full-range dimming with zero visible flicker, meeting high-frequency exemption standards;
- Features soft-start gradual brightening for enhanced visual comfort;
- EU ERP compliance: no-load power consumption and network standby power <0.5W;
- 0V output at no load to prevent LED fixture damage from poor contact;
- Over-temperature, over-voltage, overload, and short-circuit protection with automatic recovery;
- Suitable for indoor Class I, II, and III luminaires, such as linear lights, triple-proof lights, floor lamps, bracket lights, and other linear or ultra-thin fixtures;
- Lifespan up to 100,000 hours under normal use;
- 5-year warranty.

5 in 1 Dimming
0-10V
1-10V
10V PWM
RX
PUSH DIM/CCT

DIM/CCT

Flicker Free
IEEE 1789

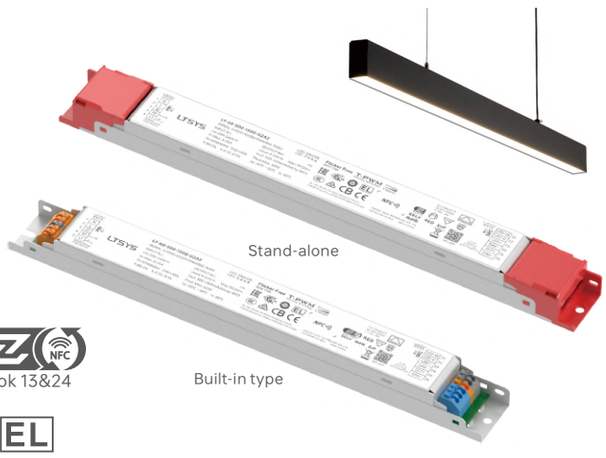
T-PWM Dimming Technology

Book 13&24

Dimmable: 1:10000

corridor DIM

EL



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

Multi current setting | Overheat Protection | Over voltage protection | Over Load protection | Constant power setting | Short circuit protection

Technical Specs

Model				
		LF-60-500-1500-G2A2 (Stand-alone)		LF-60-500-1500-G2A2 (Built-in type)
FEATURES	Output Type	Constant current		
	Dimming Interface	0-10V(1-10V,10V PWM,RX), PUSH DIM/CCT		
	Output Feature	Isolation		
	Zhaga Standard	Book 24		Book 13,24
	Installation Method	Can be independently installed in ceilings or light channels, etc.		Installed inside the luminaire
	Other Features	Corridor Lighting Applications		
	IP Rating	IP20		
	Insulation Class	Class II (Suitable for class I/II/III light fixtures)		
OUTPUT	Output Voltage	9-54V⎓		
	Max. Output Voltage(No-load)	≤59.5V⎓		
	Rated Current Range	500-1500mA (Set higher current levels via the mobile app's NFC feature, with step increments as low as 1mA; Default: 500mA)		
	Load Power Range	4.5-60W		
	Dimming Range	0~100%，Dimming depth: 0.01%		
	LF Current Ripple	< 5%(Maximum current for non dimming state)		
	Current Accuracy	±5%		
	PWM Frequency	≤3600Hz		
INPUT	AC Voltage Range	220-240V～		
	DC Voltage Range	220-240V⎓		
	Rated Voltage	230V~		
	Frequency	0/50/60Hz		
	Input Current	≤0.35A/230V~		
	Power Factor	PF > 0.95/230V～(Fully loaded)		
	THD	230V～@THD<10% (Fully loaded)		
	Efficiency(Typ.)	88.5%		
	Inrush Current	Cold start18A(Test twidth=123us tested under 50% Ipeak)/230V ～		
	Anti Surge	L-N: 2KV L-FG/N-FG: 4KV		
	Leakage Current	Max.0.5mA		
ENVIRONMENT	Operating Temperature	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	±0.03%/°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 ≥110°C. When the PCB temperature <90°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/ < 5mA，I/P-FG: 1750V～ /1min/ < 5mA，O/P-FG:500V～ /1min/ < 5mA，Signal-FG:500V～/1min/ < 5mA ①		
	Insulation Resistance	I/P-O/P: 100MΩ/500V～ /1min/25°C/70%RH		
	Safety Certifications	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
		EAC	Russia	IEC61347-1，IEC61347-2-13
		RCM	Australia	AS 61347-1，AS 61347-2-13
		ENEC	Europe	EN61347-1，EN61347-2-13，EN62384
	EMC Emission	CCC	China	GB/T17743，GB17625.1
		CE	European Union	ENIEC55015，ENIEC61000-3-2，EN61000-3-3
		EAC	Russia	IEC62493，IEC61547，EH55015
		RCM	Australia	EN55015，EN61000-3-2，EN61000-3-3，EN61547
	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
OTHERS	Weight(N.W.)	260g±5g		245g±5g
	Dimensions	305x30.5x21.3mm(LxWxH)		280x30.5x21.3mm(LxWxH)

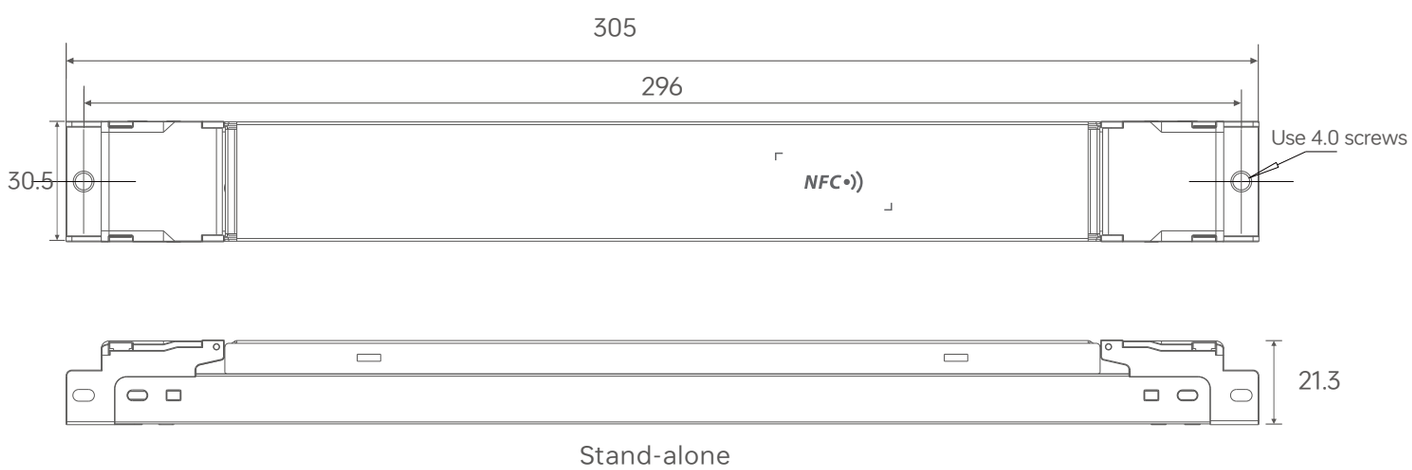
①Note: When performing a withstand voltage test to ground (FG), the gas discharge tube at the drive input must be temporarily removed to prevent functional operation of the internal gas discharge tube (see IEC 60598-1-10.2). After testing is complete, it must be reinstalled to restore surge protection functionality for the power line to ground and ensure reliable contact.

Typical Current Corresponding Parameter Table

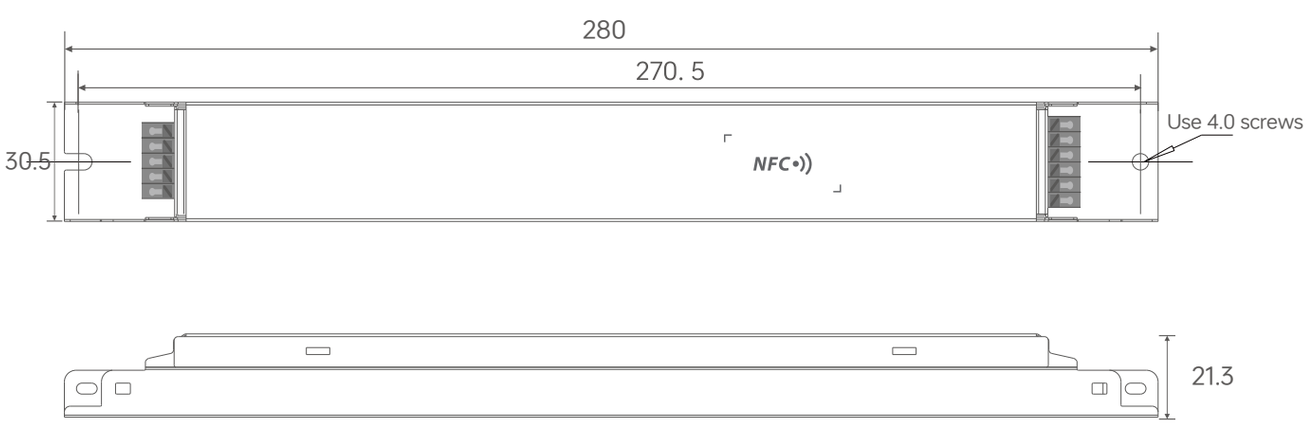
The following 21 groups of typical current data are provided for model selection reference. More currents can be set via the mobile phone APP NFC. The settable range is 500-1500mA, and the current step value can be as low as 1mA.									
LF-60-500-1500-G2A2	Output Current	500mA	550mA	600mA	650mA	700mA	750mA	800mA	850mA
	Output Voltage	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc
	Output Power	4.5-27W	4.95-29.7W	5.4-32.4W	5.85-35.1W	6.3-37.8W	6.75-40.5W	7.2-43.2W	7.65-45.9W
	Output Current	900mA	950mA	1000mA	1050mA	1100mA	1150mA	1200mA	1250mA
	Output Voltage	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-54Vdc	9-52.5V	9-50Vdc	9-48Vdc
	Output Power	8.1-48.6W	8.55-51.3W	9-54W	9.45-56.7W	9.9-59.4W	10.35-60W	10.8-60W	11.25-60W
	Output Current	1300mA	1350mA	1400mA	1450mA	1500mA			
	Output Voltage	9-46.2Vdc	9-44.4Vdc	9-42.9Vdc	9-41.4Vdc	9-40Vdc			
	Output Power	11.7-60W	12.15-60W	12.6-60W	13.05-60W	13.5-60W			

Product Size

Unit: mm



Stand-alone

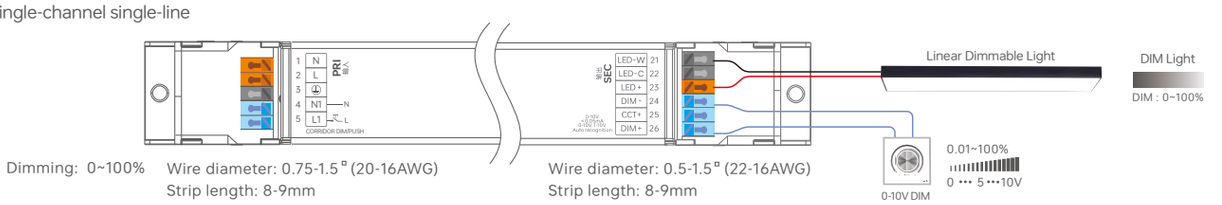


Built-in type

Connectivity Diagram

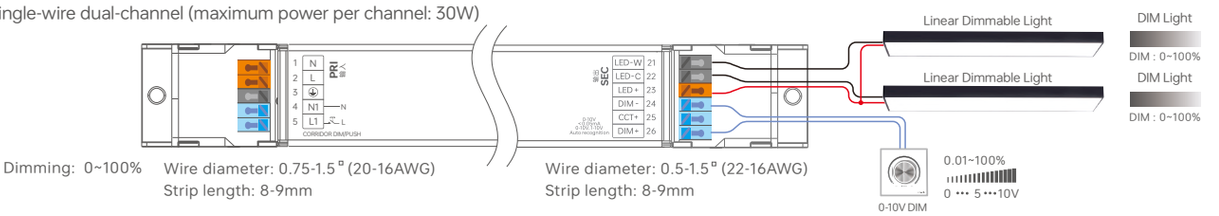
0-10V Connection Method

1. Dimming: Single-channel single-line



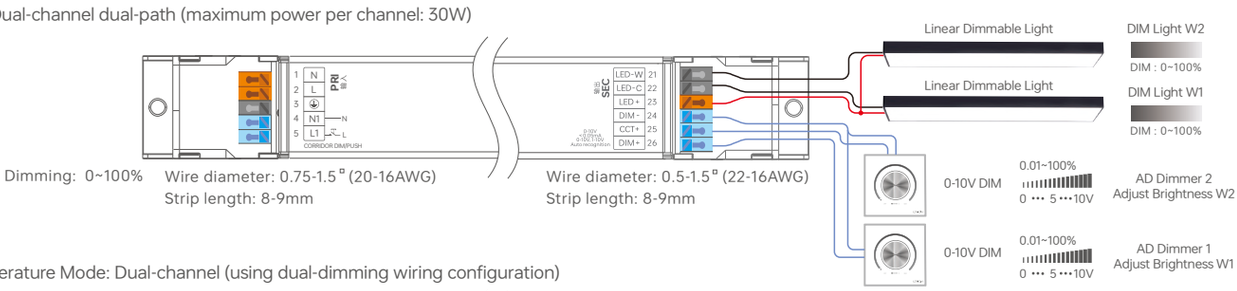
Dimming: 0~100% Wire diameter: 0.75-1.5㎟ (20-16AWG) Strip length: 8-9mm
Wire diameter: 0.5-1.5㎟ (22-16AWG) Strip length: 8-9mm

2. Dimming: Single-wire dual-channel (maximum power per channel: 30W)



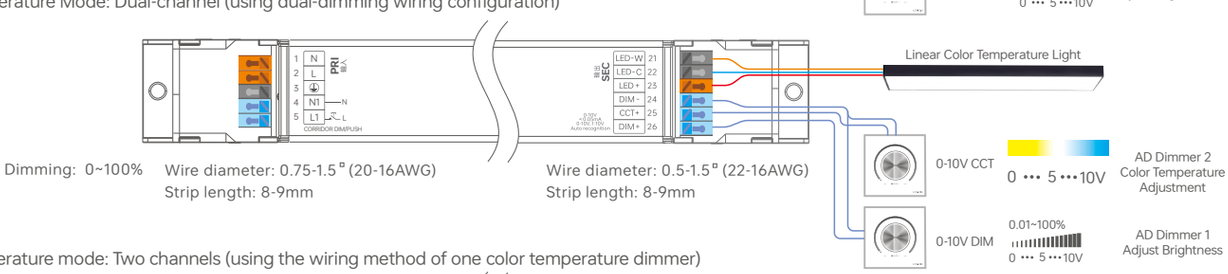
Dimming: 0~100% Wire diameter: 0.75-1.5㎟ (20-16AWG) Strip length: 8-9mm
Wire diameter: 0.5-1.5㎟ (22-16AWG) Strip length: 8-9mm

3. Dimming: Dual-channel dual-path (maximum power per channel: 30W)



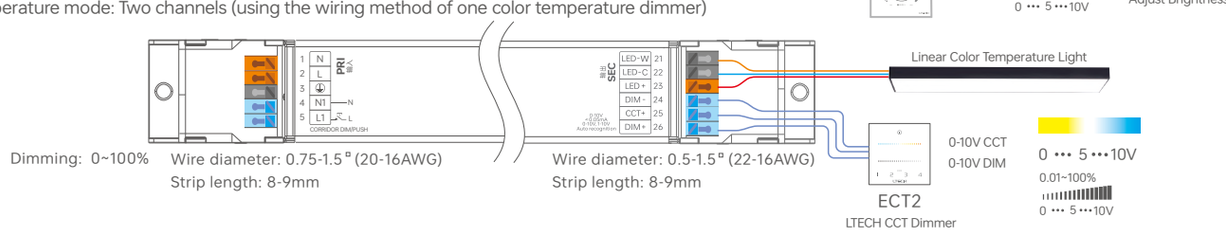
Dimming: 0~100% Wire diameter: 0.75-1.5㎟ (20-16AWG) Strip length: 8-9mm
Wire diameter: 0.5-1.5㎟ (22-16AWG) Strip length: 8-9mm

4. Color Temperature Mode: Dual-channel (using dual-dimming wiring configuration)



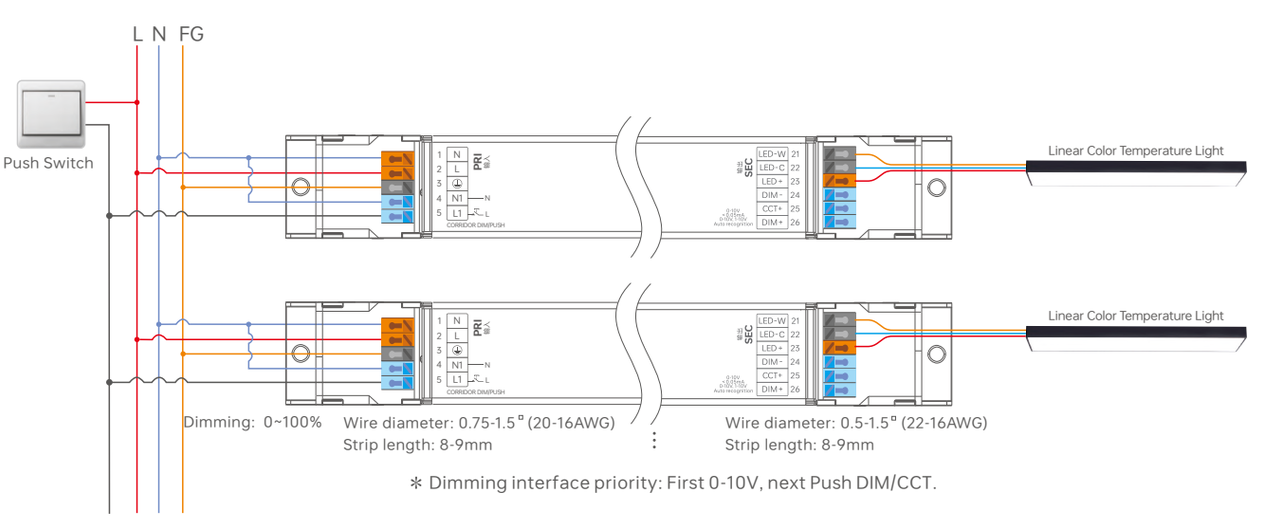
Dimming: 0~100% Wire diameter: 0.75-1.5㎟ (20-16AWG) Strip length: 8-9mm
Wire diameter: 0.5-1.5㎟ (22-16AWG) Strip length: 8-9mm

5. Color temperature mode: Two channels (using the wiring method of one color temperature dimmer)



Dimming: 0~100% Wire diameter: 0.75-1.5㎟ (20-16AWG) Strip length: 8-9mm
Wire diameter: 0.5-1.5㎟ (22-16AWG) Strip length: 8-9mm

PUSH DIM/CCT Connection



* Dimming interface priority: First 0-10V, next Push DIM/CCT.

Push Switch

Operation Instructions

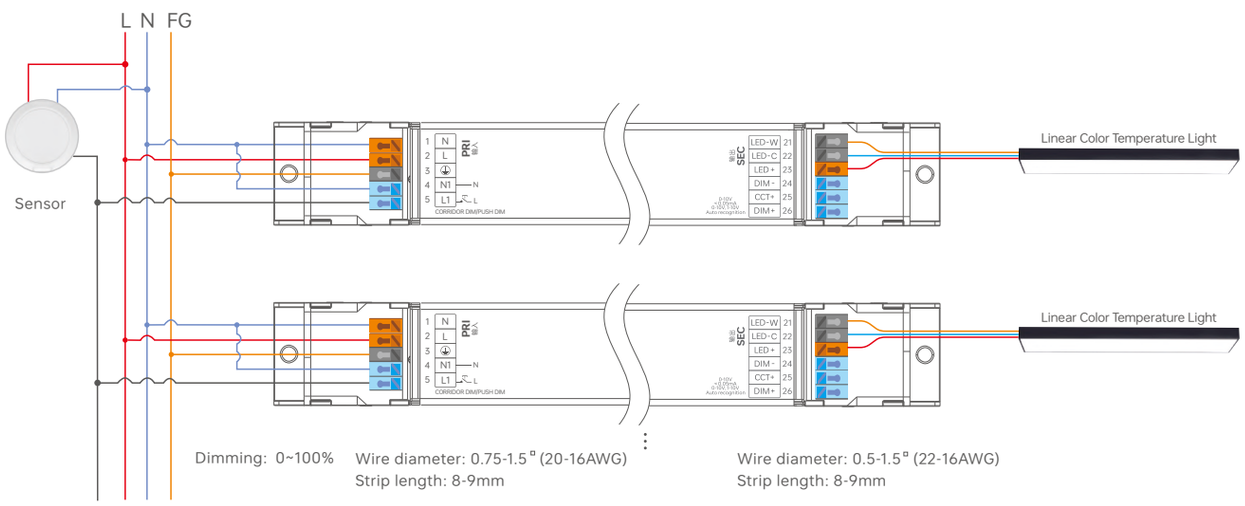
Short press : on/off control.
Double press: Switch brightness/color temperature mode.
Long press : Adjust the current mode.
Dimming memory : Upon being switched on again, the light resumes the previously set brightness level.

Switch to PUSH DIM/CCT Mode:

Method 1: If it has been switched to the corridor light mode, you can connect the circuit according to the PUSH DIM/CCT wiring diagram. Short press the push switch 5 times within 3 seconds, then long press it for 6 seconds and short press it 5 times within 3 seconds. The driver will automatically switch to the PUSH DIM/CCT mode.

Method 2: If it has been switched to the corridor light mode, you can switch it to the PUSH DIM/CCT mode via the NFC Lighting app.

Corridor Light Mode Connection



Switch to the corridor light mode

Method 1: Switch the driver to the corridor light mode via the NFC Lighting app, and the Push DIM/CCT mode will be turned off.

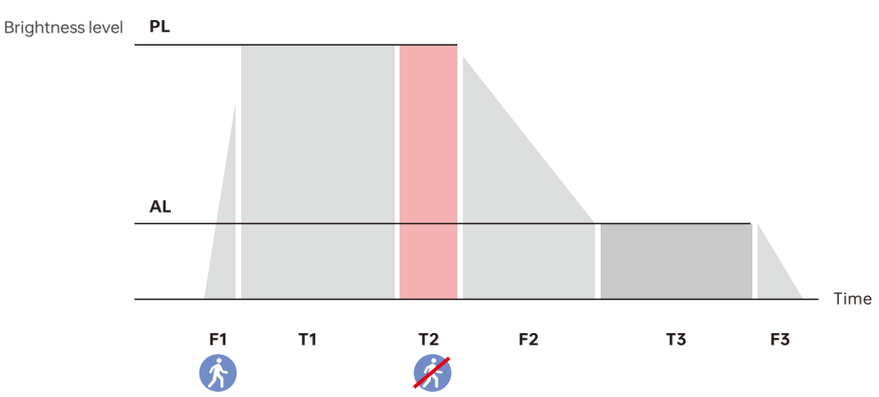
Method 2: After connecting the wires according to the corridor dimming wiring diagram, keep moving within the effective sensing area for more than 2 minutes, and it will automatically switch to the corridor dimming mode with all lights on at full brightness.

Method 3: After connecting the wires according to the corridor dimming wiring diagram, first replace the sensor with a common switch, then turn on the common switch and keep it conducting for 2 minutes. The driver will automatically switch to the corridor dimming mode. After that, remove the common switch and replace it with the sensor again.

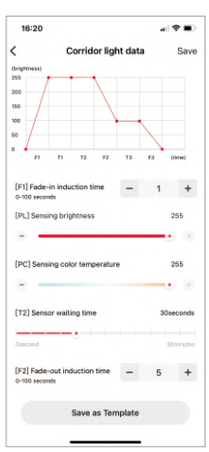
Note:: During normal operation, it is recommended to set the hold-time of the motion sensor to the minimum.

It is necessary to select a motion sensor with an AC switch.

Process of Corridor Dimming



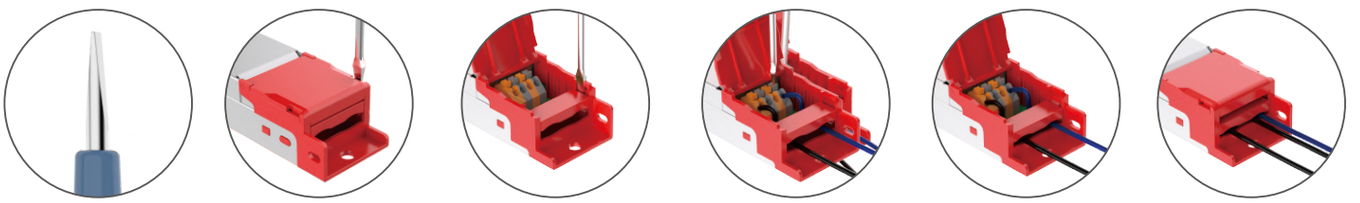
Name	Default	Setting Range
(F1) Fade-in Detection Time	1 s	0-100 s
(PL) Detection Brightness	255	0-255
(PC) Detection Color Temperature	0	0-255
(T1) Induction Hold Time	Set via the sensor	
(T2) Delay Time	30 s	0 s,5 s,10 s,20 s,30 s,45 s,1 min, 2 min, 3 min,5 min,10 min,20 min,30 min
(F2) Gradual Exit Sensing Time	1 s	0-100 s
(AL) Hold Brightness Level	100	0-255
(AC) Hold Color Temperature	0	0-255
(T3) Detection Hold Time	30 s	0 s,5 s,10 s,20 s,30 s,45 s,1 min,2 mins,3 mins,5 mins, 10 mins,20 mins,30 mins,Permanent
(F3) Fade-out Time to Off	1 s	0-100 s



Note: *If the light needs to maintain a low brightness hold, please set the [T3] Detection Hold Time to Permanent.

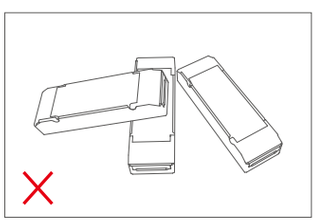
*The above parameters are set through the NFC lighting APP.

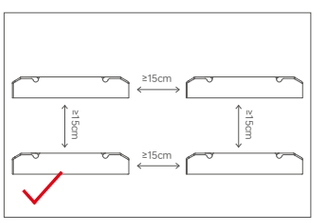
Protective Housing Application Diagram



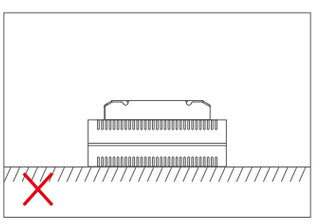
1. Prepare a screwdriver with a 0.6mm bit.
2. Use a screwdriver to pry up the protective cover on the side panel.
3. Use a screwdriver to pry up the side of the terminal block.
4. Connect the wiring according to the wiring diagram.
5. Press down on the wire board to secure the wire.
6. Close the protective cover.

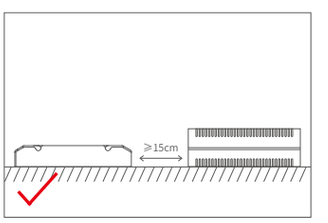
Installation Precautions





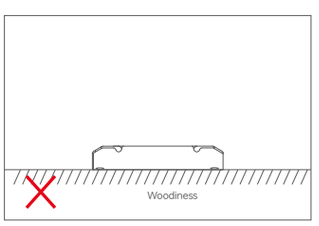
Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation or the lifetime of the products.

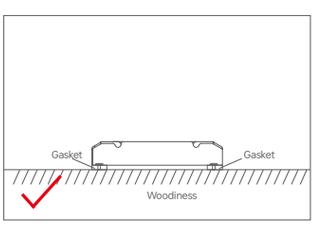




Please not place the products on power supplies. The distance between the product and the power supplies should be ≥15cm so as not to aśect heat dissipation or shorten the lifetime of the products.

Note: Installation must comply with the product's operating temperature range. Do not install inside lighting fixtures to avoid exceeding the product's operating temperature range, which may affect its lifespan.





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

Use the NFC Lighting APP

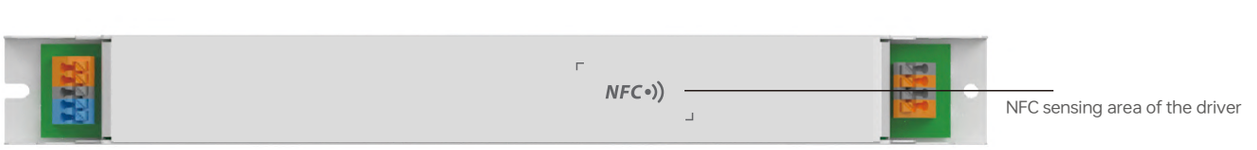
Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).

✱ 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.

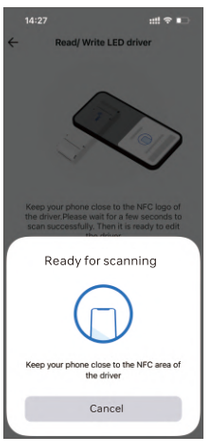


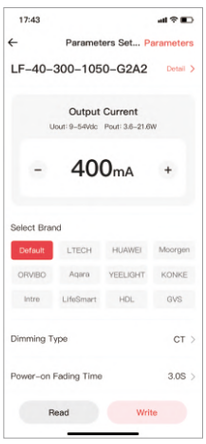
2. Edit parameters

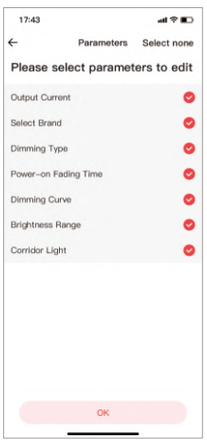
Click on [Parameter Management] to edit more advanced parameters such as Output Current,Select Brand, Dimming Type, Power-on Fading Time, Dimming Curve,Brightness Range and Corridor Light.

3. Write to the drive

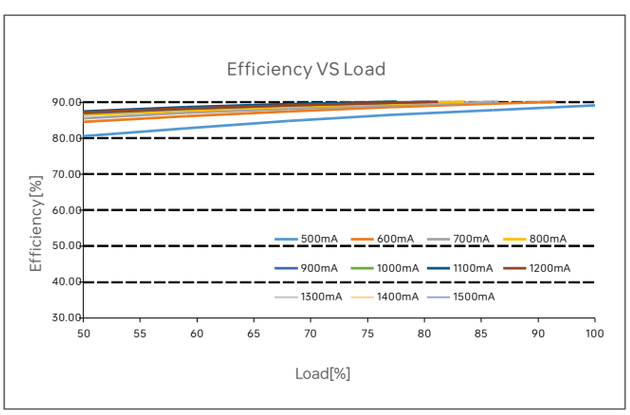
After completing the parameter settings, click 【Write】in the upper right corner, and keep the programmer's sensing area close to the NFC sensing area of the driver, so the parameters can be written to the driver.

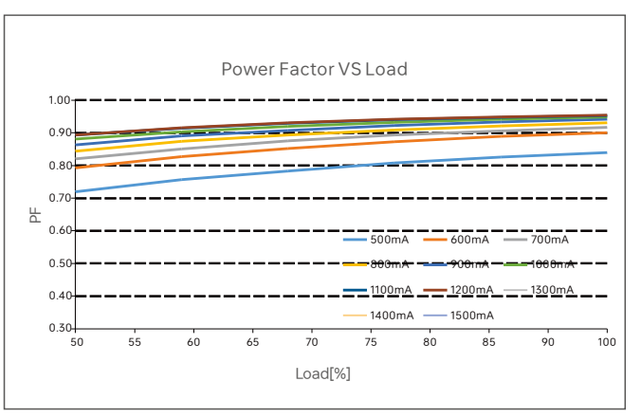


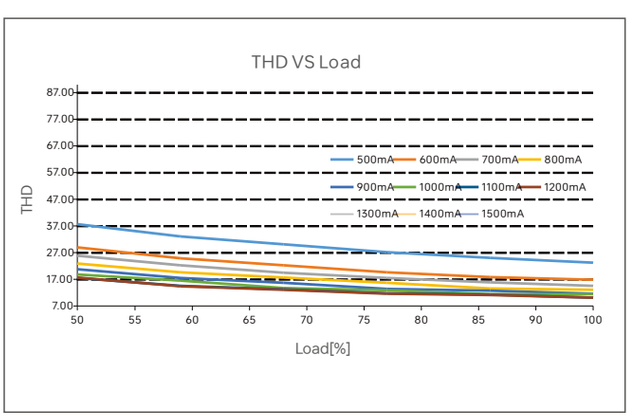


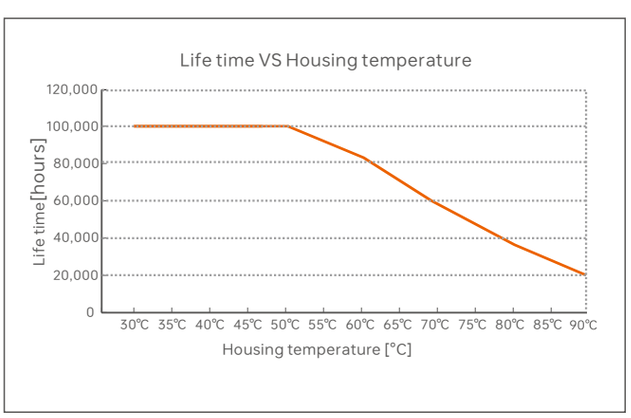


Relationship Diagrams









LF-60-500-1500-G2A2

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	15	19	24	30	40	17	22	27	35	43	20	25	31	39	49

Remarks:

1. Test Conditions: Cold start 18A(Test twidth=123us 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℃ 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.

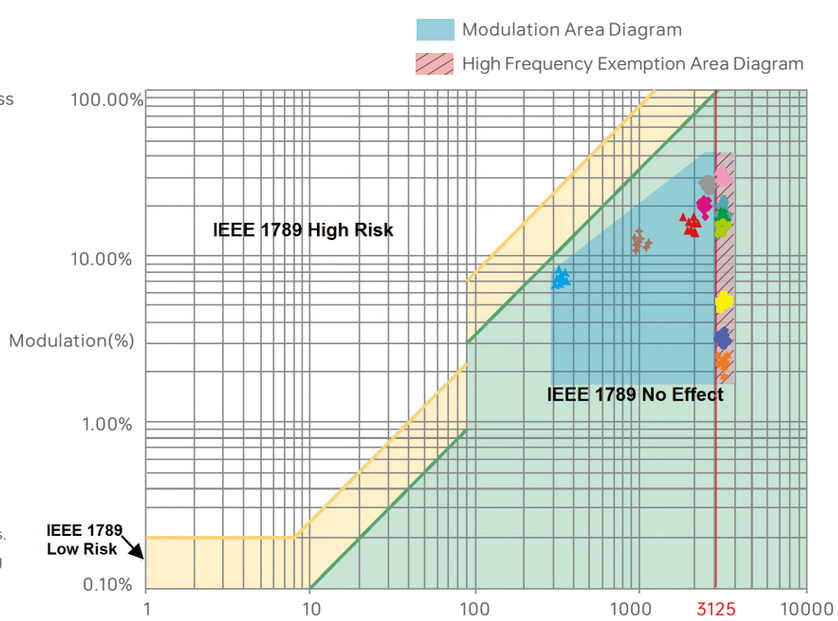
Flicker Test Sheet

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%

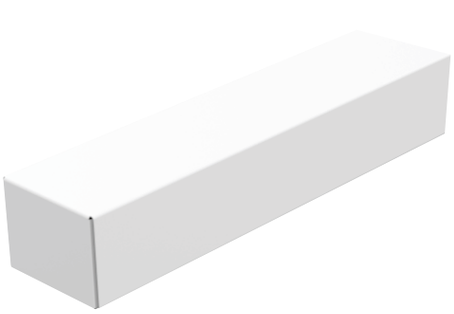


Marks in the right chart were tested results of different current ranges.
The output frequeny is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.

Packaging Specification

Model	LF-60-500-1500-G2A2
Packaging box size	325×255×140mm(L×W×H)

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 Conten	Updated by
A0	20251111	Original version	Haipeng Li