LTSYS

LF-60-500-1500-G1D2

DALI-2 DT6 PUSH DIM

Office Linear Smart Dimming 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 DALI-2 DT6/DT8, PUSH DIM/CCT, and corridor lighting dimming/ color temperature adjustment.
- Supports full-command NFC rapid programming, enabling users to modify output current, DALI address, and other parameters via a mobile app using NFC, thereby achieving driver data interaction functionality.
- Supports L-Data functionality, enabling access to DALI Part 251 (luminaire data query), Part 252 (energy report reading), and Part 253 (diagnostic and maintenance data reading) via the DALI master controller, providing robust data support for intelligent management platforms.
- NFC settings feature current step values as low as 1mA, delivering enhanced compatibility and finer control.
- 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.
- Supports CLO light decay compensation to ensure consistent illumination brightness.
- Supports EL emergency lights; in DC emergency mode, the current defaults to 15%.
- Supports wired firmware upgrades for devices.
- EU ERP no-load power consumption and network standby power consumption < 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.

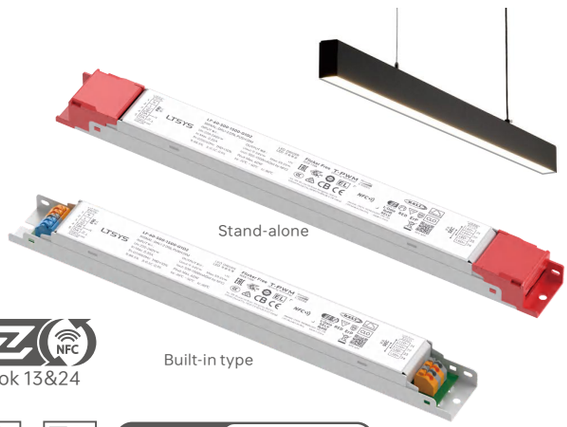
DALI 2

DIM

Flicker Free
IEEE 1789

T-PWM
Dimming Technology

NFC
Book 13&24



Dimmable:
1:10000

CLO

corridor DIM

EL

L-Data 251/252/253

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

Short circuit protection

Technical Specs

Model		LF-60-500-1500-G1D2 (Stand-alone)			LF-60-500-1500-G1D2 (Built-in type)
FEATURES	Output Type	Constant current			
	Dimming Interface	DALI-2 DT6, DALI Part 251/252/253, PUSH DIM			
	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	EL Emergency Lights, Lumen Maintenance Compensation, 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 start25A(Test twidth=125us 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)

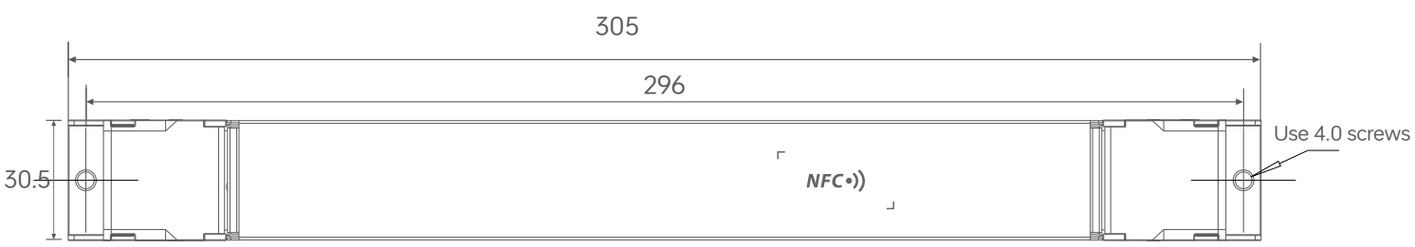
①Note: When performing a withstand voltage test to ground (FG), the gas discharge tube at the drive input must be temporarily removed to prevent functional operation of the internal gas discharge tube (see IEC 60598-1-10.2). After testing is complete, it must be reinstalled to restore surge protection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

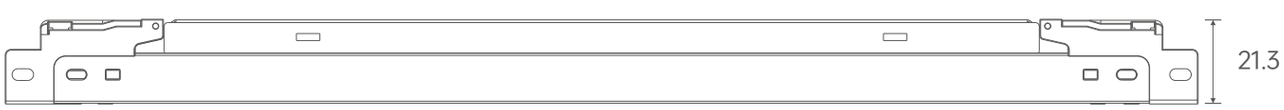
Typical Current Corresponding Parameter Table

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 300-1800mA, and the current step value can be as low as 1mA.									
LF-60-500-1500-G1D2	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			

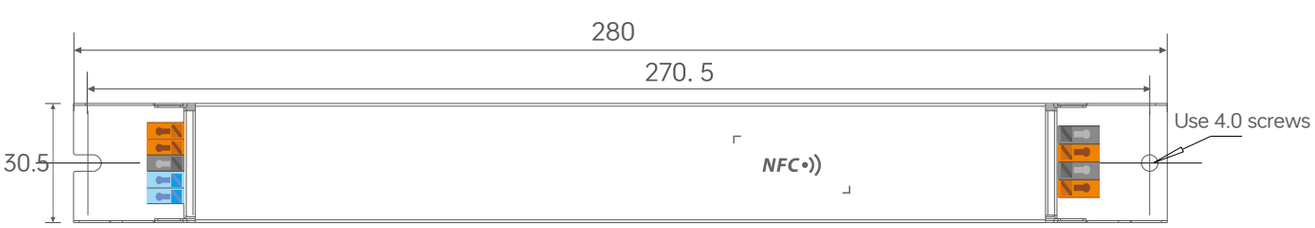
Product Size

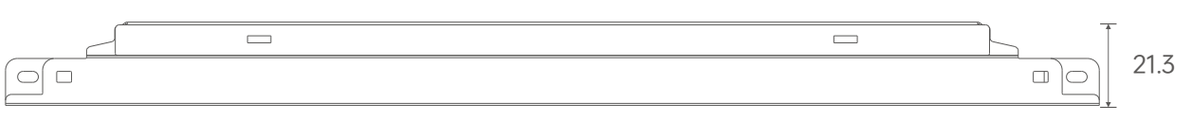
Unit: mm





Stand-alone

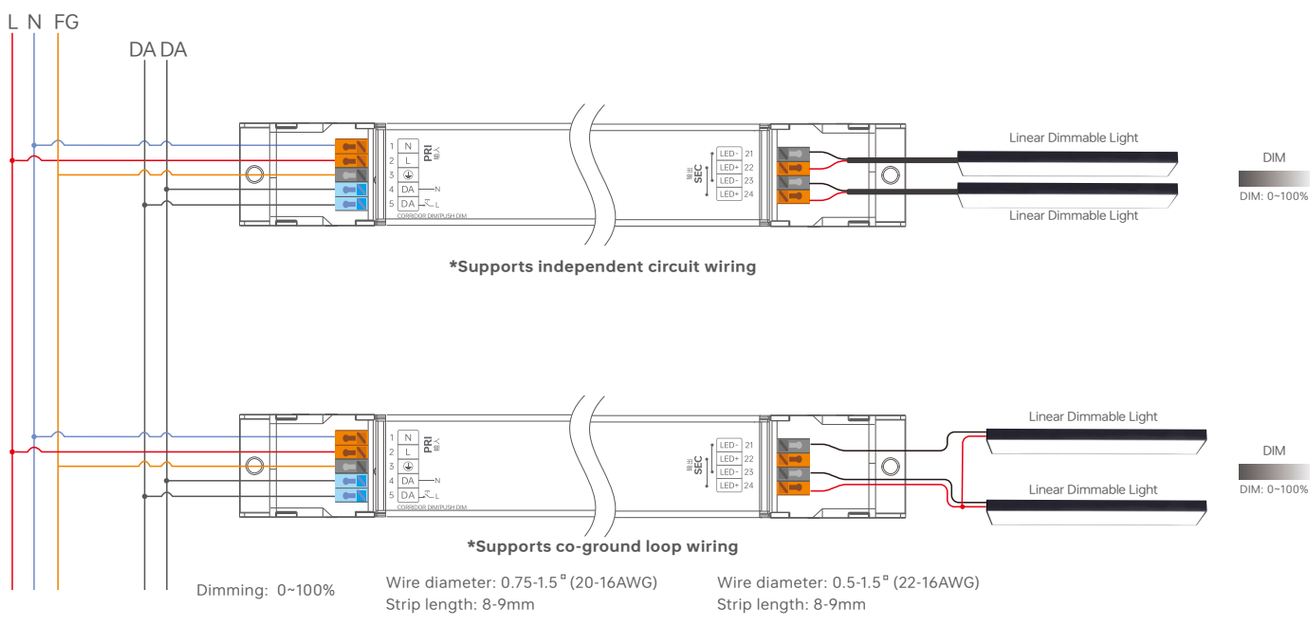




Built-in type

Connectivity Diagram

DALI Connection Method



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

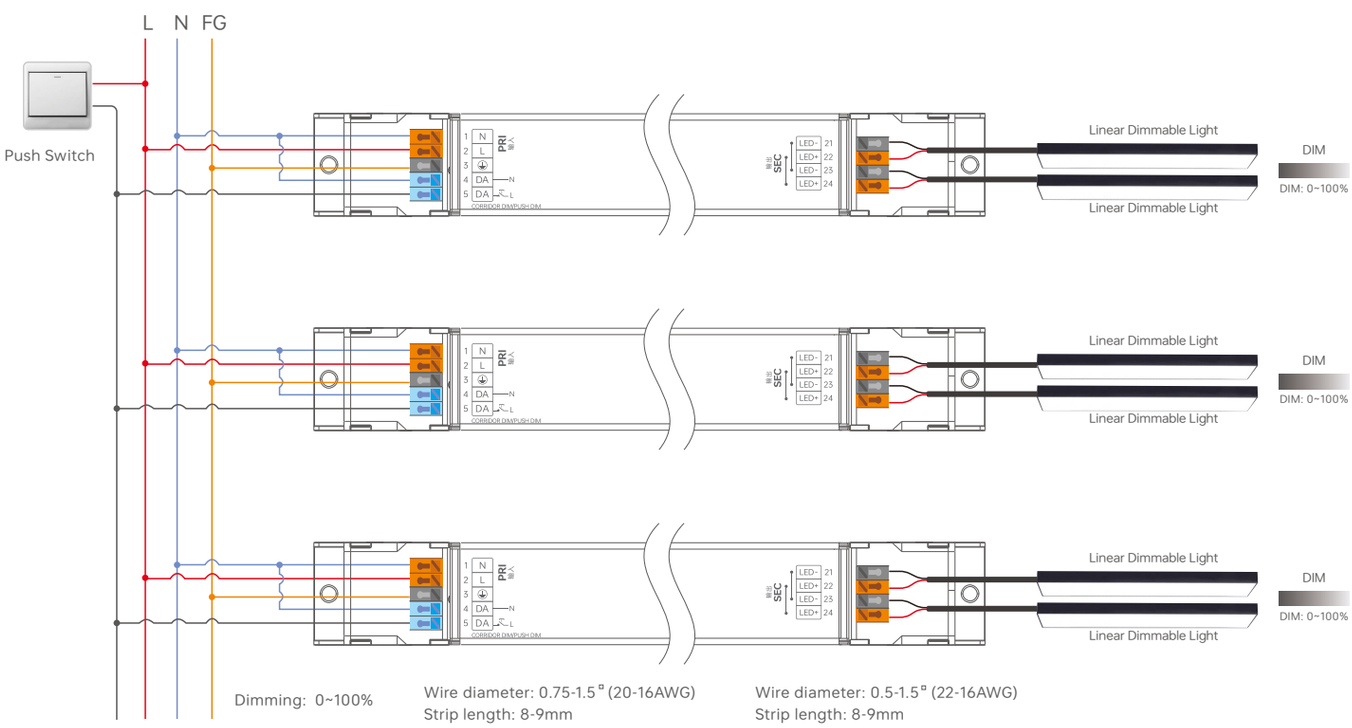
✻ When DC voltage is applied, button dimming is disabled.

✻ The dimming interface priority is as follows: DALI first, followed by PUSH DIM.

Switch to DALI dimming mode

After installation according to the DALI dimming application wiring diagram, the driver will automatically switch to DALI dimming mode upon receiving any DALI command.

PUSH DIM Connection Method



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 Switch

Operation Instructions

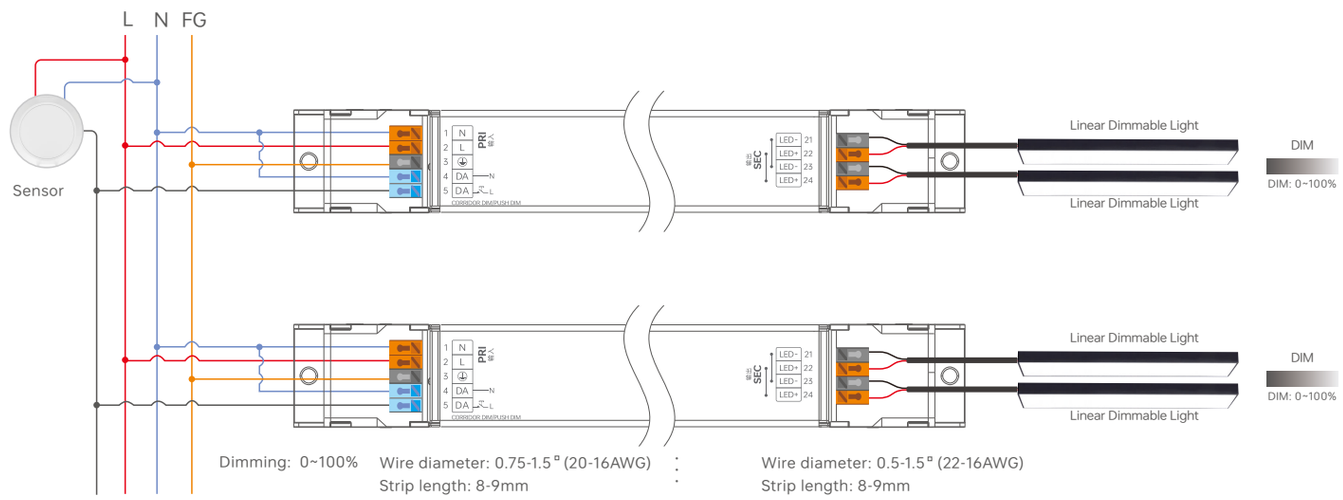
- Short press : on/off control.
- Long press: Brightness adjustment +/-, each subsequent long press will adjust the brightness in the opposite direction.
- Dimming Memory: When switched on or off again, the light will return to the previously adjusted brightness level.

Switch to PUSH DIM dimming mode

Method 1: If already switched to Corridor Dimming mode, connect the wiring according to the PUSH DIM wiring diagram. Reset the switch by pressing it 5 times within 3 seconds, then hold it down for 6 seconds, followed by pressing it 5 times within 3 seconds. The driver will automatically switch to PUSH DIM dimming mode.

Method 2: If already switched to Corridor Mode, you can switch to PUSH DIM dimming mode via the NFC Lighting app.

Corridor Light Mode Connection



Switch to the corridor light mode

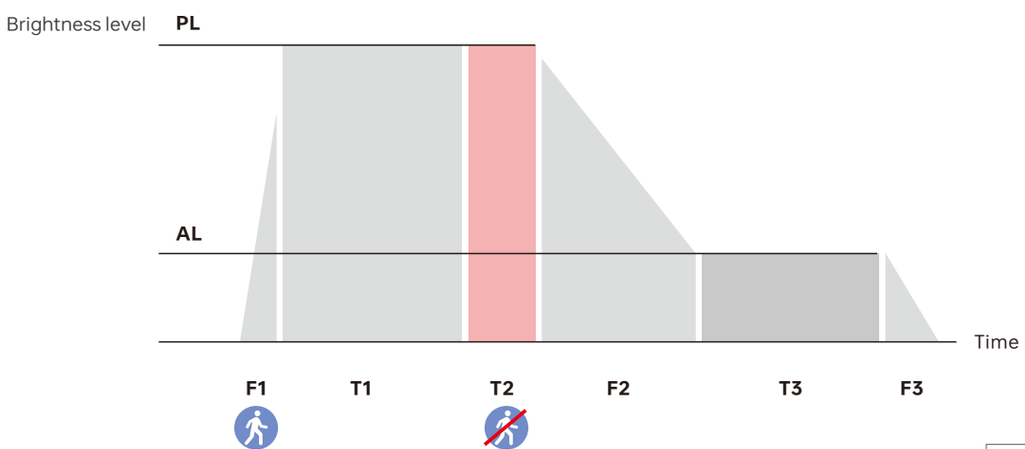
Method 1: Switch the driver to the corridor light mode via the NFC Lighting app, and the Push DIM mode will be turned off.

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.

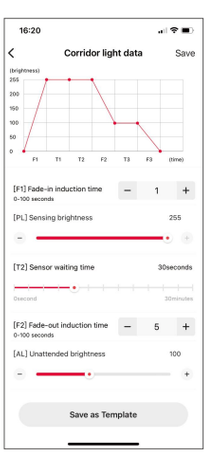
Method 3: After connecting the wires according to the corridor dimming wiring diagram, first replace the sensor with a common switch, then turn on the common switch and keep it conducting for 2 minutes. The driver will automatically switch to the corridor dimming mode. After that, remove the common switch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

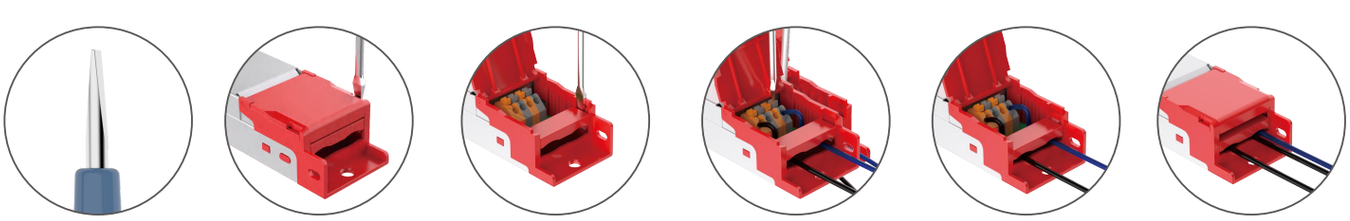


Name	Default	Setting Range
(F1) Fade-in Detection Time	1 s	0-100 s
(PL) Detection Brightness	255	0-255
(T1) Induction Hold Time	Set via the sensor	
(T2) Delay Time	30 s	0 s,5 s,10 s,20 s,30 s,45 s,1 min, 2 min, 3 min,5 min,10 min,20 min,30 min
(F2) Gradual Exit Sensing Time	1 s	0-100 s
(AL) Hold Brightness Level	100	0-255
(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



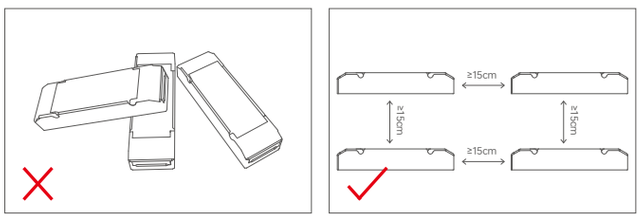
Note: *If the lamp needs to be on standby at a low brightness level, the [T3] Sensing Standby Time should be set to "Permanent".
*The above parameters are set through the NFC lighting APP.

Protective Housing Application Diagram

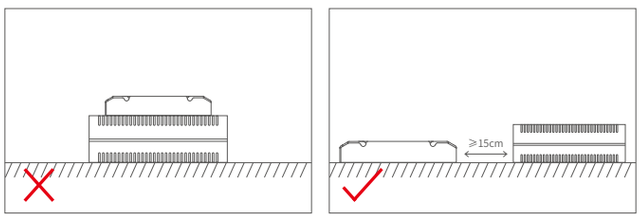


1. Prepare a screwdriver with a 0.6mm bit.
2. Use a screwdriver to pry up the protective cover on the side panel.
3. Use a screwdriver to pry up the side of the terminal block.
4. Connect the wiring according to the wiring diagram.
5. Press down on the wire board to secure the wire.
6. Close the protective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

Installation Precautions

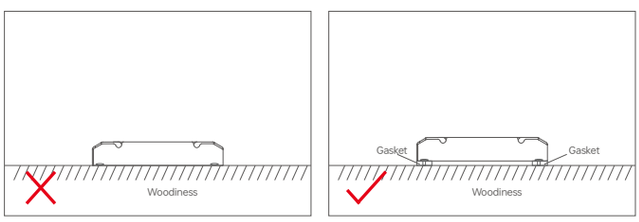


Please do not stack the products. The distance between two products should be ≥15cm so as not to affect heat dissipation or the lifetime of the products.



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.

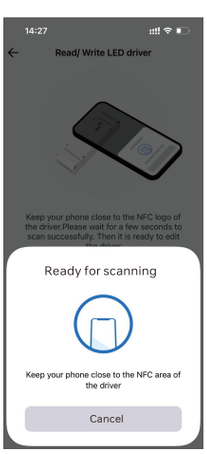
Read/Write the LED driver

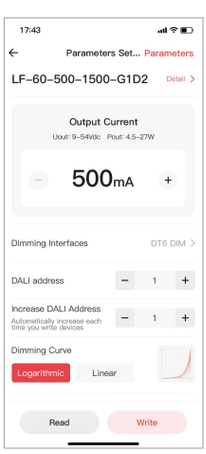
Use your NFC-capable phone to read LED driver data, then edit the parameters and they can be directly written to the driver.

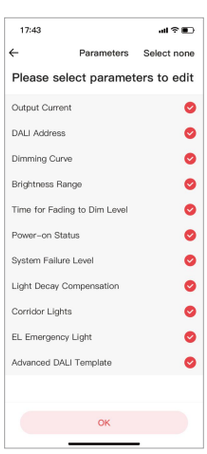
1.Read the LED driver
On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC sensing area of the driver to read the driver parameters.

2. Edit parameters
Click on [Parameter Management] to edit more advanced parameters such as Output Current, DALI Address, Dimming Curve, Brightness Range, Time for Fading to Dim Level, Power-on Status, System Failure Level, Light Decay Compensation, Corridor Lights, EL Emergency Light, Advanced DALI Template 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.



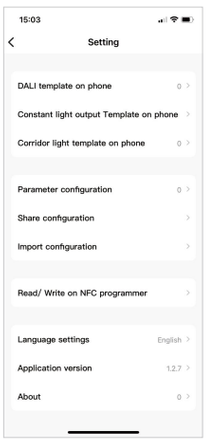


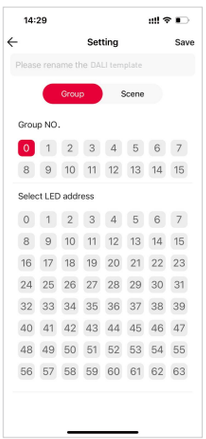


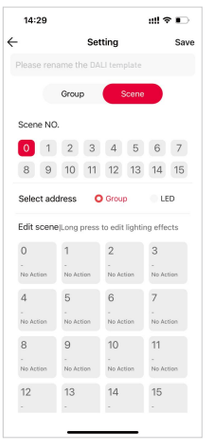
Advanced DALI template

Integrate the functions of the DALI lighting system, edit the DALI group and lighting effects for scenes, then save them in the advanced template to achieve lighting programming.

Setup page (for Read/Write LED driver) : Go to App home page — 【⬡】 icon in the top right — 【DALI template on pnone】.

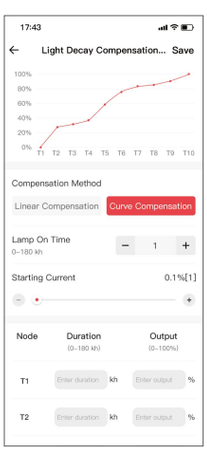






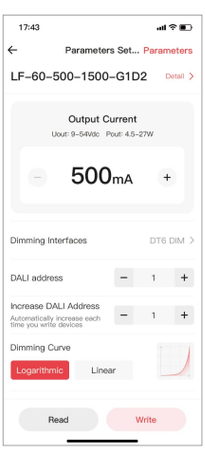
Light Decay Compensation

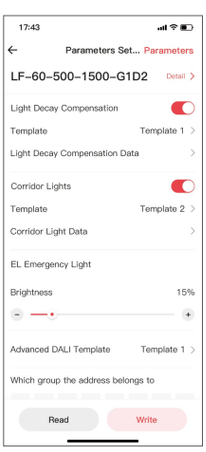
Lumen Maintenance Compensation primarily serves to sustain constant luminous flux output from LEDs. Throughout the LED's entire lifespan, it gradually increases the drive current to counteract lumen depreciation caused by prolonged operation, thereby ensuring consistent light output.



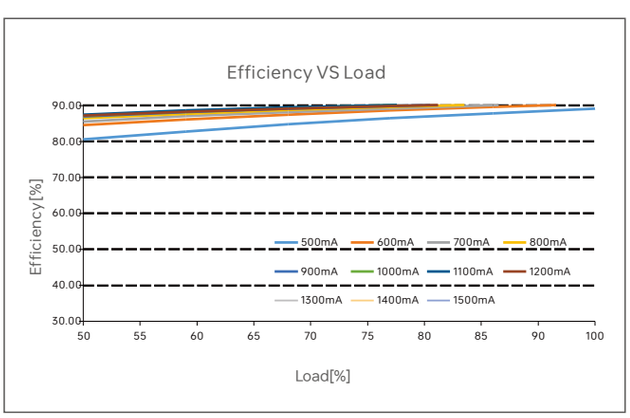
EL Emergency Light

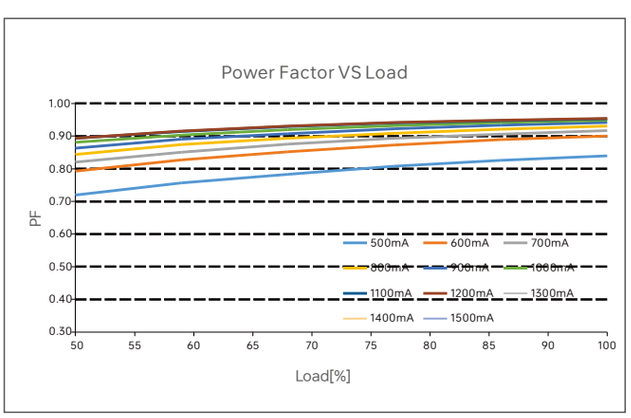
- The power supply operates normally with DC input.
- When using DC input, connect the positive terminal of the DC cable to the L terminal and the negative terminal to the N terminal.
- The output current can be configured via the NFC lighting app.

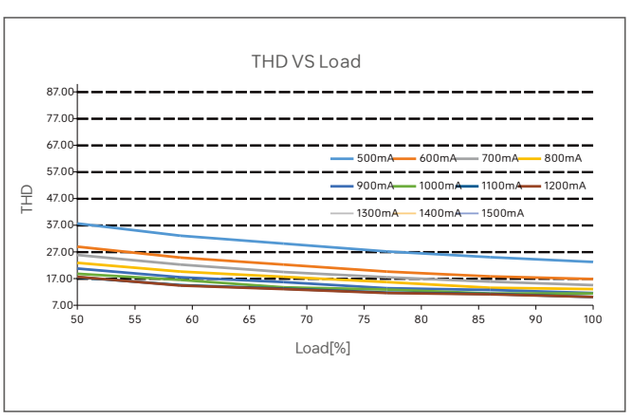


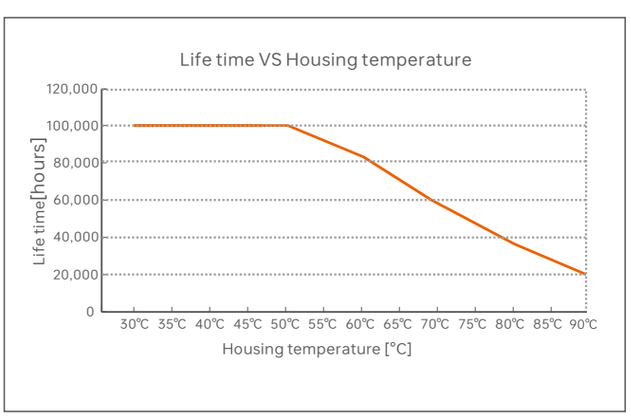


Relationship Diagrams









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	11	14	18	22	30	12	16	20	26	32	15	18	23	29	36

Remarks:

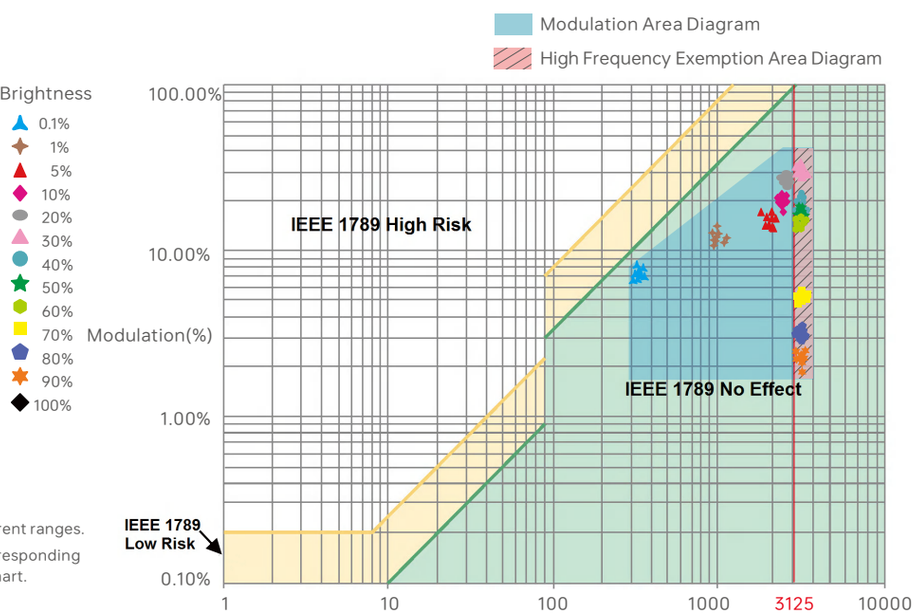
1. Test Conditions: Cold start 25A(Test twidth=125us tested under 50% Ipeak)/230V ~ .
2. The number of supported drivers may vary depending on the brand and model of the MCB.
3.It is recommended not to exceed the specified load capacity during on-site installation. The actual load should be determined 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 (%)
$f \le 8Hz$	0.2
$8Hz < f \le 90Hz$	$0.025 \times f$
$90Hz < f \le 1250Hz$	$0.08 \times f$
$f > 1250Hz$	Exemption assessment
Limit of modulation in no effect area	
Waveform frequency of optical output	limit (%)
$f \le 10Hz$	0.1
$10Hz < f \le 90Hz$	$0.01 \times f$
$90Hz < f \le 3125Hz$	$(0.08/2.5) \times f$
$f > 3125Hz$	Exemption assessment (High frequency exemption)

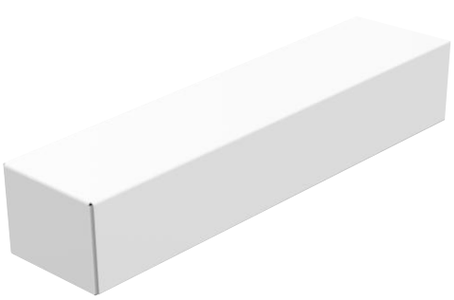
Marks in the right chart were tested results of different current ranges.
The output frequeny is 0Hz in 100% brightness and its corresponding modulation is 0%, which could not be shown in the right chart.



Packaging Specification

Model	LF-60-500-1500-G1D2
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