LTSYS

LM-75-24-G1A2F
LM-75-12-G1A2F

0-10V PUSH DIM

Intelligent LED Driver(Constant Voltage)

- Housing made from SAMSUNG/COVESTRO's V0 flame retardant PC materials.
- Screwless wire-pressing flip cover design, with detachable end caps. The length of the shell can be adjusted as needed.
- Supports full-command NFC fast programming; the mobile APP can be used to change dimming modes, PWM, brightness range, etc., via NFC, realizing the data interaction function of the driver.
- Supports 0-10V, PUSH DIM, and corridor light dimming
- 0-10V port ultra-low power consumption <0.05mA.
- Dimming range: 0-100%, and the LED starts dimming from 0.01%.
- Soft-on and fade-in dimming function enhances your visual comfort.
- The dimming interface is equipped with photoelectric isolation, complies with the latest safety standards, and is more safe and reliable.
- Complies with the EU ERP Directive on energy efficiency, with no-load power consumption < 0.5W and network standby power consumption < 0.5W.
- Innovative thermal management technology for intelligent protection of power supply lifespan.
- 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).

Flicker Free
IEEE1789

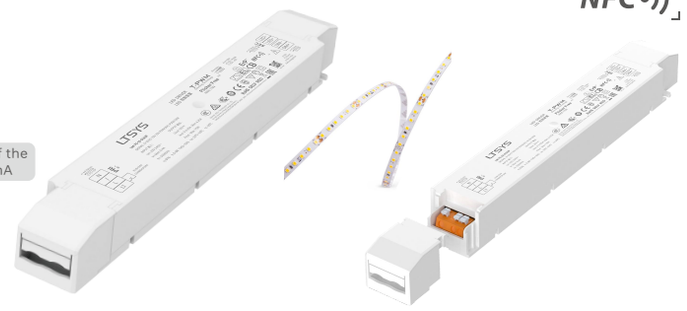
5 in 1dimming
0-10V
1-10V
10V PWM
RX
PUSH DIM

Current consumption of the 0-10V interface < 0.05mA

Dimmable:
1:10000

CORRIDOR DIM

NFC



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

PWM Digital Dimming
Overheat Protection
Over voltage protection
Over Load protection
Short circuit protection

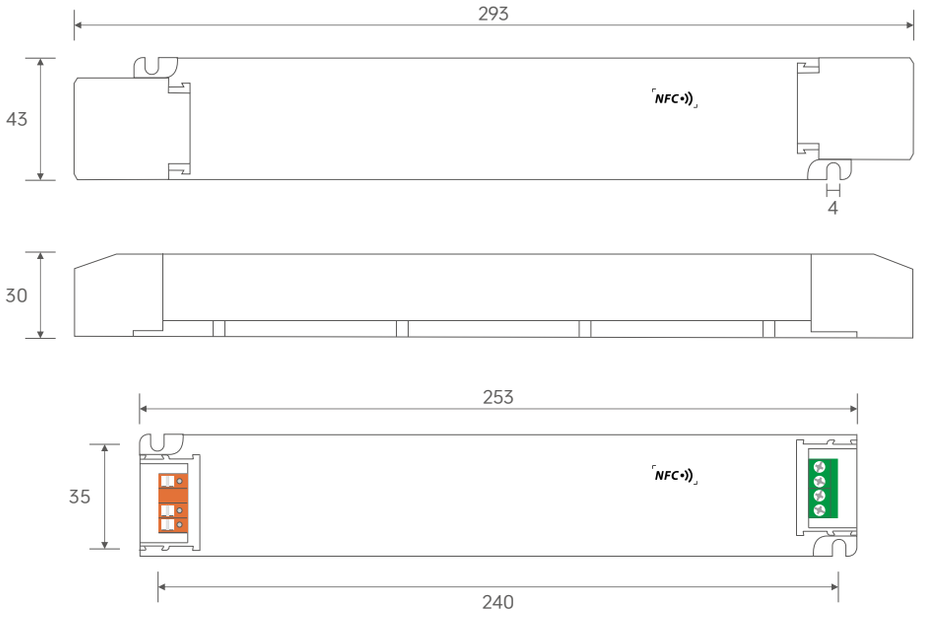
Technical Specs

Model		LM-75-24-G1A2F			LM-75-12-G1A2F
Features	Output Type	Constant voltage			
	Dimming Interface	0/1-10V, Push DIM			
	Output Feature	Isolation			
	Protection Grade	IP20			
	Insulation Grade	Class Ⅱ (Suitable for class Ⅰ/ Ⅱ /Ⅲ light fixtures)			
OUTPUT	Output Voltage	24V ⎓			12V ⎓
	Output Voltage Range	24V ± 0.5V ⎓			12V ± 0.5V ⎓
	Output Current	Max. 3.125A			Max. 6.25A
	Output Power	Max. 75W			
	Output Power Range	0-75W			
	Strobe Level	High frequency exemption level			
	Dimming Range	0-100%, down to 0.01%			
	Overload Power Limitation	≥102%			
	Ripple	≤300mV			≤200mV
	PWM Frequency	300-22000Hz			
INPUT	Input AC Voltage	220-240V~			
	Input DC Voltage	220-240V ⎓ (EMI needs to be evaluated after the lamp is equipped.)			
	Frequency	50/60Hz			
	Input Current	Max. 0.4A/230V~			
	Power Factor	PF>0.98/230V~ (at full load)			
	THD	THD<10%@ 230V~(at full load)			
	Efficiency (Typ.)	92%			91%
	Inrush Current	Cold start 45A(Test twidth=300us tested under 50% Ipeak)/230Vac			
	Anti Surge	L-N: 2KV			
	Leakage Current	Max. 0.5mA			
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℃-50℃)			
	Vibration	10~500Hz, 2G 12mins/cycle, 72 min for X, Y and Z axes respectively			
PROTECTION	Overheat Protection	Intelligently adjust or turn off the current output if the PCB temperature ≥110℃. When the PCB temperature <90℃, automatically recover normal output			
	Overload Protection	Automatically protect the device when the load exceeds 102% of the rated power. Automatically recover once load is reduced			
	Short Circuit Protection	Enter hiccup mode if short circuit occurs, and recover automatically			
	Overvoltage Protection	No-load voltage ≥ 28V; output turns off and can recover automatically.			No-load voltage ≥ 16V; output turns off and can recover automatically.
SAFETY & EMC	Withstand Voltage	I/P-O/P:3750V~			
	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	
		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	EN55015，EN61000-3-2，EN61000-3-3，EN61547	
		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 switching on/off via 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.)	290g±10g			
	Dimensions	293×42.5×30mm(L×W×H)			

This driver is suitable for connecting LED lighting fixtures with resistor current limiting (such as LED light strips). If it is connected to a fixture with built-in constant current IC for current limiting, an instantaneous inrush current dozens of times higher will be generated, causing the driver to activate overload protection (hiccup and strobing). When placing an order, such fixtures with built-in constant current IC for current limiting (e.g., MR16 bulbs, underground lights, wall washers, constant current hard light strips, etc.) need to be specified to facilitate the burning of a special program.

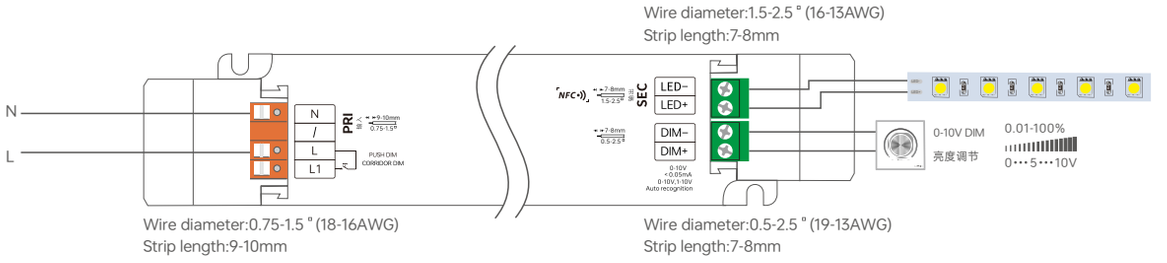
Product Size

Unit:mm



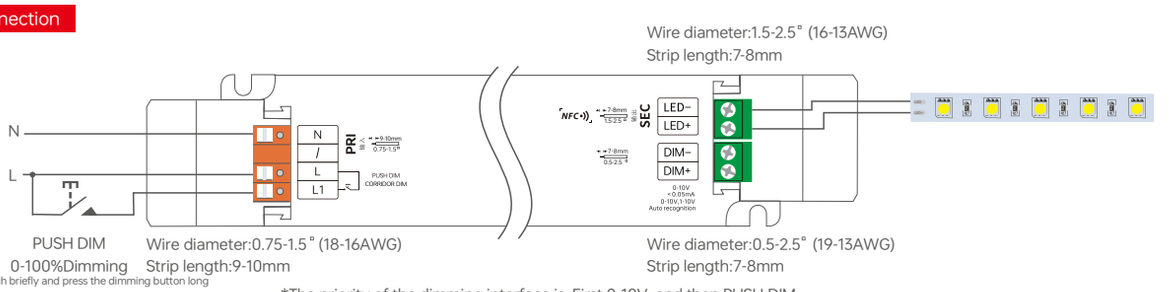
Wiring Application Diagram

0-10V Connection Method



*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

PUSH DIM Connection



*The priority of the dimming interface is: First 0-10V, and then PUSH DIM.

*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

Switch to PUSH DIM Mode:

Method 1: If it has been switched to the corridor dimming mode, connect the wires according to the PUSH DIM wiring diagram. Press the switch briet y 5 times within 3 seconds of reset button, then press and hold it for 6 seconds, and then press it briefly 5 times within 3 seconds. The driver will automatically switch to the Push DIM dimming mode.

Method 2: If it is switched to the corridor mode, you can switch to the Push DIM dimming mode through the NFC Lighting app.

PUSH DIM

Reset Switch

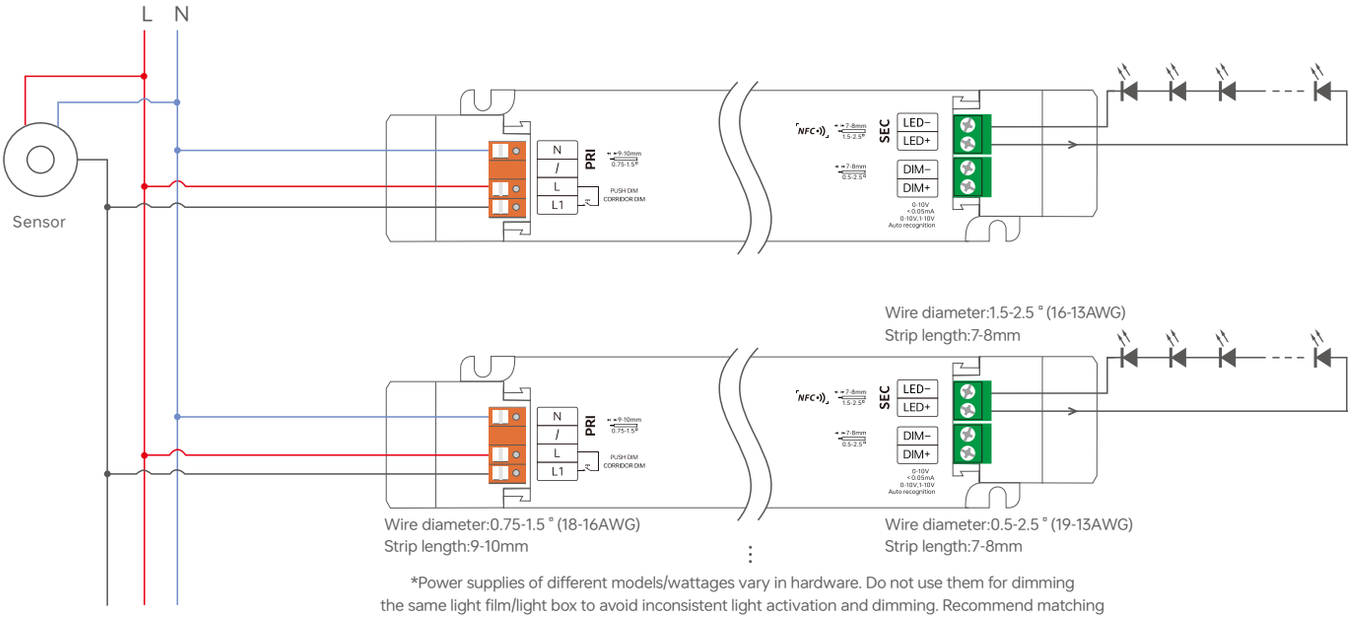
Short press : on/off control.

Double-click: Not available.

Long press : Adjust the current brightness.

Dimming memory : When the light is switched on/off again, the light will resumes to the previously set brightness level.

Corridor Dimming Application



*Power supplies of different models/wattages vary in hardware. Do not use them for dimming the same light film/light box to avoid inconsistent light activation and dimming. Recommend matching the same light film/light box with a power supply of the same model for consistent dimming.

Switch to the corridor light mode

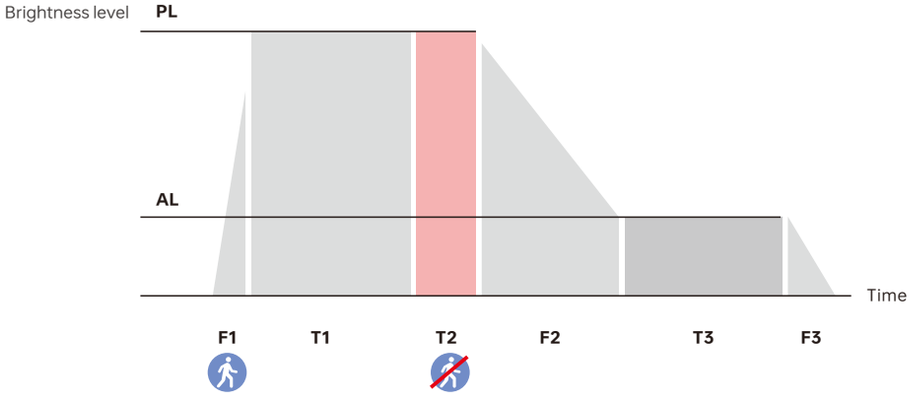
Method 1: Configure and switch the corridor light function via NFC, and the Push DIM function will be turned off.

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.

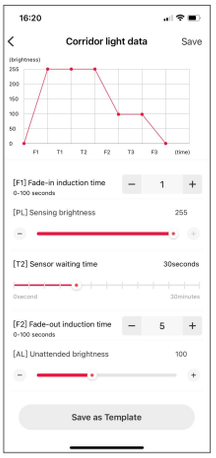
Method 3: After connecting the wires according to the corridor dimming wiring diagram, first replace the sensor with a common switch, then turn on the common switch and keep it conducting for 2 minutes. The driver will automatically switch to the corridor dimming mode. After that, remove the common switch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

Corridor Dimming: Working Process



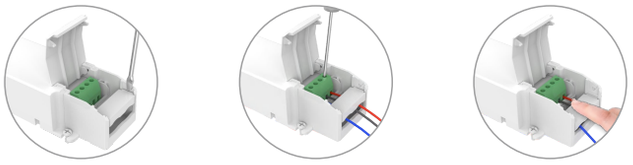
Name	Default	Setting Range
(F1) Gradual Entry Sensing Time	1 s	0-100 s
(PL) Sensing Brightness	255	0-255
(T1) Sensing Holding Time	Set through the sensor	
(T2) Delay Time	30 s	0 s,5 s,10 s,20 s,30 s,45 s,1 min, 2 min, 3 min,5 min,10 min,20 min,30 min
(F2) Gradual Exit Sensing Time	1 s	0-100 s
(AL) Standby Brightness	100	0-255
(T3) Sensing Standby 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) Gradual Exit to Off Time	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

Tension plate

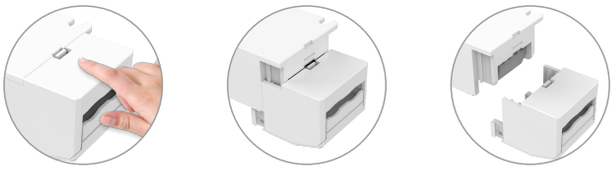


1. Pry up the protecting housing in the side plate position with a tool.

2. Connect to electrical wires with a screwdriver as wiring diagram shows.

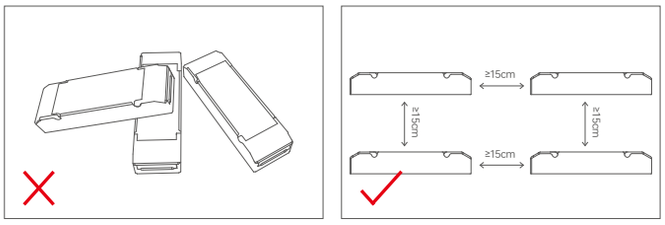
3. Press down the tension plate to fix the the electrical wires, then close the protective housing.

Remove the protective housing

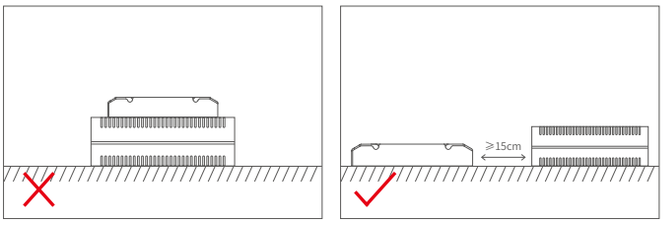


Pull the housing left and right from the bottom to remove it.

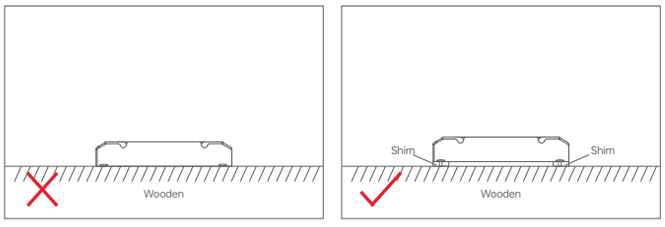
Installation Precautions



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



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.



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.

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).

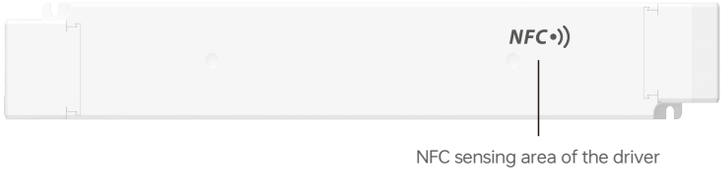
✱ Before you begin setting the parameters of the driver, please make sure the driver is powered off.

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.



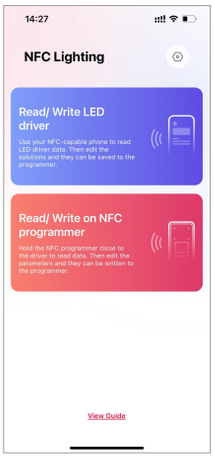
NFC sensing area of the driver

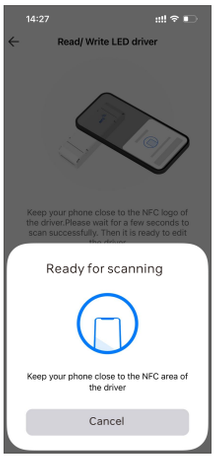
2. Edit parameters

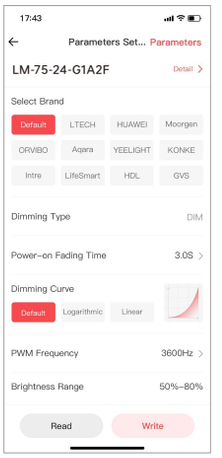
Click on [Parameter Management] to edit more advanced parameters such as Select Brand, Dimming Type, Power-on Fading Time, Dimming Curve, PWM Frequency, Brightness Range, and Corridor Light.

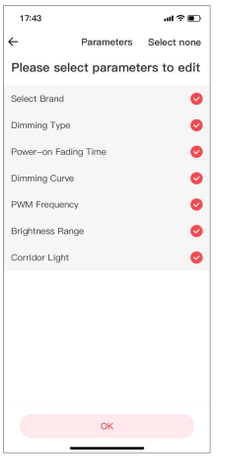
3. Write to the drive

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

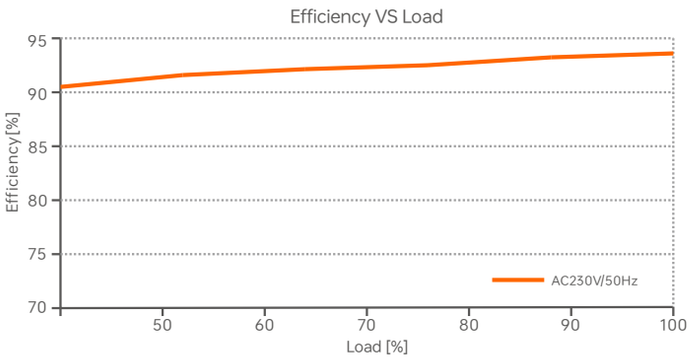


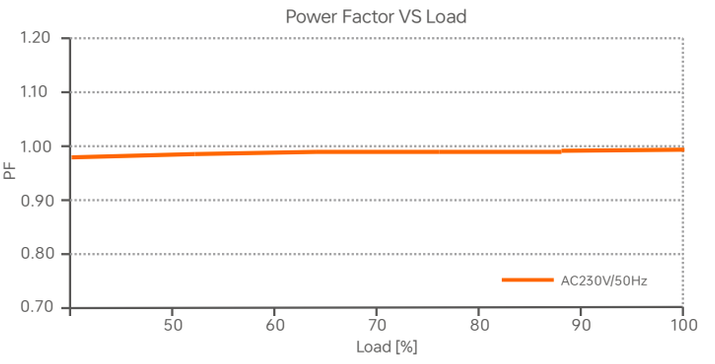


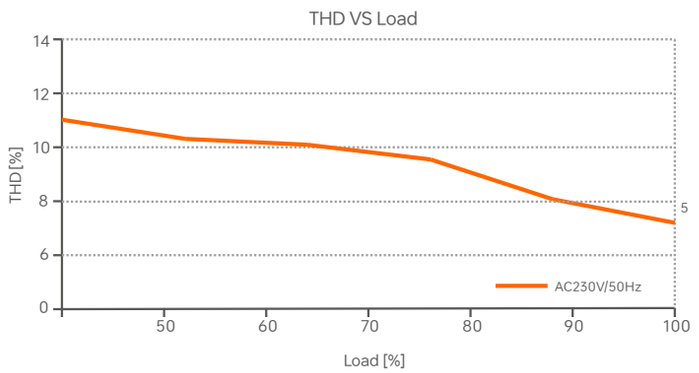


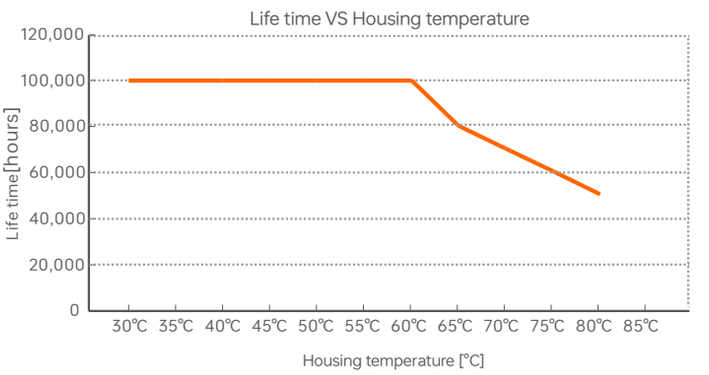


Relationship Diagrams

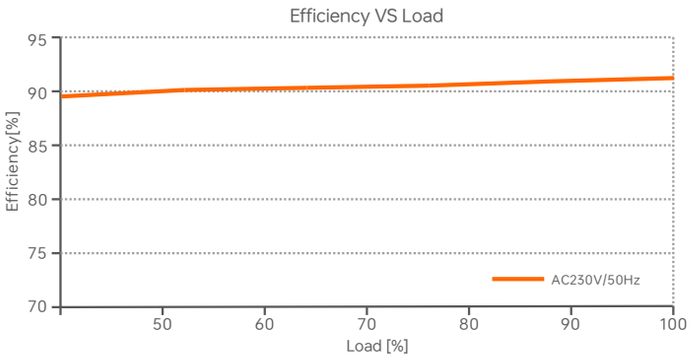


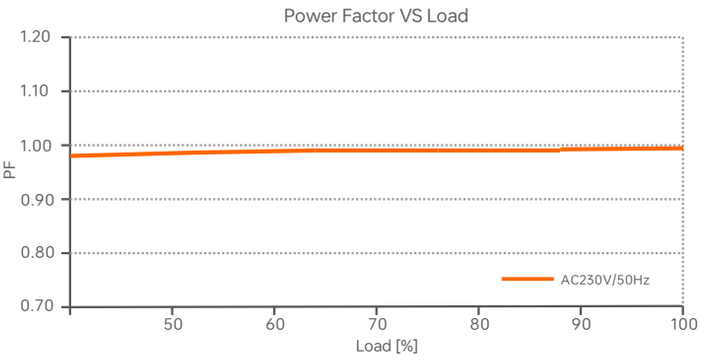


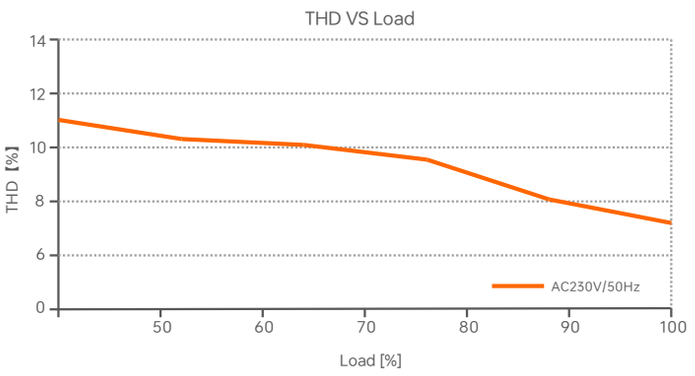


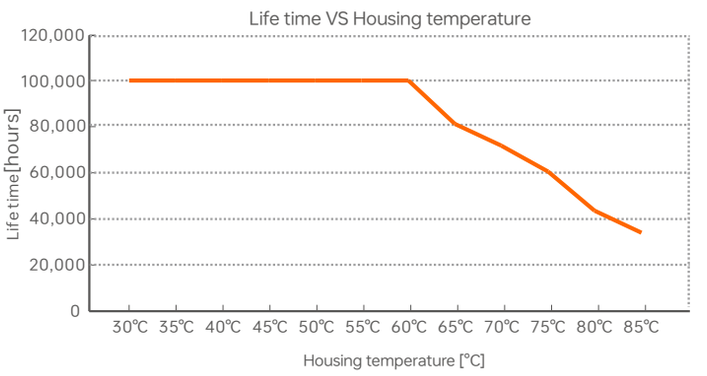


LM-75-24-G1A2F









LM-75-12-G1A2F

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	5	7	8	10	13	8	9	10	12	15	11	12	13	16	19

Remarks:

1. Test Conditions: Cold start 45A(Test twidth=300us 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.

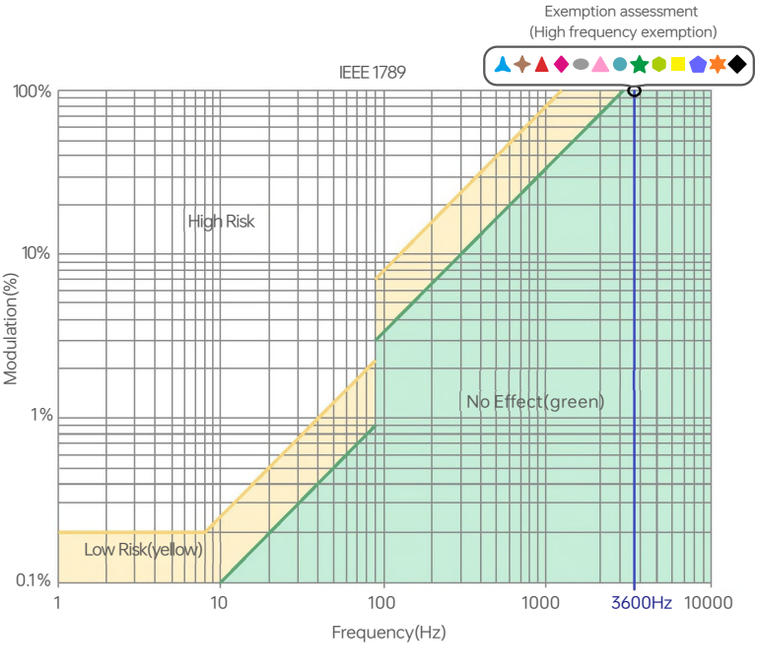
Flicker Test Table

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

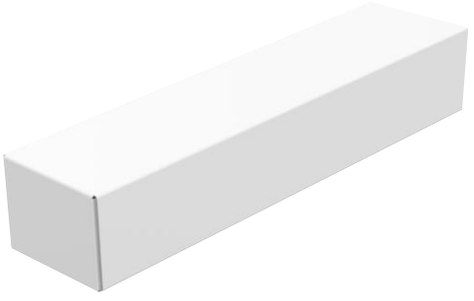
- 0.1%
- 1%
- 5%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%



Packaging specification

Model	LM-75-24-G1A2F/LM-75-12-G1A2F
Packaging box size	315×215×240mm(L×W×H)
Quantity	10 PCS per layer, 3 layers per box, 30 PCS per box
Weight	0.29kg per PC, 9.6kg±5% per 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.

ZHUHAI LTECH TECHNOLOGY CO., LTD.

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Website: www.ltech-led.com