Product Description

LF-GMD045YSV conforms to the latest safety standards and DLC5.0 certification of North American. Its output circuit is isolated from the dimming circuit. It has three-in-one dimming function including 0-10V, PWM & Rx dimming. With upgraded dimming effect and wider output current range, this product is a better solution for your US-standard panel light.

Features

- Conforms to the latest safety standards: the output circuit is isolated from the dimming circuit
- Conforms to the latest DLC5.0 certification standards
- Upgraded dimming effect: the dimming curve becomes much smoother; the light can be dimmed to off; up to 10 pieces of LED drivers to be turned on and off synchronously

Application

- Indoor US-standard panel light

Technical Data

Full Model Name		LF-GMD045YSV						
Output	Output Voltage	25-42V						
	Output Current	800mA	850mA	900mA	950mA	1000mA	1050mA	1100mA
	Ripple Voltage	<2V @ 20MHz						
	Percent Flicker	Meet the US standards						
	Current Tolerance	±5%						
	Temperature Drift	±10%						
	Line Regulation	±5%						
	Start-up Time	<1s						
Input	Line Regulation	±5%						
	Rated Input Voltage	100-277VAC						
	Input Frequency Range	47Hz-63Hz						
	Input Current	0.6A Maximum						
	Power Factor	≥0.95 @ 120VAC						
		≥0.90 @ 277VAC						
	Total Harmonic Distortion	≤20%						
	Efficiency	≥84% @ 120VAC	≥84% @ 120VAC	≥85% @ 120VAC	≥85% @ 120VAC	≥85% @ 120VAC	≥85% @ 120VAC	≥85% @ 120VAC
		≥84% @ 277VAC	≥84% @ 277VAC	≥85% @ 277VAC	≥85% @ 277VAC	≥85% @ 277VAC	≥86% @ 277VAC	≥86% @ 277VAC
	Inrush Current	≤60A & 300uS @ 230VAC						
	Quantity of the same model of power supply that can be configured by a circuit breaker.	Under the condition of 230VAC, the total quantity of the same model of power supply that can be configured by a type-B 16A circuit breaker is 43 pieces.						
	Standby Power Consumption	≤1W (dim-to-off)						
Protection	Output Short-Circuit Protection	Hiccup mode (auto-recovery)						
	Output Open-Circuit Protection	<55V						
	Output Overvoltage Protection	<55V						
Environment Condition	Working Temperature	-30℃ ~ +50℃						
	Working Humidity	20-90%RH (no condensation)						
	Storage Temperature/Humidity	-50℃ ~ 85℃ (six months under class I environment); 10-95%RH (no condensation)						
	Atmospheric Pressure	86KPa-106KPa						
	Vibration	Displacement amplitude: 5Hz ~ 9Hz 1.2mm; acceleration amplitude: 9Hz ~ 200Hz 1G; sweep-frequency: 1.0oct/min; test time: XYZ, 30 min each; The driver was in operating state and was tested according to system setting.						

Safety & Norm	Certificate	UL, FCC, Class P
	Withstand Voltage	I/P-O/P: 3.75KV, 5mA, 60s; I/P-GND: 1.6KV 5mA 60S
	Insulation Resistance	I/P-O/P: 500VDC, >100MΩ
	Surge Rating	IEC61000-4-5 (L-N: 1KV, L/N-PG: 2KV) , Class B
	Electrical Fast Transient / Burst	2KV (Class B)
	Ringing wave	2.5KV (Class B)
	Safety Standard	UL8750, AS/NZS 61347-1: 2016
	Electromagnetic Interference	FCC Part 15B
	Electromagnetic Susceptibility	EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, IEC61000-4-13
	EMI Light Fixture	LED panel light
	Electrostatic Discharge (ESD)	Air 8KV; touch 4KV (Class B)

Other Statements

Others	RoHS	RoHS 2.0 (EU) 2015 / 863
	Warranty Condition	5 years (43,800 hours) @Tc 71 ℃
	Noise Rating	≤20db (Tested in a soundproof room and the noise collector was 10cm away from the driver.)
Testing Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectrum analyzer: KH3935, hi-pot tester: TH9201B, flicker tester 60N-01, etc.	
Testing Condition	Unless otherwise stated, the parameters of the power factor, THD and efficiency are the test results under the ambient temperature of 25℃ and humidity of 50%, AC input of 230V and 100% load.	
Additional Remark	1. It is recommended that customer should install protection devices for surge and for overvoltage & undervoltage to ensure safety before connecting to electricity. 2. The PC cover, housing, end caps and other parts of the LED driver inside the LED light fixture must conform to UL94-V0 flammability standard or above. 3. As an accessory, the LED driver is not the only factor determining the EMC performance of the LED light fixture. The structure and the wiring of the light fixture are also relevant. Thus it's strongly recommended the LED light fixture manufacturer re-confirms the EMC of the whole LED light fixture.	

RoHS: Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

ITHD: The total harmonic distortion of the current

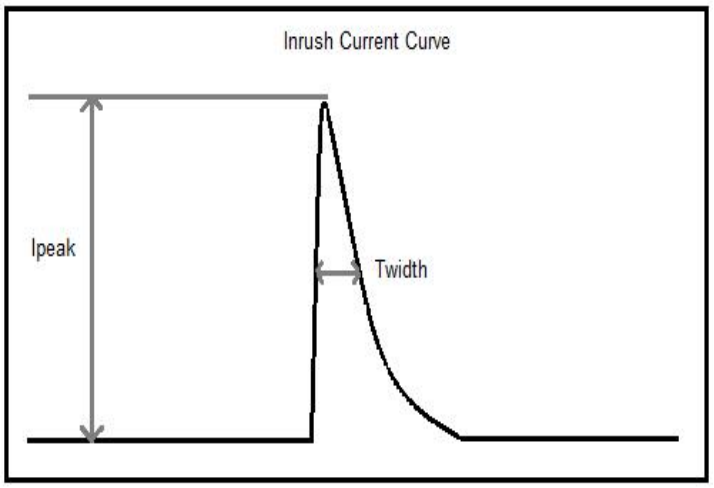
MTBF: Mean time between failure

Circuit Breaker & Relevant Parameters

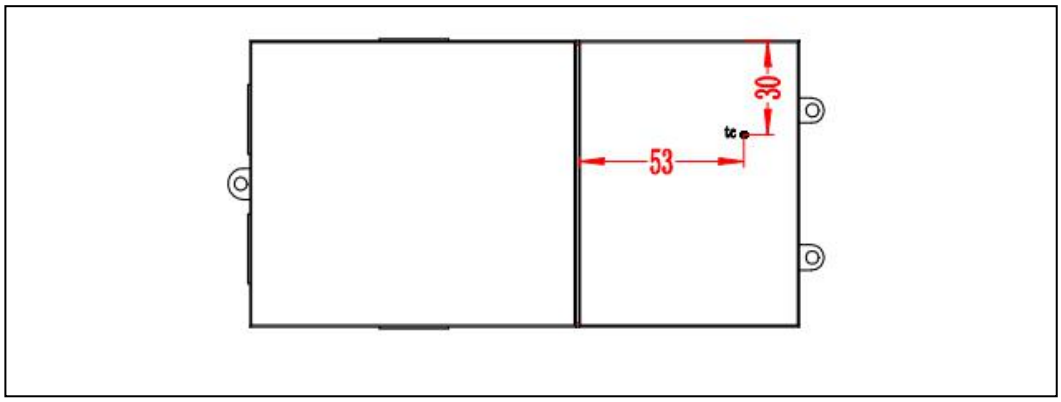
Name	Value	Remark
Surge peak current (Ipeak)	33.2A	Input voltage 230Vac
Surge half-peak time (Twidth)	77μs	Input voltage 230Vac. Measure the time for Ipeak to drop to its half value.
Quantity of the same model of driver that can be configured by a type-B 16A circuit breaker.	43 pcs (maximum)	

Driver quantities are below if use another type of circuit breaker.

Type	Rank	Qty of accommodated drivers	Relative conversion ratio
B	10A	27 pcs	63%
	13A	34 pcs	81%
	16A	43 pcs	100% (benchmark)
	20A	53 pcs	125%
	25A	67 pcs	156%
C	10A	44 pcs	104%
	13A	58 pcs	135%
	16A	73 pcs	170%
	20A	89 pcs	208%
	25A	111 pcs	260%



Tc Spot on the Upper Casing



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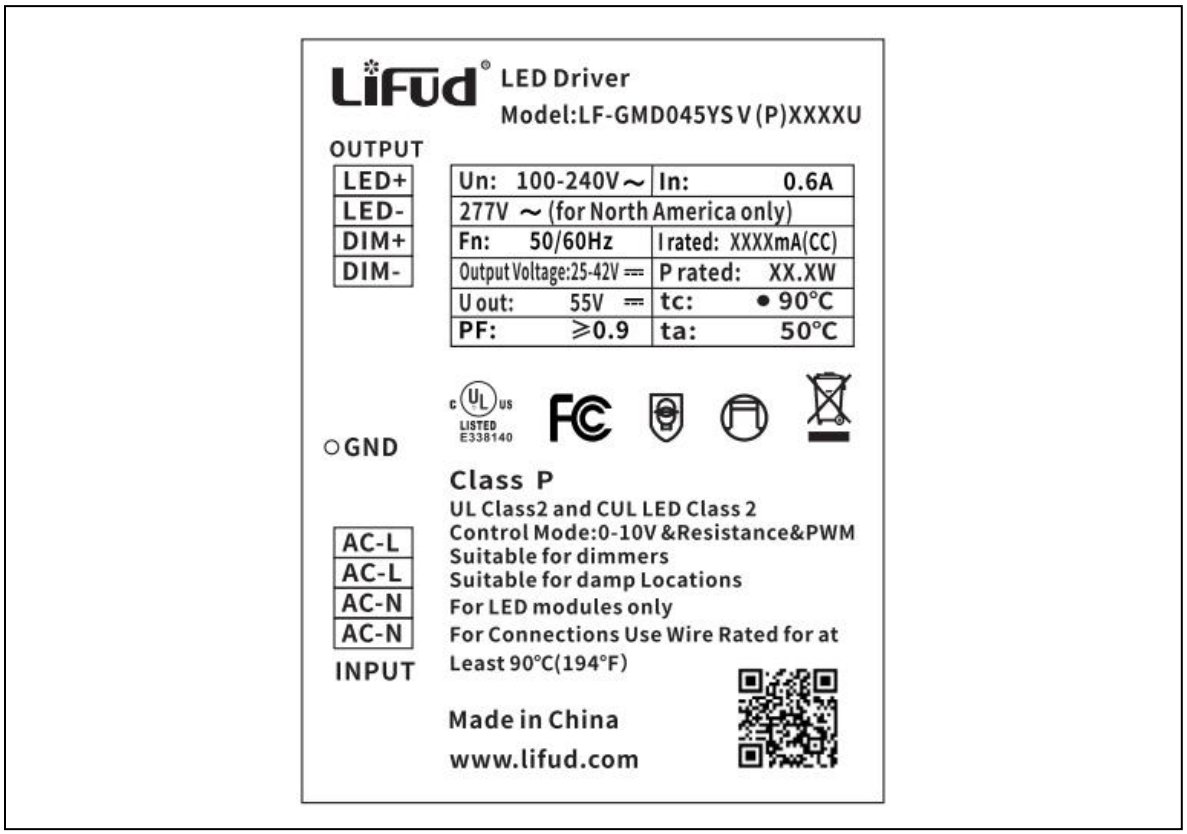
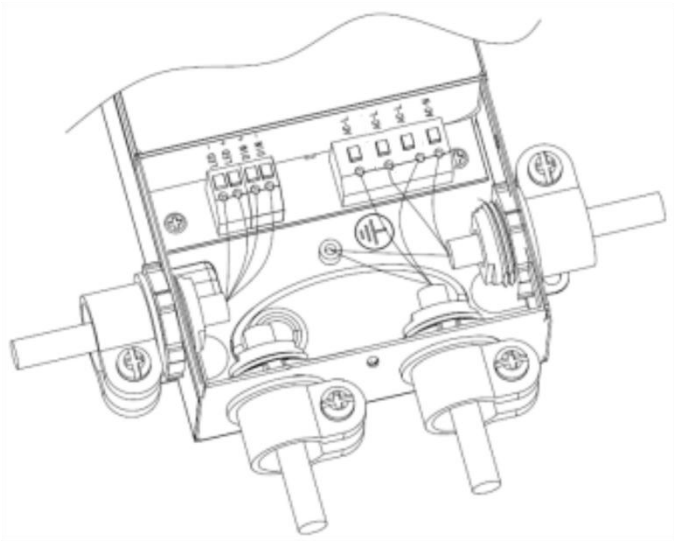


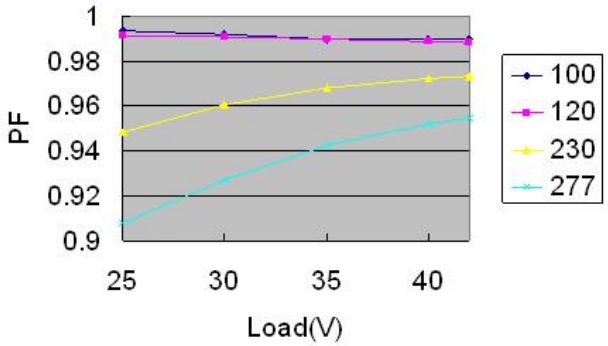
Wiring Diagram



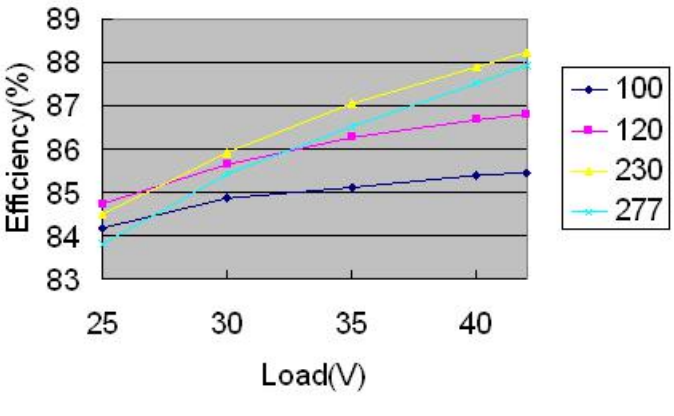
Remark:
1. Press the screw terminals while connecting or disconnecting the wires.
2. Suitable wire: AWG16-20.
3. Peel 6-7mm of the wire. The copper wire should not be exposed after connecting to the screw terminal.

Feature Curves

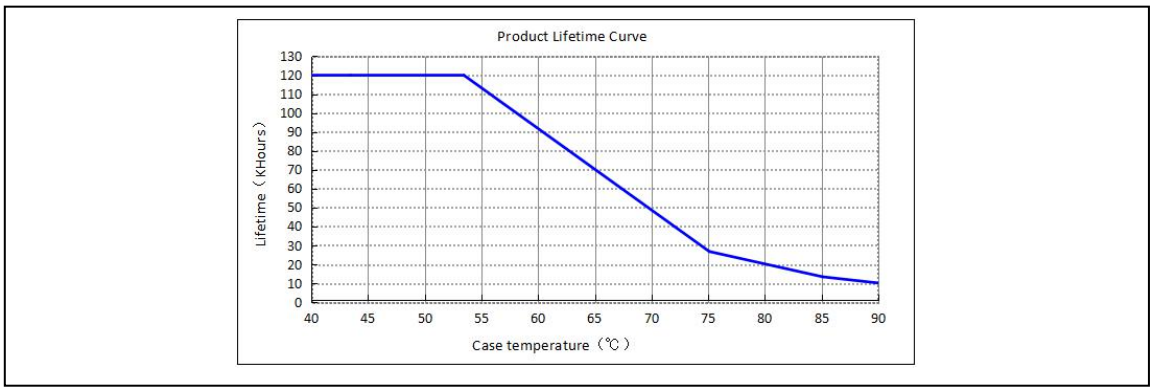
1. PF curve



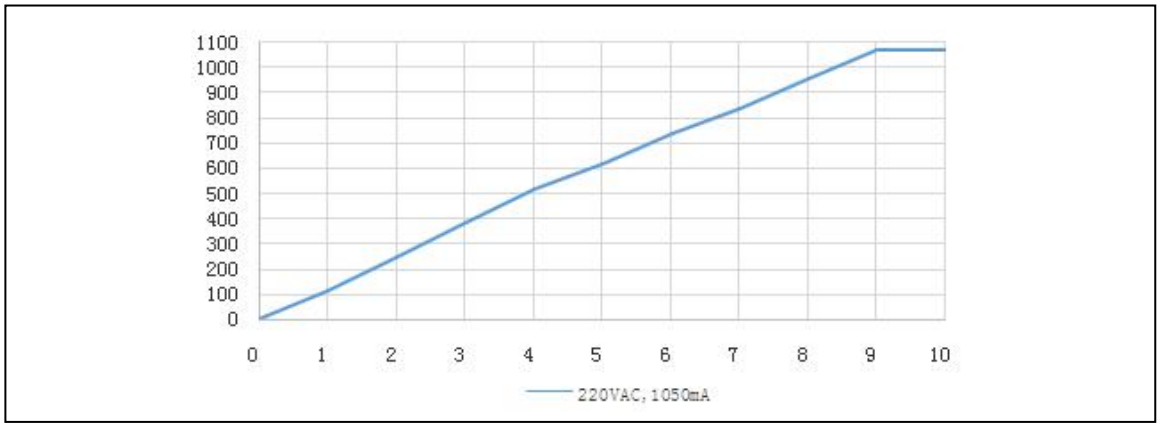
2. Efficiency curve



3. Lifetime curve



4. Dimming curve



Dimming Operation

1. 0-10V signal connects to the DIM terminal.

2. In 0-10V mode, when the input voltage is equal to or below 0.3V, the light will be turned off. When it's over 0.5V, the light will be turned on.

3. In 0-10V mode, the minimum dimming depth is 8% (Iout).

0-10V dimming

Dimming voltage	≤0.3V	0.5V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V
Output current	OFF	64	117	250	379	517	618	732	837	953	1070	1070

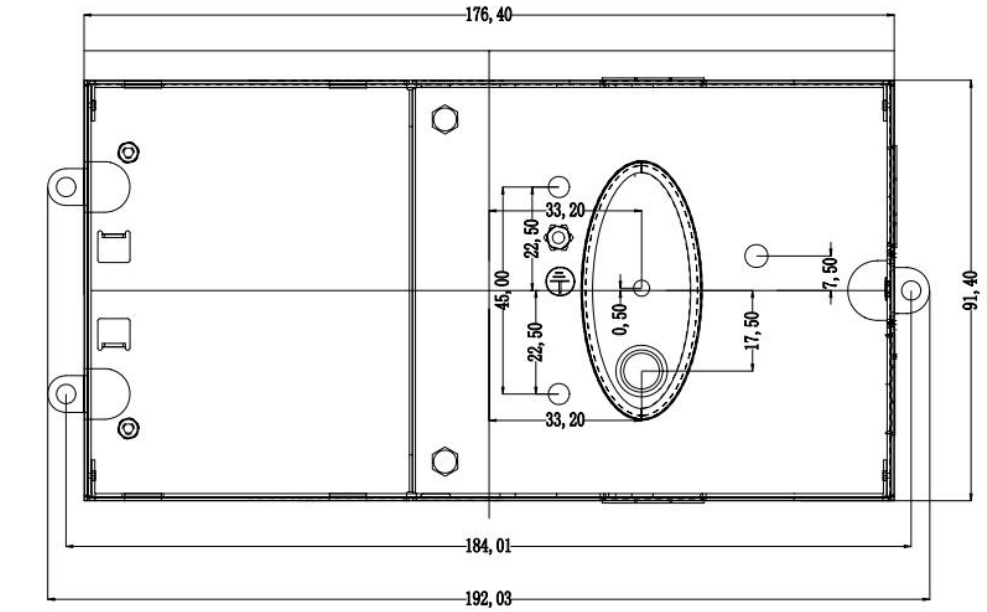
PWM dimming

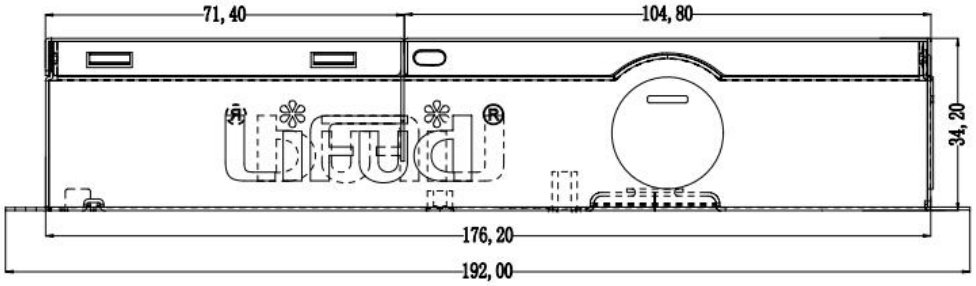
PWM signal	0-5%	8%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Output current	OFF	64	120	252	384	516	618	728	841	958	1066	1066

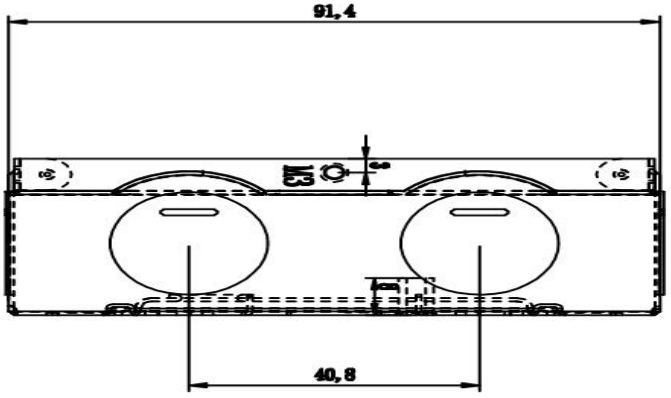
Rx dimming

Dimming resistance	0KΩ	5KΩ	10KΩ	20 KΩ	30 KΩ	40 KΩ	50 KΩ	60 KΩ	70 KΩ	80 KΩ	90 KΩ	100 KΩ
Output current	OFF	64	120	252	384	516	618	728	841	958	1066	1066

Dimension (unit: mm, tolerance: +0.5mm)







Packaging Specification

Carton dimension	420*300*210mm (L*W*H)
Quantity	12 pcs/layer; 2 layers/ctn; 24 pcs/ctn
Weight	360g/pc; 9.43Kg/ctn

Attention

1. Use this product according to the specifications, please. Otherwise there may be malfunction.
2. Use luminaires that have not been certified or are not compatible with the drivers may cause fire, explosion or other hazards.
3. Man-made damage is not covered by warranty.
4. The withstanding voltage of the aluminium substrate should meet the requirement.

Remark: The final interpretation right of contents of this data sheet belongs to Lifud Technology Co., Ltd.