

SPECIFICATION FOR APPROVAL

Model No. _____ **GMD045YS-1000U** _____

Version : _____ **V1.4** _____

Manufacturer: _____

Customer Approval

Tested by	Checked by	Approved by

Ledfriend Approval

Tested by	Checked by	Approved by

The full model numbers required by customers

Full model No.		Full model No.	
Full model No.		Full model No.	

E.C. List

Version	Description of change	Engineer	Date
1.0	format change	Liao Xinggao	2016-5-12
1.1	revise installation instruction & wire connection	Liao Xinggao	2016-6-6
1.2	add certification information	Liao Xinggao	2016-7-6
1.3	add the specification of Iout 600-80mA	Liao Xinggao	2016-7-12
1.4	revise the dimensional drawing	Liao Xinggao	2016-7-26

Model	GMD045YS-1000U	Series	UL panel driver, flicker-free, 0-10V/PWM/Rx dimmable
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1. Product description



Isolated LED driver designed for class I LED luminaires.

Category: UL LED panel light driver, metal case, flicker-free and 0-10V/PWM/Rx dimmable version.

Product properties: active PFC, high PF, high efficiency, low THD, an integrated unique cable connection box which ensures better heat dissipation and reliability.

0-10V/PWM/Rx three-in-one dimmable and flicker-free LED driver.

Application: office, decorative, residential and commercial lighting.

Warranty: 5 years (please refer to the warranty condition).

Certifications:

GMD045YS xxxxU
(UL8750)



GMD045YS(T)xxxxU
(TYPE TL)



GMD045YS(P)xxxxU
(CLASS P)



Remark: for different UL certifications, the silk-screen labels and the housings are different.

2. Technical data

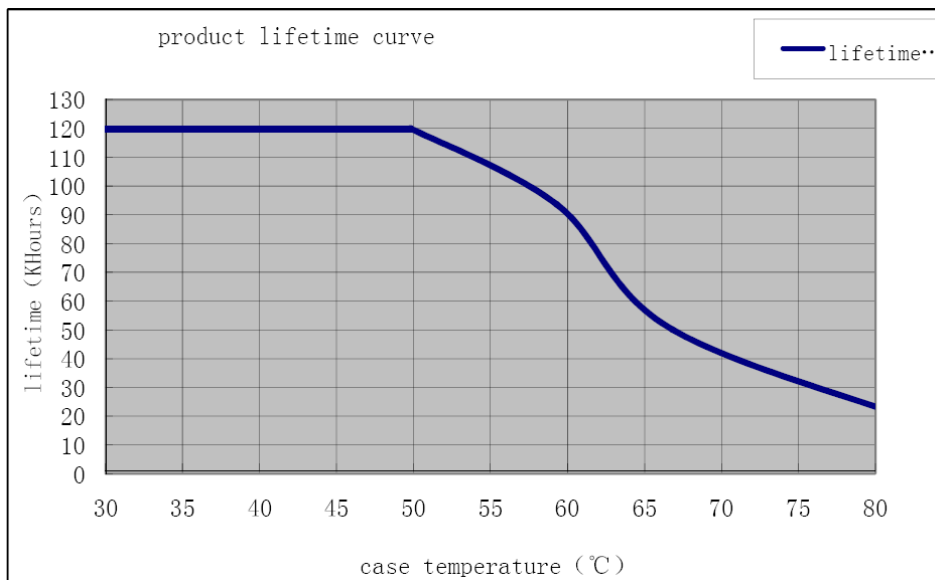
	Full model number	GMD045YS-1000U
Output	Output voltage	25-42 VDC
	Output current	1000mA
	Ripple voltage	< 1V
	Current tolerance	±5%
	Time to light	100Vac<1S 230Vac <0.5S 277ac <0.5S
	Temperature drift	±10%
	Output Line regulation	±5%
Input	Input Line regulation	±5%
	Rated input voltage	100-240 Vac or 277 Vac (Max input voltage: 90-305Vac)
	Frequency	47Hz-63Hz
	Input current	0.65A Max
	Power factor	≥0.98/100Vac
		≥0.95/230Vac
		≥0.9/277Vac
	THD	≤20%
	Efficiency	≥85%/100Vac
≥86%/230Vac		
≥85%/277Vac		
In-rush current (peak /duration)	I<60A/350uS@230Vac	
Typ. power input on stand-by	Pin<1W	
Protective features	No-load	Max. output voltage (no-load voltage) 55V
	Short-circuit	Hiccup mode (auto-recovery)
Environment condition	Working temperature	-30°C - +50°C
	Working humidity	20-90%RH (no condensation)
	Storage temperature/humidity	-40°C ~ +80°C (6 months under the class I environment); 10-90%RH (no condensation)
	Atmospheric pressure	86-106KPa
Safety and norms	Certifications	UL(UL8750, Type TL and Class P), FCC
	Hi-pot test	I/P-O/P: 3.75KVac, <5mA 60S; I/P-FG:1.6KVac,<5mA 60S; O/P-FG:0.5KVac, <5mA 60S
	Insulation resistance	I/P-O/P, I/P-FG, O/P-FG:500VDC, >100MΩ
	Surge level	Comply with IEC61000-4-5(L/N:1KV, L/PG:2KV, N/PG:2KV)
	EMI	Comply with EN55015, EN61000-3-2, FCC Part 15.
	EMS	Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547.
Others	Packing (weight)	Net weight: 430g±5%/pc; 28pcs/carton; 12.5KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH).
	IP level	/
	Warranty condition	5 years (Max. case temperature must not exceed 60°C).

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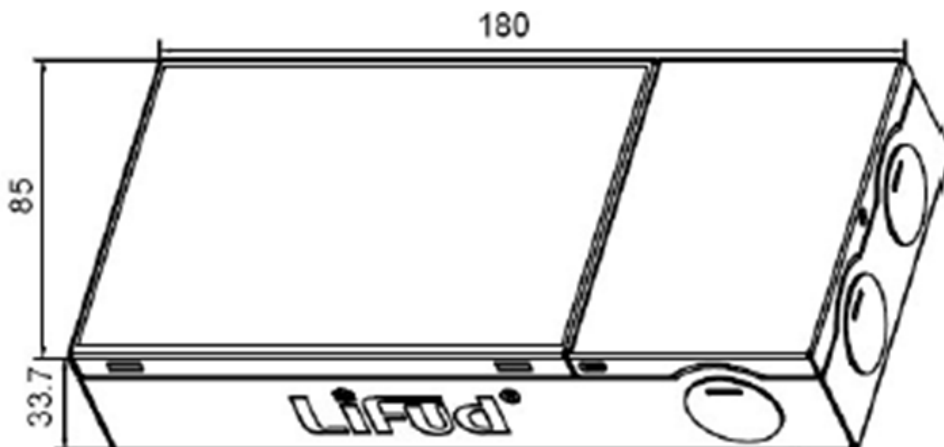
Testing equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: TH9201B, flicker-free tester (flicker-free coefficient tester) 60N-01, etc.
Test conditions	The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25°C and humidity 50%, AC input 230V and 90% output load.
Additional Remark	<ol style="list-style-type: none"> 1. In the power supply circuit, it is recommended that the customer should install an over-under-voltage protection and surge protection device to ensure the safety of using electricity. 2. The PC cover, shell, end caps used together with the LED driver inside the LED lamp must meet the UL94V-0 fire rating level or above. 3. As a part of the LED lamp, the LED driver is not the only factor determining the EMC performance of the LED lamp. And the EMC performance is also related to the LED lamp's structure and the wire routing. Thus we strongly recommend the manufacturer of the finished LED lamp must re-confirm the EMC of the LED lamps.

3. Product Referenced Lifetime Curve

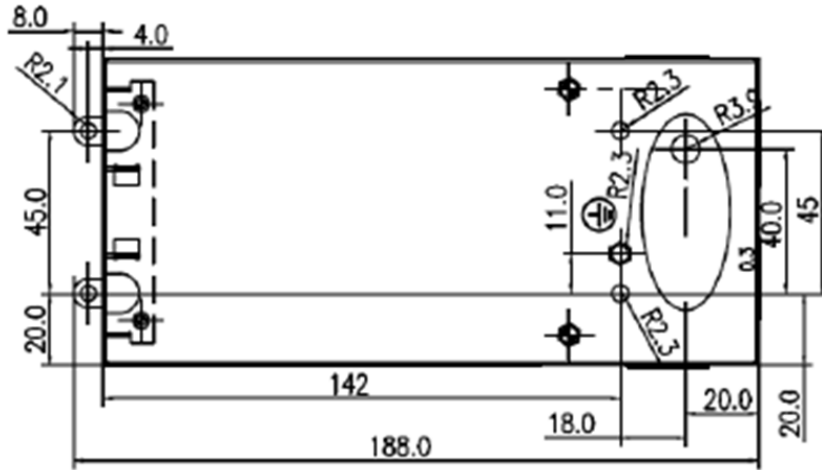
The curve below illustrates the driver's lifetime data when the LED driver's Max. case temperature reaches 40°C, 50°C, 60°C, 70°C and 80°C.



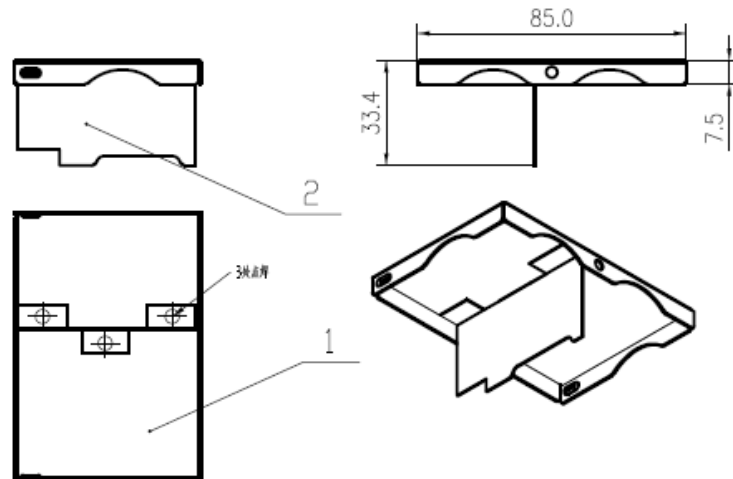
4. Dimensional Drawing (unit: mm, the tolerance is ±0.5mm)



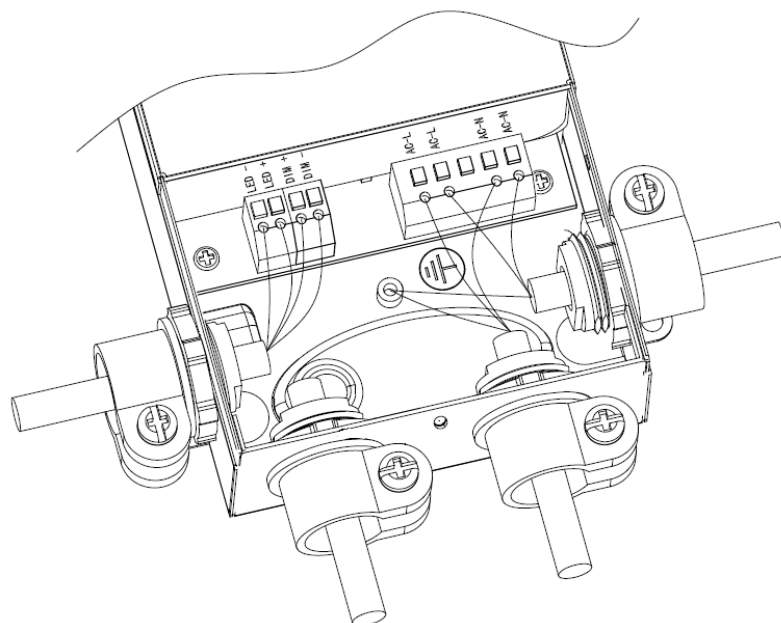
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Remark: as shown in the picture below, the Class P version GMD045YS-1000U's housing is different because there is an additional baffle plate between the AC terminal and DC terminal inside the cable connection box and this ensures the isolation between the input wires and output wires.



5. Wire Connection Diagram:



Remark: when you insert in or pull out the wires from the terminal blocks, please press and hold the terminal blocks until you finish the wire installation; the terminal blocks are suitable for AWG16-20 wires, and the skinned wires' length should be 6-7mm, the wires' skinned copper part should not be bare out of the terminals.

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6. Dimmable feature

1. 0-10V dimmable, dimming range 10%~100%.

voltage signal	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Iout percentage	off	10%	15%	25%	35%	50%	60%	70%	83%	95%	100%	95%-105%

2. PWM dimmable, dimming range 10~100%, the voltage amplitude is 10V and the frequency of PWM signal is 500Hz~5KHz.

PWM signal	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Iout percentage	10%	20%	30%	42%	53%	64%	74%	85%	95%	100%	95%-105%

Remark: the output current percentages above are typical values.

Distributor:

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Web: www.videosec.com

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