

SPECIFICATION FOR APPROVAL

Customer: _____

Product Material No. : _____

Model No. _____ **LF-GDE023YF**

Version : _____ **V3.1**

Manufacturer: _____ **Sichuan Ledfriend Technology Co., Ltd**

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
3.0	format change	Tian Qiao	2016-1-25
3.1	ENEC added	Tian Qiao	2016-6-2

Shenzhen Ledfriend Optoelectronics Co., Ltd.

Address: 4&5/F, Bldg 14A, Taihua Wutong Island, Gushu Development Zone, Xixiang, Bao'an District, Shenzhen, China 518126

www.lifud.com, China service hotline: 400-096-6815 (China technical support: 13410244507)

Model	LF-GDE023YF	Series	0-10V/PWM plastic case dimmable series
--------------	-------------	---------------	--

1. Product description



Isolated LED driver designed for class II LED luminaires.

Category: 0-10V/PWM plastic case dimmable version.

Product properties: active PFC, high PF, high efficiency, low THD, 0-10V/PWM dimmable.

Application: commercial, residential and decorative lighting.

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

Certifications:



2. Technical data

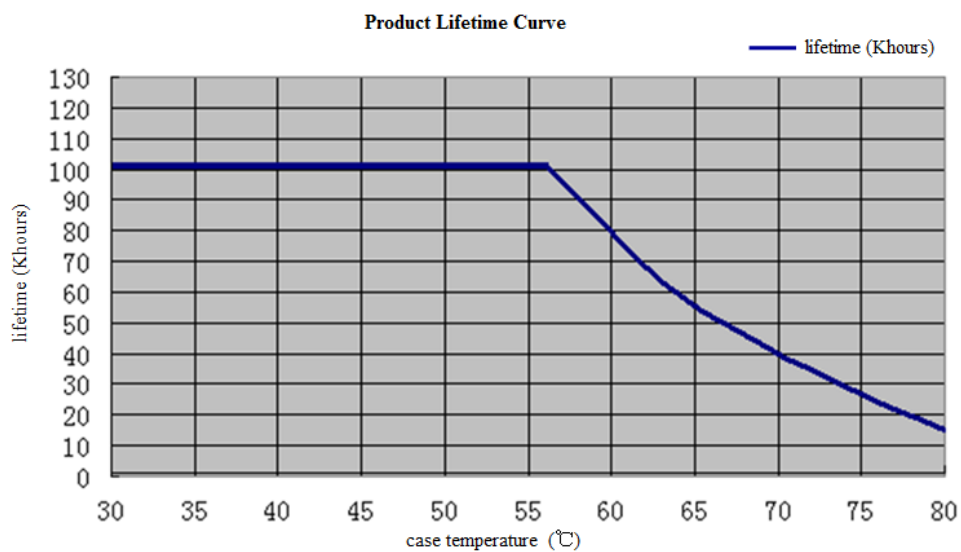
	Full model number	LF-GDE023YF 0350U	LF-GDE023YF 0400U	LF-GDE023YF 0450U	LF-GDE023YF 0500U	LF-GDE023YF 0550U
Output	Output voltage	27-42 VDC	27-42 VDC	27-42 VDC	27-42 VDC	27-42 VDC
	Output current	350mA	400mA	450mA	500mA	550mA
	Ripple current	< 300mA				
	Ripple voltage	< 4.2V				
	Current tolerance	±5%				
	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, 277 Vac (Max input voltage: 90-305Vac)				
	Frequency	47Hz-63Hz				
	Input current	0.3A Max				
	Power factor	≥0.98/100Vac	≥0.98/100Vac	≥0.98/100Vac	≥0.98/100Vac	≥0.98/100Vac
		≥0.95/230Vac	≥0.95/230Vac	≥0.95/230Vac	≥0.95/230Vac	≥0.95/230Vac
		≥0.90/277Vac	≥0.90/277Vac	≥0.90/277Vac	≥0.90/277Vac	≥0.90/277Vac
	THD	≤20%	≤20%	≤20%	≤20%	≤20%
	Efficiency	≥84%/100Vac	≥84%/100Vac	≥84%/100Vac	≥84%/100Vac	≥84%/100Vac
		≥85%/230Vac	≥85%/230Vac	≥86%/230Vac	≥86%/230Vac	≥86%/230Vac
		≥84%/277Vac	≥84%/277Vac	≥85%/277Vac	≥85%/277Vac	≥85%/277Vac
Protective features	In-rush current (peak /duration)	I<60A/350uS@230Vac				
	Typ. power input on stand-by	Pin<1W				
	No-load	Max. output voltage (no-load voltage) 55V				
Environment condition	Short-circuit	Hiccup mode (auto-recovery)				
	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)				
Safety and norms	Atmospheric pressure	86-106KPa				
	Certifications	ENEC, GS, CE, CB, RCM, SAA				
	Hi-pot test	I/P-O/P: 4KVac, <5mA, 60S				
	Insulation resistance	I/P-O/P: 500VDC, >100MΩ				
	Surge level	Comply with IEC61000-4-5(L/N: 1KV)				
	EMI	Comply with EN55015, EN61000-3-2.				
Others	EMS	Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547.				
	Packing (weight)	Net weight: 130g±5%/pc; 48pcs/carton; 7.0KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH).				
	IP level	IP20				
Warranty condition	Warranty condition	5 years (Max. case temperature must not exceed 65°C).				

Model	LF-GDE023YF	Series	0-10V/PWM plastic case dimmable series
-------	-------------	--------	--

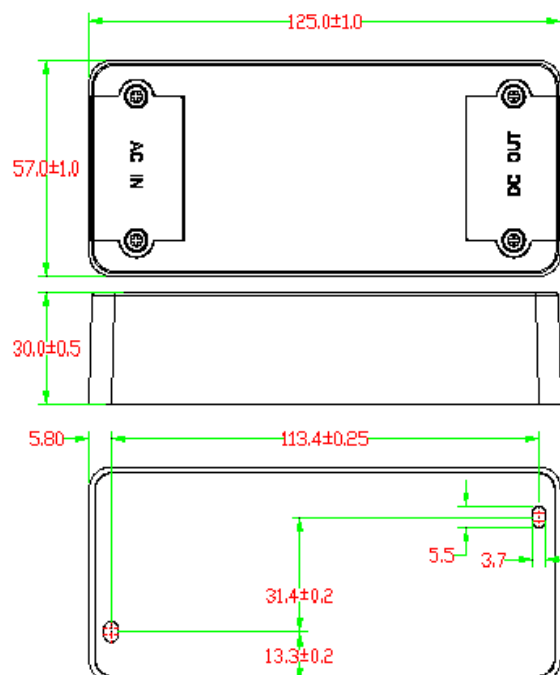
Testing equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: 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-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.

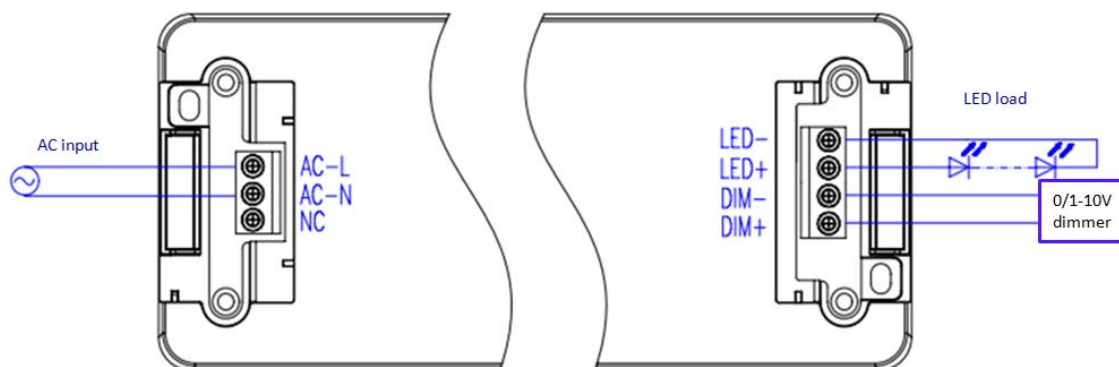


4. Dimensional Drawing (unit: mm)



Model	LF-GDE023YF	Series	0-10V/PWM plastic case dimmable series
--------------	-------------	---------------	--

5. Wire Connection Diagram:



6. Dimmable feature

1) 0-10V dimmable, dimming range 10%~100% (the LED lights might flicker when the voltage signal is with the 0-1V range).

voltage signal	0	1	2	3	4	5	6	7	8	9	10	OPEN
output current percentage	3%	5%	10%	25%	40%	50%	60%	70%	80%	90%	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	0	1	2	3	4	5	6	7	8	9	10	OPEN
output current percentage	3%	5%	10%	25%	40%	50%	60%	70%	80%	90%	100%	95%-105%

Remark: the output current percentages above are typical values.