深圳市莱福德光电有限公司
SHENZHEN LEDFRIEND OPTOELECTRONICS CO.,LTD.

SPECIFICATION FOR APPROVAL

Customer: _____

Product Material No.: _____

Model No. LF-GIF060YA(H)

Version: V1.1

Manufacturer: Sichuan Ledfriend Technology Co., Ltd

Customer Approval

Tested by	Checked by	Approved by

Ledfriend Approval

Tested by	Checked by	Approved by
Chen Min	Huang Bin	Zhong Chunlin

The full model numbers required by customers

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

E.C. List

Versio	Description of change	Engineer	Date
1.0	Formal version	Huang Bin	2017-10-12
1.1	Add location hole size of dimensional drawing and assembly diagram	Chen Min	2017-11-09

Shenzhen Ledfriend Optoelectronics Co., Ltd
4&5/F, Bldg 14A, Taihua Wutong Island, Gushu, Xixiang St., Bao'an Dist., Shenzhen 518126, China
www.lifud.com | China service hotline: 400-096-6815 (China technical support: 13410240457)

1. Product description

Isolated LED driver for class I, class II LED luminaire.

Category: AC220-240V, plastic case, flicker free

Properties: flicker coefficient ≤0.5%, active PFC, high PF, high efficiency, low THD

Application: indoor office lighting, decorative lighting, commercial lighting and residential lighting

Warranty: 5 years (Tc≤80℃; Please refer to the warranty condition).

Certificate: TUV, CE, CB, RCM (are coming soon)

2. Technical data (1)

	Full model number	LF-GIF060YA(H)1550H	LF-GIF060YA(H)1500H	LF-GIF060YA(H)1450H
Output	Output voltage	33-40Vdc		
	Output current	1550mA	1500mA	1450mA
	Ripple voltage	≤ 2V		
	Current tolerance	±5%		
	Time to light	≤ 0.5S/230Vac		
	Temperature drift	±10%		
	Line regulation	±5%		
	Flicker coefficient	≤ 0.5%		
Input	Line regulation	±5%		
	Rated input voltage	220-240 Vac (Max input voltage:200-264Vac)		
	Frequency	47Hz-63Hz		
	Input current	0.5A Max		
	Power Factor	≥0.95/230Vac	≥0.95/230Vac	≥0.95/230Vac
	THD	≤20%		
	Efficiency	≥90%/230Vac		
	In-rush current (peak /duration)	I<60A/350uS@230Vac		
	Typ. power input on stand-by	Pin≤0.3W		
Protective features	No-load	Max. output voltage (no-load voltage) 55Vdc		
	Short-circuit	Hiccup mode (auto-recovery)		
Environment condition	Working temperature	-30℃ ~ +50℃		
	Working humidity	20-90%RH (no condensation)		
	Storage temperature/humidity	-40℃ ~ +80℃ (6 months under the class I environment); 10-90%RH (no condensation)		
	Atmospheric pressure	86-106KPa		
Safety and norms	Certifications	TUV, CE, CB, RCM are coming soon		
	Hi-pot test	I/P-O/P: 3.75KVac, ≤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.		
	EMS	Comply with EN61000-4-2,3,4,5,6,8,11; EN61547.		
Others	Packing (weight)	Net weight: 140g ±5%/pc; 66pcs/ctn; 10kg±5%/ctn; Carton size: 39 x 29 x 21 cm(L*W*H).		
	IP level	IP20		
	Warranty condition	5 years (Tc≤80℃).		

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℃ and humidity 50%, AC input 230V and 90% DC load.
Additional Remark	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.

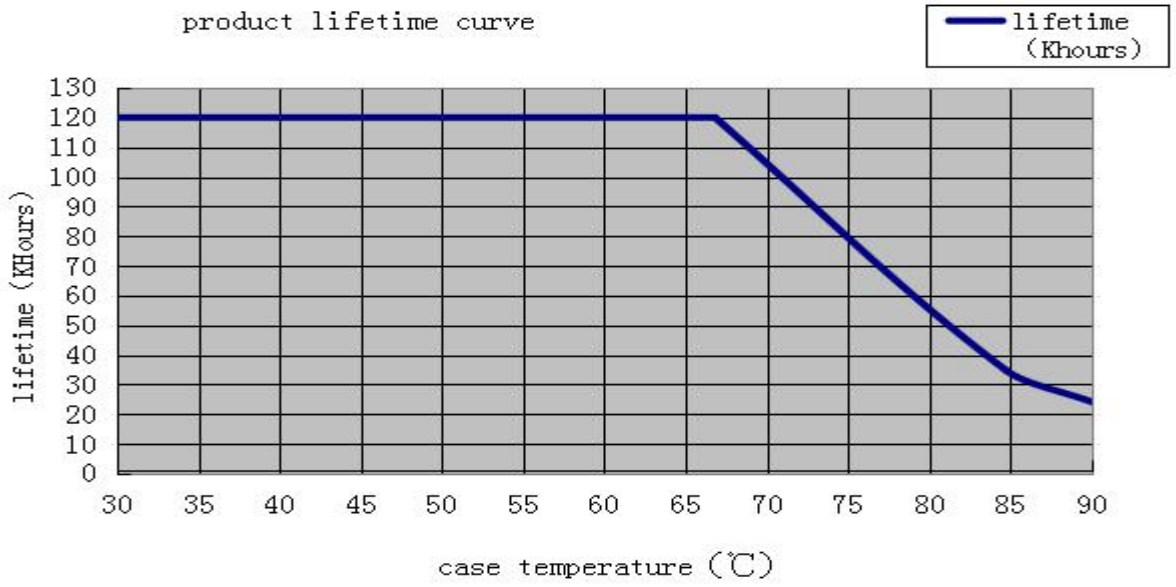
Technical data (2)

	Full model number	**LF-GIF060YA(H)1400H**	**LF-GIF060YA(H)1350H**
Output	Output voltage	33-40Vdc	
	Output current	1400mA	1350mA
	Ripple voltage	≤ 2V	
	Current tolerance	±5%	
	Time to light	≤ 0.5S/230Vac	
	Temperature drift	±10%	
	Line regulation	±5%	
	Flicker coefficient	≤ 0.5%	
Input	Line regulation	±5%	
	Rated input voltage	220-240 Vac (Max input voltage:200-264Vac)	
	Frequency	47Hz-63Hz	
	Input current	0.5A Max	
	Power Factor	≥0.94/230Vac	≥0.94/230Vac
	THD	≤20%	
	Efficiency	≥90%/230Vac	
	In-rush current (peak /duration)	I<60A/350uS@230Vac	
	Typ. power input on stand-by	Pin≤0.3W	
Protective features	No-load	Max. output voltage (no-load voltage) 55Vdc	
	Short-circuit	Hiccup mode (auto-recovery)	
Environment condition	Working temperature	-30℃～+50℃	
	Working humidity	20-90%RH (no condensation)	
	Storage temperature/humidity	-40℃～+80℃ (6 months under the class I environment); 10-90%RH (no condensation)	
	Atmospheric pressure	86-106KPa	
Safety and norms	Certifications	TUV, CE, CB, RCM are coming soon	
	Hi-pot test	I/P-O/P: 3.75KVac, ≤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.	
	EMS	Comply with EN61000-4-2,3,4,5,6,8,11; EN61547.	
Others	Packing (weight)	Net weight: 140g ±5%/pc; 66pcs/ctn; 10kg±5%/ctn; Carton size: 39 x 29 x 21 cm(L*W*H).	
	IP level	IP20	
	Warranty condition	5 years (Tc≤80℃).	

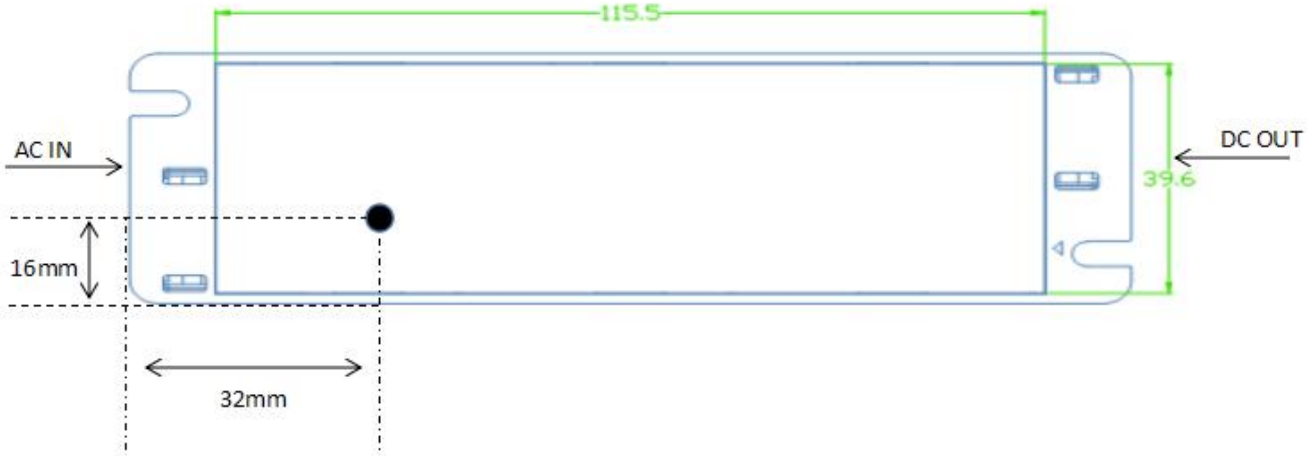
Testing equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: 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℃ and humidity 50%, AC input 230V and 90% DC load.
Additional Remark	3. 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. 4. 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

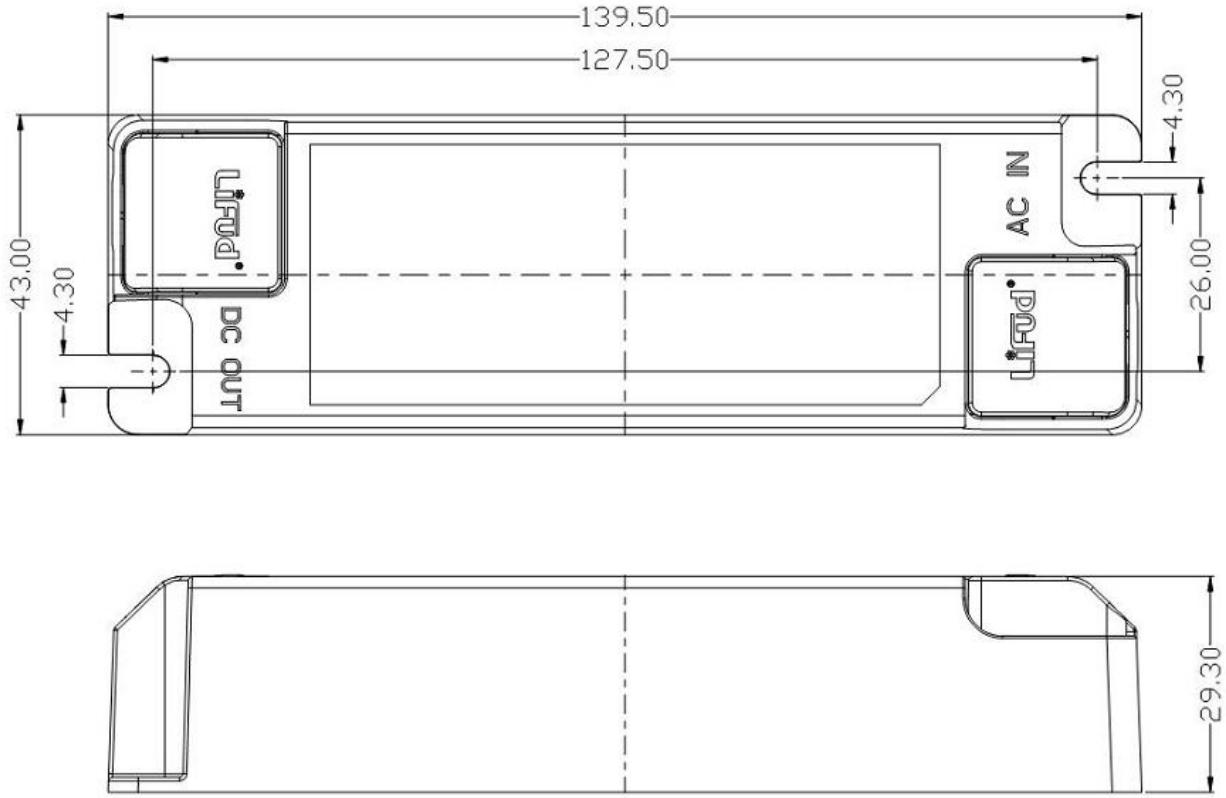
1)The curve below illustrates the driver's lifetime data when the LED driver's Max. case temperature reaches 40℃,50℃, 60℃, 70℃,80℃,85℃ and 90℃.



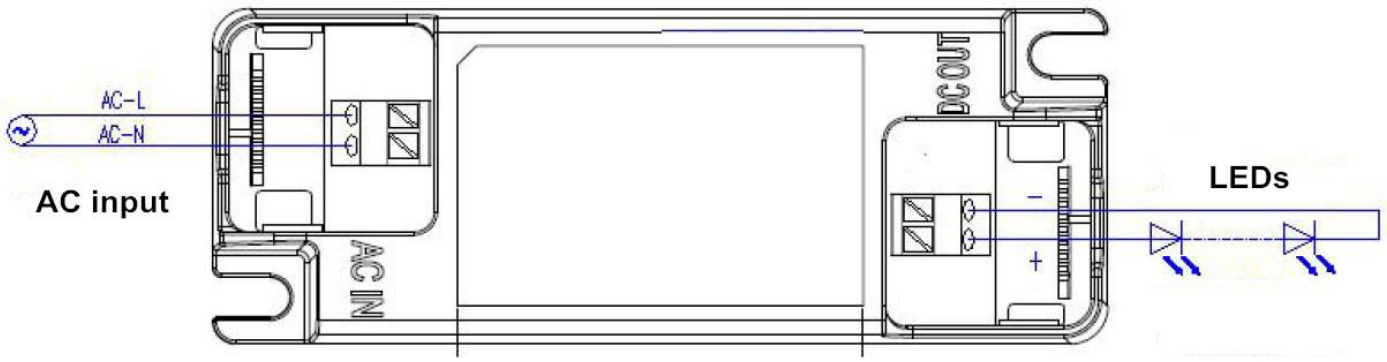
2) Tc Testing point, on the bottom case



4. Dimensional Drawing (unit: mm)

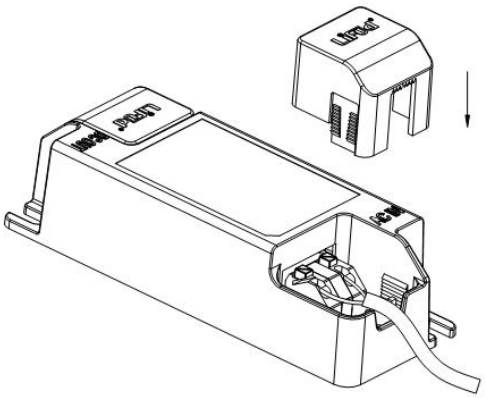


5. Wire Connection Diagram:

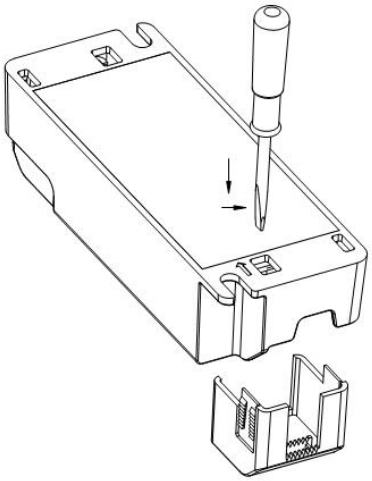


Model	LF-GIF060YA(H)	**Series**	AC220-240V & Flicker-Free

6. Assembly Diagram



Assembly of dust caps



Dis-assembly of dust caps