LF-A1-060H200B

Programmable IP67 Isolated LED Driver | Constant Current

Product family features

— THD≦10% @full load

— Rated input voltage: 220-240Vac

— Ta: -40~+60℃

— Ripple current <5%

— Output current adjustable via potentiometer

— Surge protection: DM: 4kV & CM: 6kV

— All-round protections: short-circuit, open-circuit, over-temperature

— IP67, suitable for Class I light fixtures

— 5 years guarantee

Product family benefits

— High efficiency

— Flicker free

— Long lifetime and high reliability

— Isolated

Typical applications

— For shoebox light, flood light, street light and tunnel light

— For street lighting

Product parameters

— Output current 1000-2000mA

— Output power 27W-60W

— Input voltage 200-240Vac

— Output voltage 27-56Vdc

— Efficiency 90%

Electrical data

Input data

Rated supply voltage	220 ... 240V
AC voltage range	180 ... 264V
Mains frequency	50/60Hz
Power factor	0.95
Efficiency	90% [1)]
THD	≦10% [2)]
Input current	0.4A Max
Inrush current	50A [3)]
Loading number on circuit breaker 10 A (B)	11
Loading number on circuit breaker 10 A (C)	18
Loading number on circuit breaker 16 A (B)	17
Loading number on circuit breaker 16 A (C)	28
Protective conductor current	≤3.5mA

Output data

Nominal output voltage	27... 56V
Nominal output current	1000...2000mA
Default output current	1800mA±5%
Linear adjustment rate	±5%
Load adjustment rate	±5%
Current set	Potentiometer
Maximum output power	60W
Nominal output power	27... 60W
Output ripple current (100 Hz)	＜5%
Flicker	According to IEEE Std 1789-2015
CIE SVM	≤0.4
IEC-Pst	≤1
Current accuracy	±5%
Temperature tolerance	±10%
Start-up time	＜0.5S
Device power loss	/

Safety

Withstanding voltage	I/P-O/P：3.75kV&5mA&60S; I/P-PE：1.5kV&5mA&60S; O/P-PE：0.5kV&30mA&60S
Surge capability (L-N)	4 kV
Surge capability (L/N-Ground)	6 kV
Insulation resistance	I/P-O/P I/P-PE O/P-PE: ＞100MΩ@500VDC
Guarantee	5 years[4)]

1) @output current 1070mA, output voltage 56V

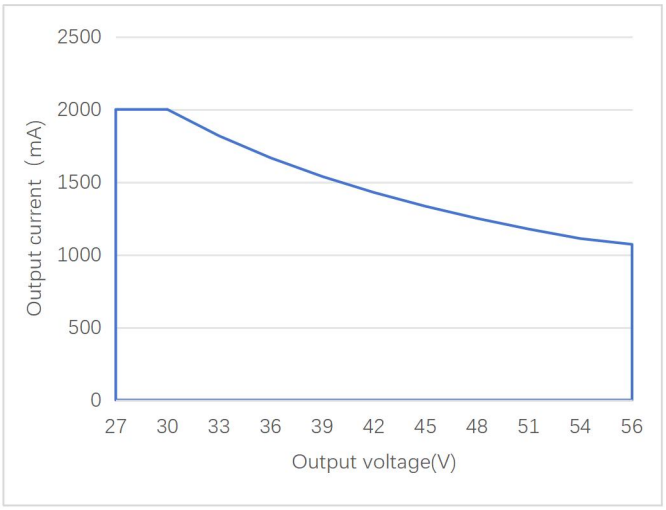
2) 60-100% full load@230Vac

3) t =250μs

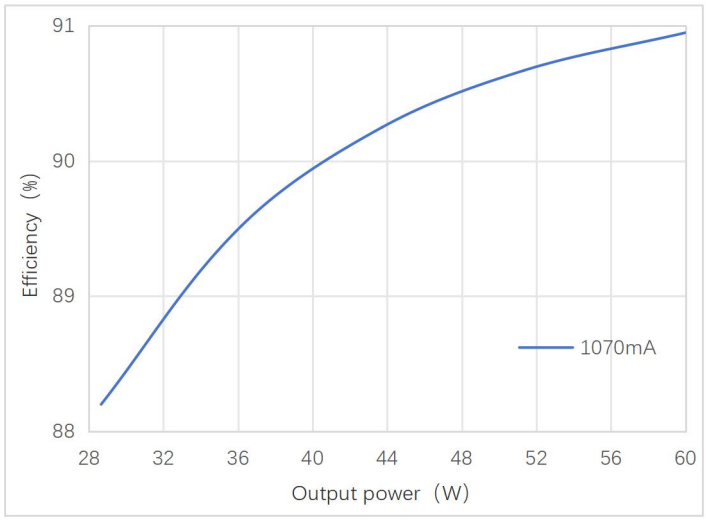
4) 5 years @Tc≤82℃

Characteristic diagram

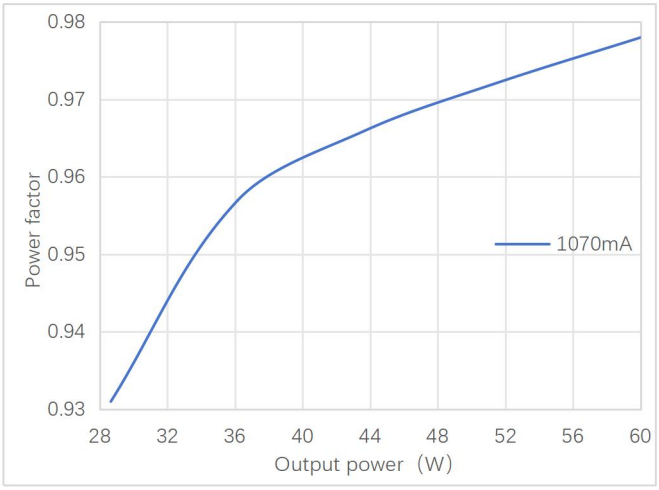
Operating Window



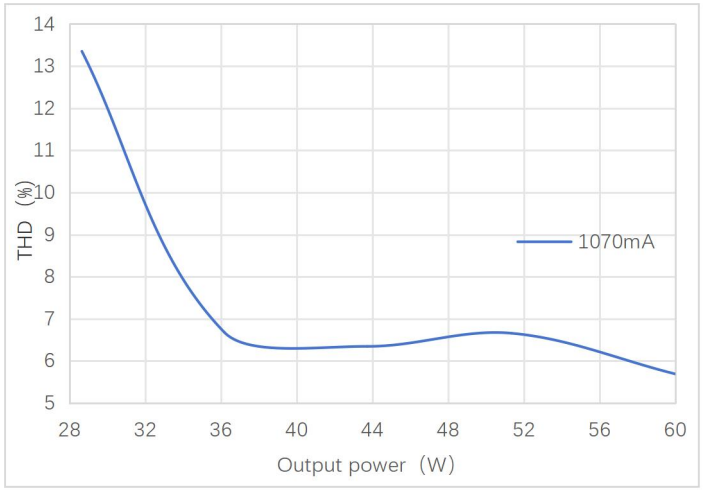
Typical Efficiency vs Load



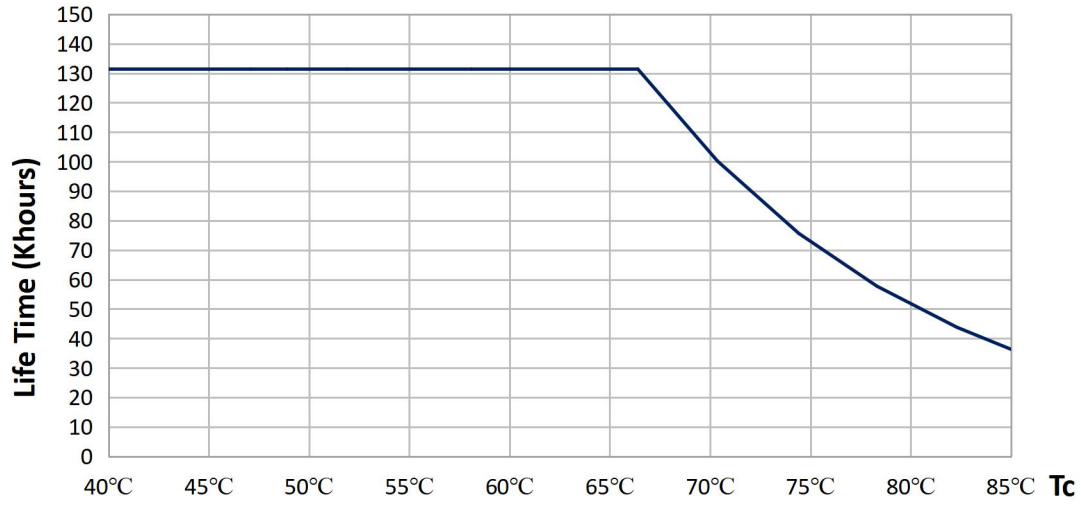
Typical Power Factor vs Load



Typical THD vs Load



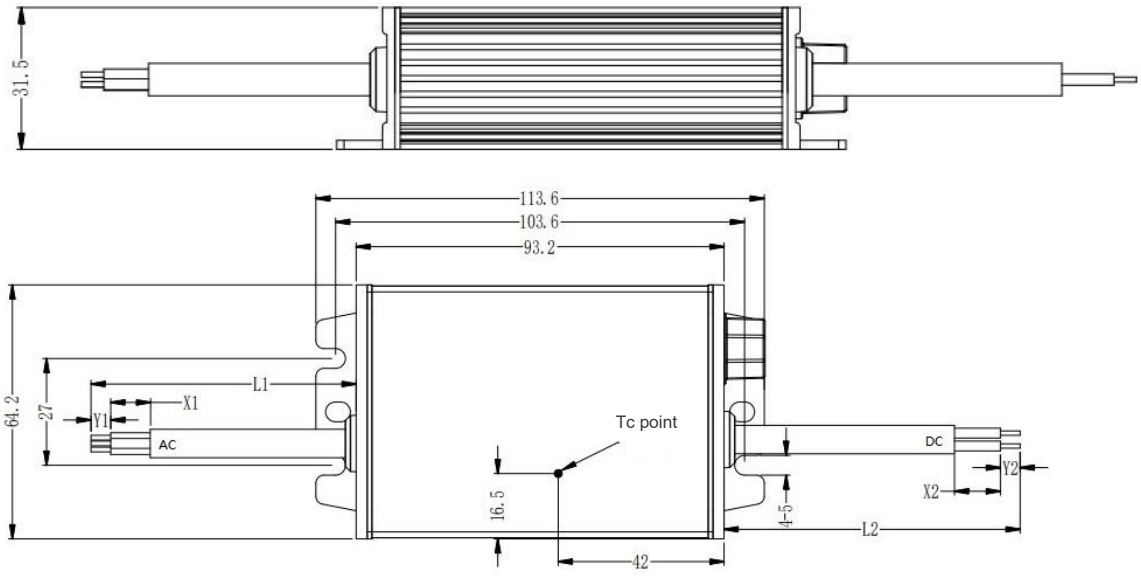
Lifespan



Instructions for adjusting current via potentiometer

Parameter	Min.	Typ.	Max.	Note
Output current setting range	1000mA	1800mA	2000mA	Total output power ≤60W

Dimensions



Mounting hole spacing length	103.6mm
Product weight	400g
Wire type, input side	3*1.0mm² Φ7.2±1mm
Wire type, output side	2*1.0mm² Φ6.8±1mm
Wire color, input side	AC-L Brown; AC-N Blue; PE Yellow&green

Wire color, output side	LED+ Brown; LED- Blue
Wire peeled length, input side (X1)	50±5mm
Wire peeled length, output side (X2)	36±5mm
Wire length, input side (L1)	300±10mm
Wire length, output side (L2)	220±10mm
Wire tinned length, input side (Y1)	10±2mm
Wire tinned length, output side (Y2)	6±1.5mm
Length (l)	113.6±1mm
Width (w)	64.2±0.5mm
Height (h)	31.5±0.5mm

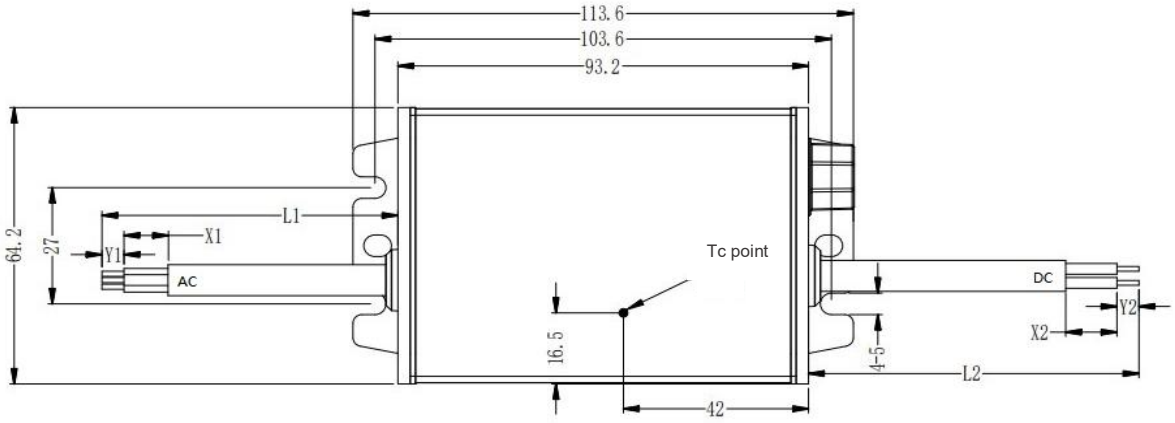
Colors & materials

Casing material	Metal
Casing color	Silver gray

Temperature & operating conditions

Ambient temperature range	-40℃ - +60℃
Maximum temperature at Tc test point	85℃
Temperature range at storage	-40℃ - +80℃ (6 months in Class I environment)
Humidity range at storage	10-90%RH (no condensation)
Humidity during operation	20-90%RH
RoHS	RoHS 2.0（EU）2015/863

Tc test point



Note: this diagram is a front view and Tc point is on the front side of the driver.

Capabilities

Dimmable	_
Overheating protection	When Tc is 90℃±5℃, it will reduce the current and auto-recover when the Tc decreases to 75℃±5℃.
Overload protection	_
Short-circuit protection	Hiccup mode (Auto-recovery)
No load protection	＜65V
Max. cable length to lamp/LED module	_
Suitable for fixtures with prot. class	I
Control interface	_
Number of channels	1 channel

Programming

Programmer	_
DALI control software	_

APP	_

Certificates & standards

Approval marks – approval	ENEC, CB, CE, RCM
Standards	IEC/EN 61347-2-13, IEC/EN 61347-1, IEC/EN 62493 IEC/EN 62384 AS 61347.1, AS 61347.2.13
EMC	GB 17625.1-2022, GB/T 17743-2021 EN 55015, EN 61547, EN 61000-3-2,3
Group pulse	5kV (Class B)
ESD	Air 8kV, touch 4kV
Type of protection	IP67

Logistical data

Product	Packaging unit (Pieces/Unit)	Dimensions (L*W*H)	Volume	Gross weight
LF-A1-060H200B	24	440mm*370mm*167mm	27.19dm³	11kg±5%

Test equipment & condition

Test Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66205, 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: EEC SE7440, flicker tester (flicker-free coefficient test): Everfine LFA-3000, etc.

If there are no special remarks, the above parameters are tested at the ambient temperature of 25℃, humidity of 50%, maximum output power and input voltage of 230Vac/50Hz.

Additional information

1. It is recommended that user install the over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety.

2. The LED driver used in combination with the end device is one of the accessories of the whole light fixture, and the EMC of the whole light fixture is not only susceptible to the driver itself, but to the LED light fixture and the whole light fixture's wiring. Thus, the manufacturer of LED light fixture should re-confirm the EMC of the whole light fixture before the whole light fixture is finished.

3. The test conditions of circuit breaker configuration quantity should be consistent with the ones of surge current.

4. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above.

5. Use a straight/Phillips screwdriver to adjust the current of the LED driver; otherwise, the potentiometer may be damaged. (Use a screwdriver with the tool head, tool body, and tool handle with good insulation, or a screwdriver with 2mm tool head, and the torque should not exceed 500g.cm)

6. When using the LED driver, please pay attention that the total output power not exceed the maximum rated output power, otherwise the warranty service of LED driver would be failed.

7. When conducting withstanding voltage test on LED driver, please short-circuit the input wire L and N; the positive electrode and negative electrode of the output wire.

Transportation & storage

Suitable transportation means: vehicles, boats and aeroplanes.

In transit, it is necessary to prepare awnings for rain or sun protection. Moreover, please keep civilized loading and unloading to prevent the vibration or impact of LED driver as much as possible.

The storage of LED driver shall conform to the standard of Class I environment. When using LED drivers which have been stored for more than 6 months, please re-test them firstly. Do not use them unless they are tested to be qualified.

Cautions

Please use Lifud LED driver according to its parameters in the specification, otherwise the LED driver may malfunction.

Using any incompatible light fixtures or those that have not been certified may cause fire, explosion or other risks.

Man-made damage is beyond the scope of Lifud warranty service.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.

Lifud Technology Co., Ltd. reserves the right to interpret any contents of this specification.