

LF-A1-100U-E105B (67)

IP67 Isolated Street Light LED Driver | Constant Current



Product family features

- Low THD<10% @70% load, 277Vac
- Rated input voltage: 100-277Vac
- Ta: -40~+55℃
- Ripple current <5%
- Output current adjustable via potentiometer
- All-round protections: automatic derating at low input voltage, short circuit, open circuit
- 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 lights, flood lights, street lights and tunnel lights
- For street lighting

Product parameters

- | | |
|-----------------------------|----------------------------|
| — Output current 700-1050mA | — Output voltage 72-144Vdc |
| — Output power 50-100W | — Efficiency 92.5% |
| — Input voltage 100-277Vac | |

Electrical data

Input data

Rated AC input voltage	100 ... 277V
AC voltage range	90 ... 305V
AC voltage range at full power	185 ... 277V
Rated DC input voltage	141 ... 391V
DC voltage range	127 ... 431V
Input frequency	50/60Hz
Power factor	$\geq 0.9/277\text{Vac}@70\%$ load; $\geq 0.95/230\text{Vac}@100\%$ load
Current tolerance	$\pm 5\%$ @AC185-305V; $\pm 7\%$ @AC90-165V
Linear adjustment rate	$\pm 5\%$ @full load
Load adjustment rate	$V_o: 72\text{-}144\text{Vdc} \pm 5\%$ @100-277Vac
Efficiency	91% ¹⁾
Input current	1.1A Max
Inrush current	$<90\text{A}/300\mu\text{s}$ @230Vac, $<110\text{A}/300\mu\text{s}$ @277Vac
Loading number on circuit breaker 10 A (B)	8
Loading number on circuit breaker 10 A (C)	8
Loading number on circuit breaker 16 A (B)	13
Loading number on circuit breaker 16 A (C)	13
Leakage current	$\leq 0.7\text{mA}$
Standby power consumption	-

Output data

Nominal output voltage	72 ... 144V
Nominal output current	700 ... 1050mA
Default output current	700mA
Current setting	Potentiometer
Maximum output power	100W Max@180-277Vac, 60W Max@100-180Vac
Nominal output power	50 ... 100W
Output ripple current	$<5\%$
Flicker	According to IEEE Std 1789-2015
CIE SVM	≤ 0.4
IEC-Pst	≤ 1
Temperature tolerance	$\pm 10\%$
Start-up time	230Vac $<1\text{s}$ @full load
THD	$\leq 10\%$ @70% load 277Vac Single harmonic: harmonic-C $\geq 70\%$ load/230Vac
Device power loss	-

12V AUX

Output voltage	-
Output current	-
Dynamic load	-
Ripple voltage	-

Safety

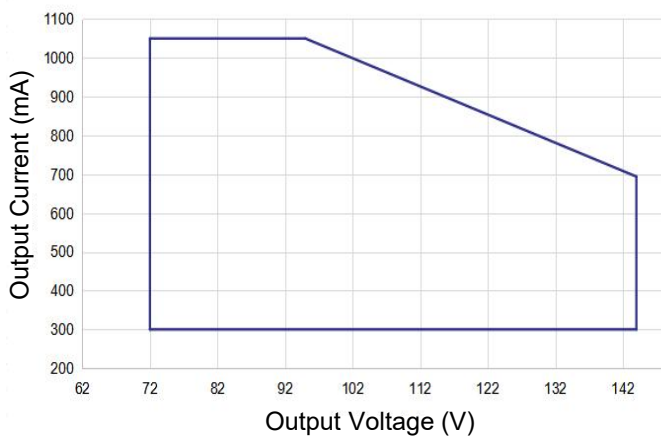
Withstanding voltage	I/P-O/P: 3.75kV&5mA&60S; I/P-PE: 1.5kV&5mA&60S; O/P-PE: 1.4kV&5mA&60S
Surge capability (L-N)	6 kV (2Ω)
Surge capability (L/N-Ground)	10 kV (12Ω)
Insulation resistance	I/P-PE, I/P-O/P, O/P-PE: >100MΩ@500Vdc
Guarantee	5 years ²⁾

1) @output current 1050mA, output voltage 95Vdc @230Vac

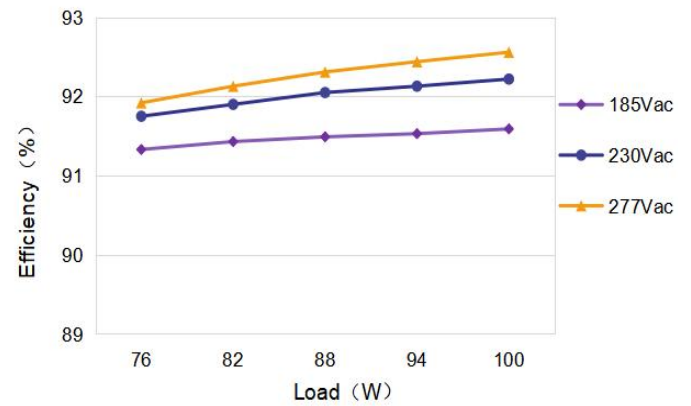
2) 5 years @Tc≤80℃

Characteristic diagrams

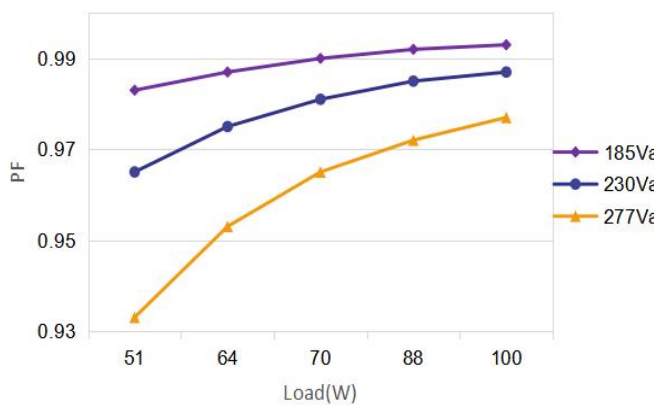
Operating Window



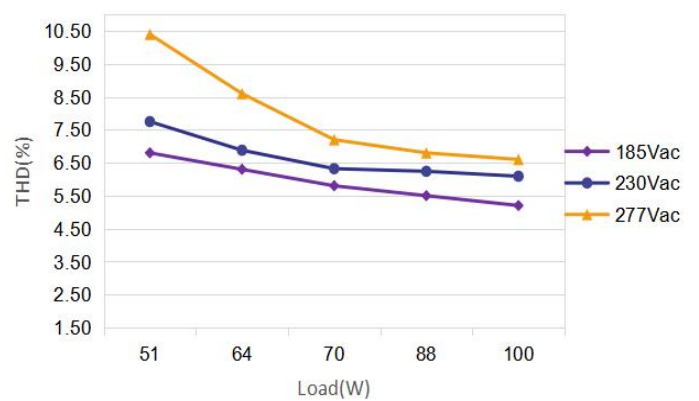
Typical Efficiency vs Load



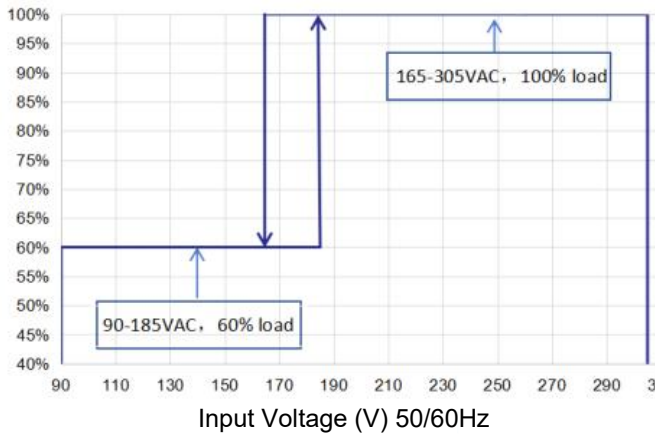
Typical Power Factor vs Load



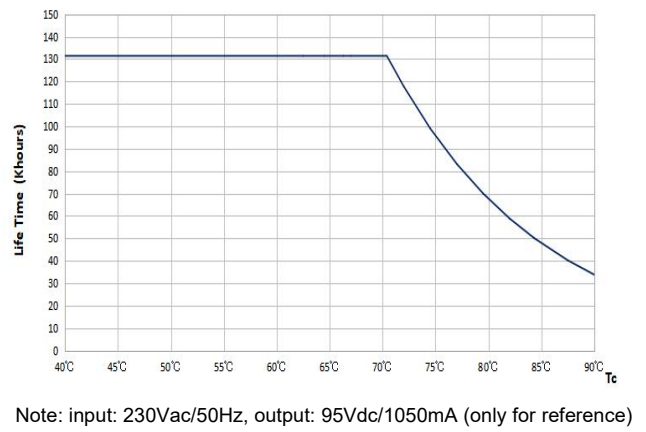
Typical THD vs Load



Load Derating Curve



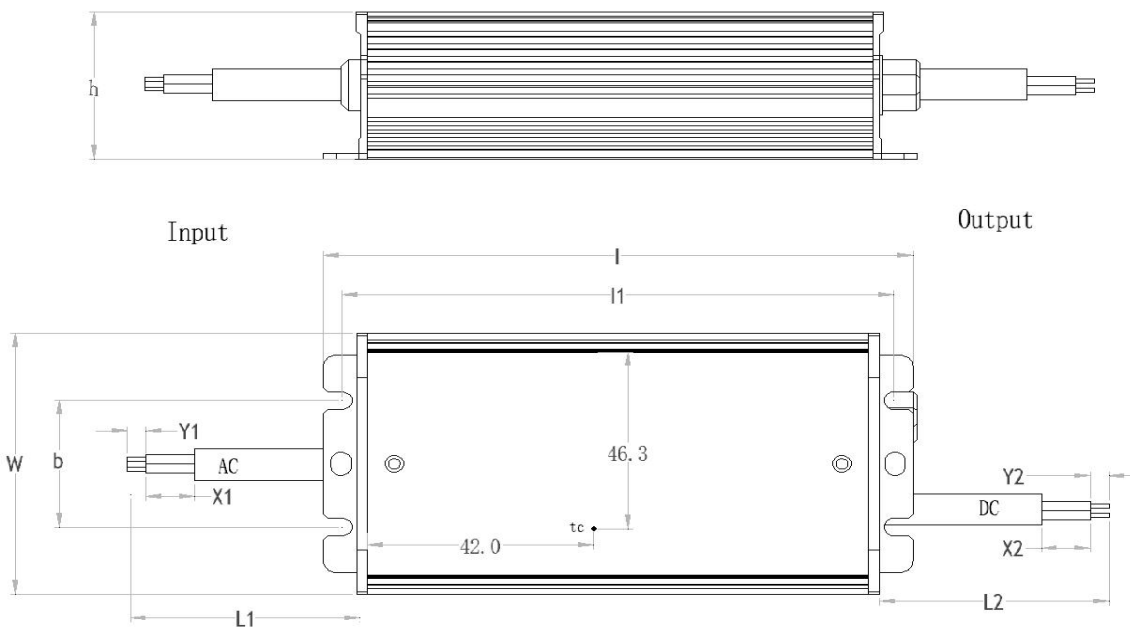
Lifespan



Current adjustment instructions (via potentiometer)

Parameter	Min.	Typ.	Max.	Note
Output current	700mA	700mA	1050mA	Total output power ≤100W

Dimensions



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

Mounting hole spacing, length(L1)	127mm
Mounting hole spacing, width(b)	32mm
Product weight	579g
Wire type, input side	3*1.0mm ² Φ8.2±1mm

Wire type, output side	2*1.0mm ² $\phi 7.7 \pm 1$ mm
Wire color, input side	AC-L Brown; AC-N Blue; PE Yellow&green
Wire color, output side	LED+ Brown; LED- Blue
Wire length, input side (L1)	300 $\pm$ 10mm
Wire length, output side (L2)	220 $\pm$ 10mm
Wire peeled length, input side (X1)	40 $\pm$ 4mm
Wire peeled length, output side (X2)	36 $\pm$ 4mm
Wire tinned length, input side (Y1)	10 $\pm$ 1.5mm
Wire tinned length, output side (Y2)	6 $\pm$ 1.5mm
Length (l)	136 $\pm$ 0.5mm
Width (w)	66 $\pm$ 0.5mm
Height (h)	37 $\pm$ 0.5mm

Colors & materials

Casing material	Metal
Casing color	Silver gray

Temperature & operating conditions

Ambient temperature range	-40°C - +55°C
Maximum temperature at Tc test point	90°C
Temperature range at storage	-40°C - +80°C (6 months in Class I environment)
Humidity range at storage	10-90%RH (no condensation)
Humidity during operation	20-90%RH
Atmospheric pressure	86-106KPa
RoHS	RoHS 2.0 (EU) 2015/863

Capabilities

Dimmable	-
Open circuit protection	Open-circuit voltage ≤ 180 Vdc
Over-temperature protection	-
Overload protection	-
Short circuit protection	The LED driver will not be damaged even in the state of short circuit for a long time. (Auto-recovery)
Derating at low input voltage	AC90-180V (with under-power protection threshold ranging from AC165-185V. For details, refer to the derating curve)
Max. cable length to lamp/LED module	-
Suitable for fixtures with prot. class	I
Control interface	-
Number of channels	1 channel

Programming

Programmer	-
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DALI control software	-
APP	-

Certificates & standards

Approval marks – approval	ENEC, CE, CB, 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	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-A1-100U-E105B(67)	16	446mm*332mm*167mm	24.73dm ³	10.61kg±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, EEC SE7440, flicker tester (flicker-free coefficient test) Everfine LFA-3000, etc.
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If there are no special remarks, the above parameters are tested at the ambient temperature of 25°C, 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 number of LED drivers that can be connected to a circuit breaker and the inrush current are tested under the same conditions.

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. When using the LED driver, please pay attention that the total output power should not exceed the maximum rated output power, otherwise the warranty service of LED driver will fail.

6. 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.

7. It is recommended that the product be installed inside the luminaire housing to ensure reliability.

8. A slight flicker may occur at power-on if the LEDs and the aluminum substrate have excessive parasitic capacitance and the luminaire is grounded. To avoid this, it is recommended to select a light board with lower parasitic capacitance.

9. It is suggested that user use a slotted screwdriver or a Philips to adjust the output current of LED driver in case that the potentiometer is damaged (the screwdriver should have good insulation at the head, body and handle, and the screwdriver with a 2mm head is recommended as well; what's more, please pay attention that the intensity of torque should not exceed 500g.cm).

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 on 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 omissions excepted. Always make sure to use the most recent release.

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