Features

- 0-10V/PWM/Rx dimmable (max. current adjustable via software programming)
- High efficiency up to 97%
- Dims to off without afterglow
- Surge protection: L-N: 6kV; L/N-GND: 10kV
- All-round protections: over temperature/open circuit/short circuit
- Suitable for Class I light fixtures
- Flicker free; IP67

IP67

Applications

· High-pole lighting · stadium lighting · UV-LED · fishing lighting · grow lighting

Descriptions

LF-FDA800 is a 3-in-1 dimming + 12V AUX output two-stage constant current LED driver. It features software programming of max. current, super-high efficiency, high PF and low THD.

Product Model

LF - FD A 800

- 800: output power: 800W
- A: 3-in-1 dimming + 12V
- F: non-isolated design; D: industrial constant current driver

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■ Electrical Characteristics

Model			LF-FDA800				
Output	Output Current		2400-4000mA				
	Default Current		3200mA±5%				
	Flicker		According to IEEE Std 1789				
	Output Voltage		180-260Vdc (LED)				
	Output Power		800W max. @120-277Vac				
	Ripple Current		＜3% @≤120Hz				
	Start-up Time		120Vac<1S @full load; 230Vac<0.5S @full load				
	Linear Adjustment Rate		±5% @full load				
	Load Adjustment Rate		±5% @full load				
	Temperature Drift		±3% @Ta 25~50℃				
Input	Input AC Voltage		90-305Vac (rated voltage: 120-277Vac)				
	Input Frequency		50/60Hz				
	Input DC Voltage		127-305Vdc (rated voltage: 170-276Vdc)				
	Input Current		<10A				
	PF		≥0.95/277Vac @full load; ≥0.90/277Vac @60% of rated load				
	THD		≤15% 120Vac&230Vac @full load				
	Efficiency	MIN	≥93%/120Vac @full load；≥95.5%/230Vac @250V/3200mA；≥95%/230Vac @200V/4000mA				
		TYP	≥94%/120Vac @full load；≥96.5%/230Vac @250V/3200mA；≥96%/230Vac @200V/4000mA				
		MAX	/				
	Inrush Current		<80A@277Vac				
	Leakage Current		＜0.75mA @277Vac				
	Loading Quantities of Circuit Breaker		Model	B10	C10	B16	C16
			Quantity(pcs)	2	2	3	3
	Standby Power Consumption		≤0.5W@230Vac Dim to off				
12V AUX Output	Output Voltage		+12Vdc (11-14V)				
	Output Current		200mA max.				
	Dynamic Load		Please make sure that it matches the LED driver.				
	Ripple Voltage		≤1V				
Protection Characteristics	Surge Protection		L-N: 6kV (2Ω); L/N-PE: 10kV (12Ω); DIM+ - DIM-: 1kV; DIM+/DIM- -PE: 2kV				
	Open Circuit Protection		Open circuit voltage ≤310Vdc@120-277Vac				
	Short Circuit Protection		Hiccup mode (auto-recovery)				
	Over Temperature Protection		Tc>90℃ @A radiator (L*W*H: 400*200*30mm) or a radiator with the same volume should be placed on the bottom (down to 50% of the rated current, flicker-free)				
	Leakage Protection (optional)		If the AC leakage current of the positive or negative pole of the output end and the light fixture to the ground is greater than 20mA, the leakage protection is triggered and the output is cut off for about 10S, and then the output is restored; if the leakage protection is triggered three times in succession, the driver will enter a self-locking protection state with no output until the input is cut off and restarted to restore.				

■ Electrical Characteristics

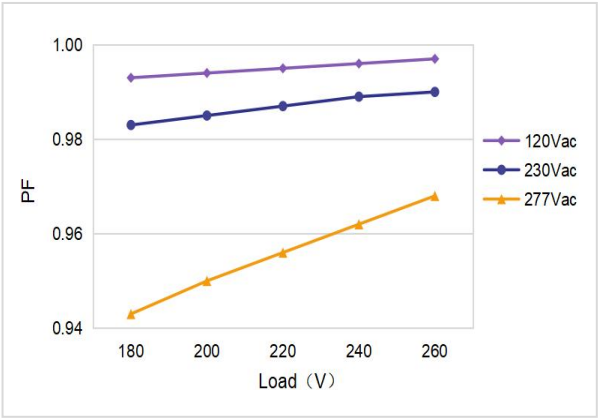
Environment Descriptions	Operating Temperature	-40℃~+40℃@90-108Vac; -40℃~+50℃@120-277Vac A radiator (L*W*H: 400*200*30mm) or a radiator with the same volume should be placed on the bottom.
	Operating Humidity	0~95%RH (no condensation)
	Storage Temperature/ Humidity	-40℃~+80℃ (6 months in Class I environment); 0~95%RH (no condensation)
	Atmospheric Pressure	86~106kPa
Safety & EMC	Certifications	TUV-ENEC, CE, RCM, SAA, CB, UKCA, FCC, UL
	Withstanding Voltage	L-N/PE: 1.5KVac, ＜5mA, 60S; L-N/DIM: 3KVac, ＜5mA, 60S; DIM-PE: 1.5KVac, ＜5mA, 60S
	Insulation Resistance	L/N-PE, L/N-DIM, DIM-PE: ≥100MΩ@500Vdc/60S/25℃/50%RH
	Earth Resistance	≤0.1Ω @25A/60S
	Safety Standards	IEC/EN 61347-2-13, IEC/EN 61347-1, IEC/EN 62493 IEC/EN 62384 AS 61347.1, AS 61347.2.13 UL 8750 CSA C22.2 no.250.13
	EMI	EN 55015, EN 61547, EN 61000-3-2,3 FCC: PART 15 CLASS B @120Vac FCC: PART 15 CLASS A @277Vac
	EMS	CE-EMC/RCM：EN61000-4-2, 3, 4, 5, 6, 11 According to IEC61000-4-2, 3, 4, 5, 6, 8, 11, 12
	Ringing Wave	6kV
	ESD	Air 8kV, touch 4kV
Other Parameters	IP Rating	IP67
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty	5 years (Tc≤85℃)
	MTBF	＞1000Khours@Telcordia SR-332 Issue4
Test Equipment	Digital power meter: CHROMA6530, digital power driver: CHROMA66205, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber; lightning surge generator: Everfine EMS61000-5B: fast transient generator:Everfine EMS61000-4A, spectroanalyzer: KH3935, Hi-pot tester: EEC SE7440, flicker tester (flicker-free coefficient test): Everfine LFA-3000, etc.	
Test Remark	If there are no special remarks, the above parameters are tested at the ambient temperature of 25℃, humidity of 50%, full load and input voltage of 230Vac.	

■ Electrical Characteristics

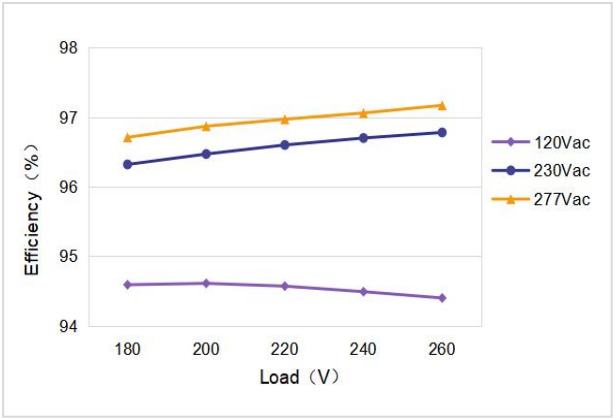
Additional Remarks	1. It is recommended that user install over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above. 3. 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. 4. 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. 5. 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; the positive electrode and negative electrode of the dimming wire and AUX power supply. 6. The withstand voltage between LEDs and PCBA should be >2.5KVac

■ Product Characteristic Curves

PF Curve

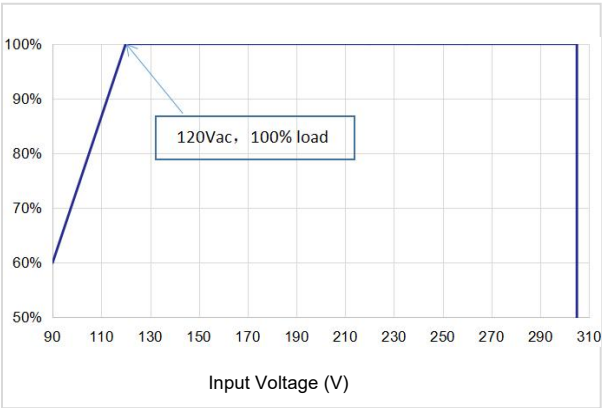


Efficiency Curve

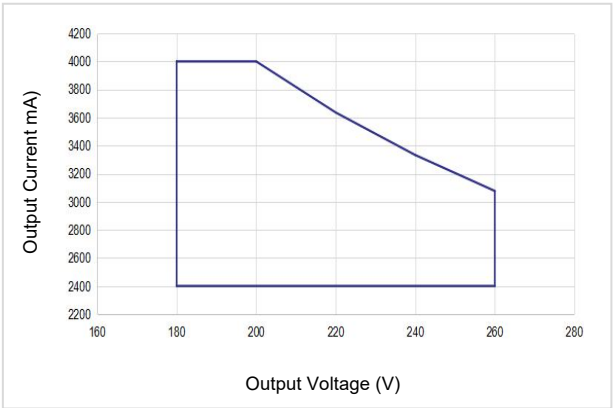


■ Product Characteristic Curves

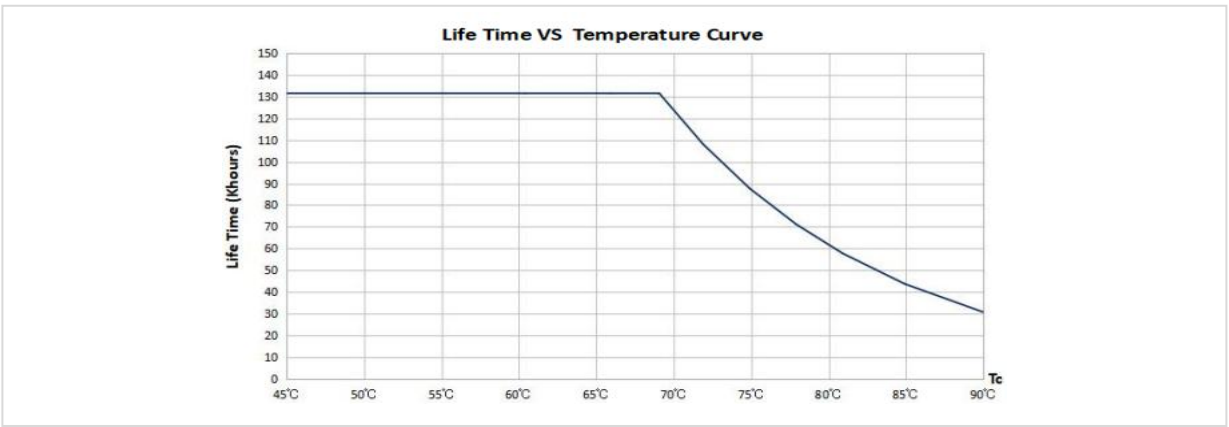
Load Derating Curve



Power Curve



Lifetime Curve



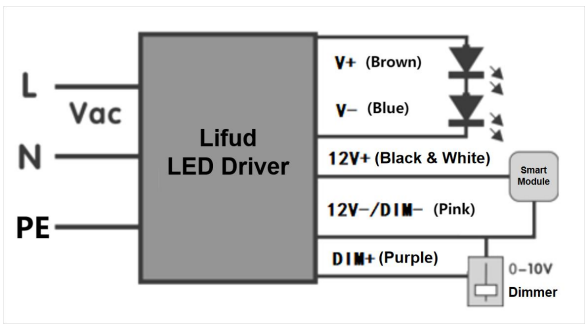
Input: 277Vac/50Hz; output: 200Vdc/4000mA (The chart is for reference only)

■ Dimming Operation Instructions

0-10V Dimming Operations

- Connect 0-10V signal to DIM terminal.
- In 0-10V dimming mode, when the input voltage is 0.8V±0.15, the light turns off; when it's 1.0V±0.15, the light turns on.
- Dimming depth: 10% (typical value); maximum is <12%
- DIM+/- (without signal connected): 100% rated current output

Wiring Diagram of 0-10V Dimming



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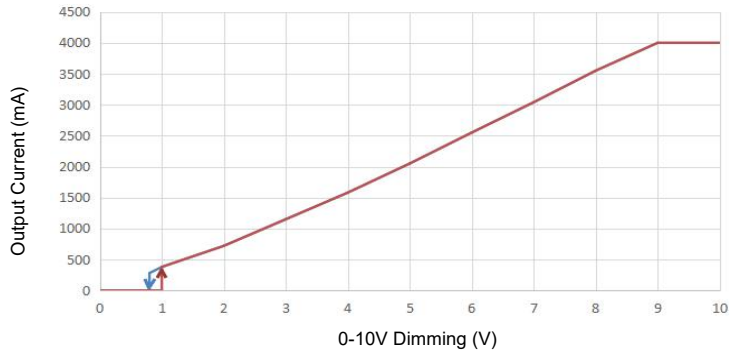
■ Dimming Operation Instructions

Dimming Curve

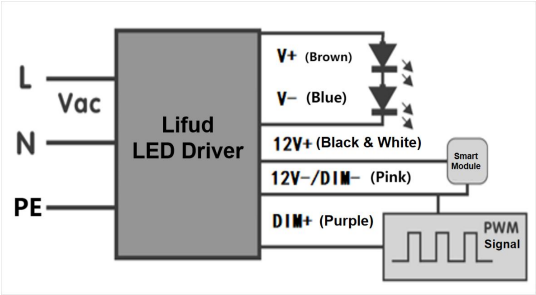


Input: 230Vac; output: 200Vdc/4000mA
(this data is measured by Lifud 0-10V dimmer and the chart is for reference only)

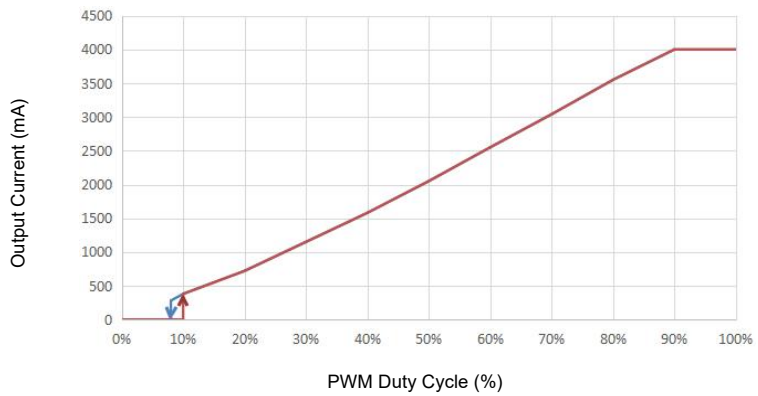
PWM Dimming Operations

- Connect PWM signal to DIM terminal.
- Dimming depth: 10% (typical value); maximum is <12%
- Compatible signal range: 1000-3000(Hz), amplitude: 9-10(V)
- DIM+/- (without signal connected): 100% rated current

Wiring Diagram of PWM Dimming



Dimming Curve



Input: 230Vac; output: 200Vdc/4000mA
(this data is measured by PWM signal generator Tektronix and the chart is for reference only)

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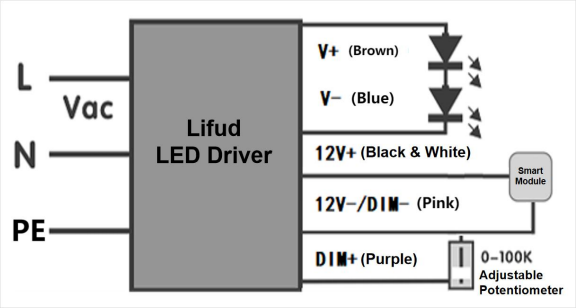
■ Dimming Operation Instructions

Rx Dimming Operations

- Connect Rx signal to DIM terminal.
- Range: 0-100KΩ
- Dimming depth: 10% (typical value); maximum is <12%
- DIM+/- (without signal connected): 100% rated current

Wiring Diagram of Rx Dimming



Dimming Curve

Input: 230Vac; output: 200Vdc/4000mA
(this data is measured by resistance dimmer and the chart is for reference only)

■ Structure & Dimensions (unit: mm; tolerance: ±0.5mm)

Wire Specifications

Type	Input Wire	Output Wire	Dimming Wire & AUX Output Wire
FDA	3*1.0mm^2 Φ8.2±1mm	2*1.0mm^2 Φ7.7±1mm	3*22AWG Φ5.0±1mm
Color	AC-L Brown; AC-N Blue; PE Yellow & Green	LED+ Brown; LED- Blue	DIM+ Purple; DIM- Pink; +12V Black & White
Length	300±10mm (L1)	300±10mm (L2)	250±10mm (L3)
Peeled	40±5mm (X1)	35±5mm (X2)	40±5mm (X3)
Tinned	10±1.5mm (Y1)	10±1.5mm (Y2)	15±1.5mm (Y3)

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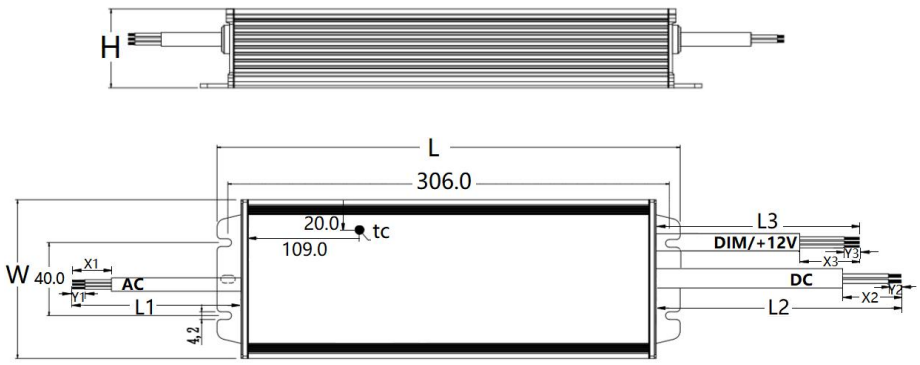
■ Structure & Dimensions

Casing Dimensions

Description	Symbol	Unit (mm)
Length	L	318
Width	W	87
Height	H	39.5

Structure Diagram



Tc point is on the top of the casing

■ Packaging Specifications

Model	LF-FDA800
Carton Size	460*359*125mm (L*W*H)
Quantity	3 pcs/layer; 2 layers/ctn; 6 pcs/ctn
Weight	1.995±0.1 kg/pc; 13.45±1.0 kg/ctn

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■ Transportation and Storage

1. Transportation

- 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.

2. Storage

- 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.

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

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