

Features

- 3-in-1 dimming (0-10V/PWM/Rx) + 12V AUX
- High efficiency up to 97%
- THD <15%
- Maximum output current settable via software
- Dims to off without afterglow
- Surge protection: L-N: 6kV & L/N-GND: 10kV
- Flicker free; IP54
- All-round protection: open circuit/short circuit/over temperature protection
- Suitable for Class I light fixtures



Applications

· High pole light · stadium light · UV-LED · fish light · plant light

Descriptions

LF-FAA600 is a constant current LED driver featuring super-high efficiency, high PF and low THD. It has 3-in-1 dimming + 12V AUX output.

Product Model

LF - FA A 600



- 600: output power: 600W
- A: 3-in-1 dimming + 12V
- F: non-isolated design; A: serial number

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■ Electrical Characteristics

Model		LF-FAA600					
Output	Output Current		1800-3000mA (Default setting: 2400mA±5%)				
	Output Voltage		180-260Vdc (LED)				
	Flicker		According to IEEE Std 1789				
	Output Power		600W Max. @120-277Vac				
	Ripple Current		<3% @≤120Hz				
	Start-up Time		120Vac<1S @full load				
	Linear Adjustment Rate		±5% @full load				
	Load Adjustment Rate		±5% @full load				
	Temperature Drift		±3% @Tc 25-50℃				
Input	AC Input Voltage		90-305Vac (rated voltage: 120-277Vac)				
	DC Input Voltage		127-305Vdc (rated voltage: 170-276Vdc)				
	AC Rated Input Frequency		50/60Hz				
	Input Current		6A max.				
	PF		≥0.90/277Vac @full load				
	THD		≤15% 120Vac&277Vac@full load				
	Efficiency	Min.	≥93%/120Vac @250V/2400mA; ≥95%/277Vac @250V/2400mA				
		Typ.	≥94%/120Vac @250V/2400mA; ≥96%/277Vac @250V/2400mA				
		Max.	/				
	Inrush Current		<80A/3500uS@277Vac				
	Leakage Current		<0.75mA @277Vac				
	Loading Quantity on Circuit Breaker	Model	B10	C10	B16	C16	
Quantity(pcs)		2	2	3	3		
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		L-N: 6KV(2Ω); L/N-PE: 10KV(12Ω); DIM+ - DIM-: 1KV; DIM+/DIM- - PE: 2KV				
	Open Circuit		Open-circuit voltage ≤310Vdc @120-277Vac				
	Short Circuit		Hiccup mode (auto-recovery)				
	Over Temperature		Tc 95±5℃@The bottom of the driver needs to be padded with a radiator of 400*200*30mm or a radiator of equivalent size (reduced to 50% rated current, no flicker)				
	Leakage (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

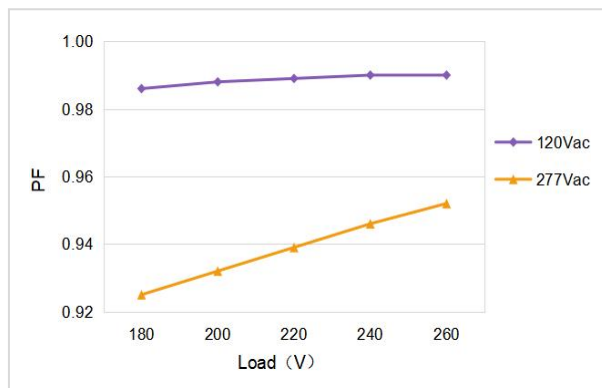
Environment Descriptions	Casing Temperature	-40°C~+40°C @90-108Vac, -40°C~+50°C @120-277Vac; the bottom of the driver needs to be padded with a radiator of 400*200*30mm or a radiator of equivalent size
	Operating Humidity	0~95%RH (no condensation)
	Storage Temperature/ Humidity	-40°C~+80°C (6 months in Class I environment); 0~95%RH (no condensation)
	Atmospheric Pressure	86~106kPa
Safety & EMC	Certifications	FCC, UL
	Withstand Voltage	L/N-PE: 1.6KVac, <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°C/50%RH
	Ground Resistance	≤0.1Ω @25A/60S
	Safety Standards	UL 8750 CSA C22.2 no.250.13
	EMI	FCC: PART 15 CLASS B @120Vac FCC: PART 15 CLASS A @277Vac
	EMS	According to IEC61000-4-2, 3, 4, 5, 6, 8, 11, 12
	Ringing Wave	6kV
	ESD	Air 8kV, touch 4kV
Other Parameters	IP Rating	IP54
	RoHS	RoHS 2.0 (EU) 2015/863
	Warranty	5 years (Tc≤80°C)
	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°C, humidity of 50%, maximum output power and input voltage of 277Vac.	

■ Electrical Characteristics

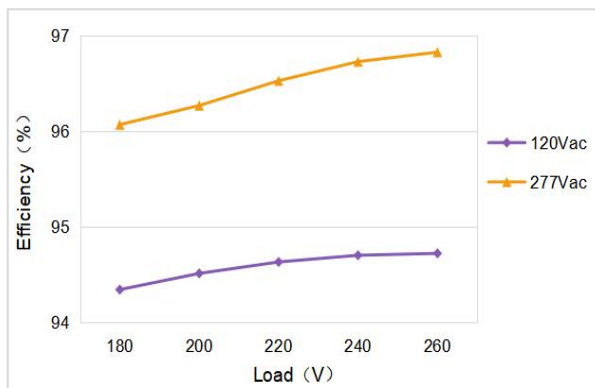
Additional Remarks	1. It is recommended that user install over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The PC cover, casing and end cap for assembling the LED driver in the light fixture 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 should 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. Please fully inspect the withstanding voltage ability of LEDs and aluminum substrates and the value shall be >2.5kVac.
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■ Product Characteristic Curves

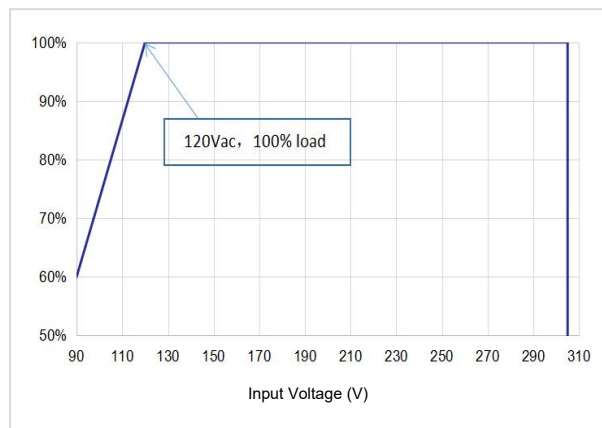
PF Curve



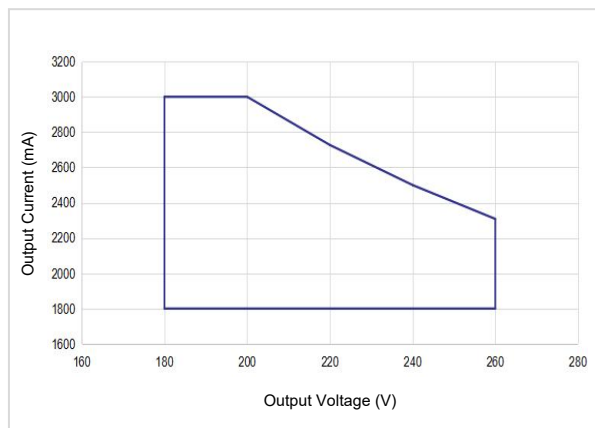
Efficiency Curve



Load Derating Curve



Power Curve



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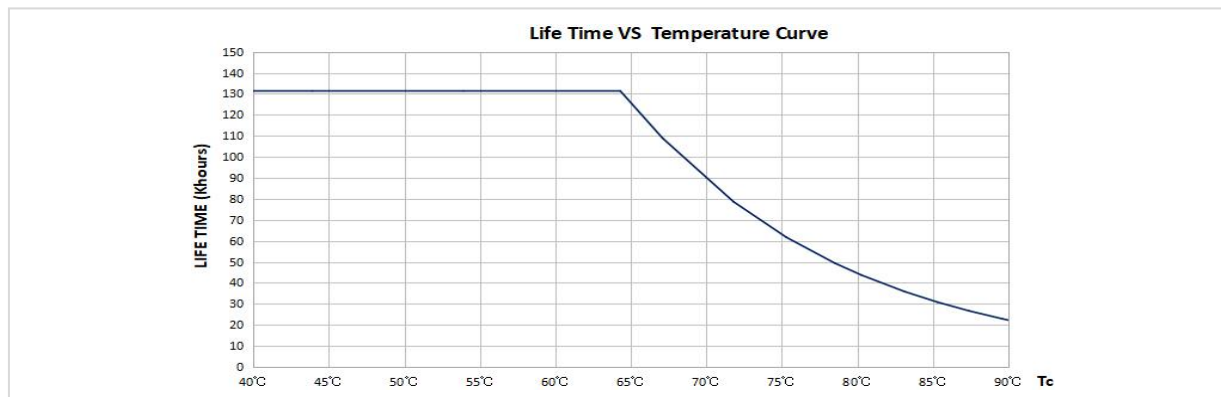
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■ Product Characteristic Curves

Lifetime Curve



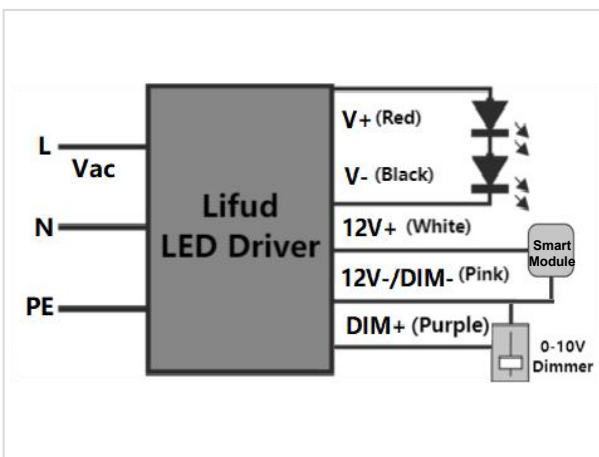
Note: Input: 120Vac/60Hz; output: 200Vdc/3000mA (This chart is only for reference).

■ Dimming Operation Instructions

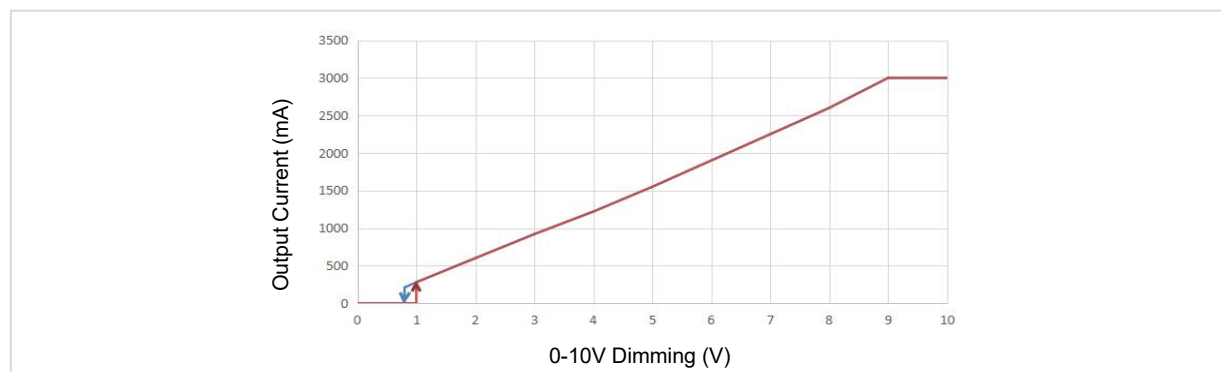
0-10V Dimming Operations

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

Wiring Diagram of 0-10V Dimming



Dimming Curve



Input: 120Vac; output: 200Vdc/3000mA (this data is measured by Lifud 0-10V dimmer and the chart is for reference only)

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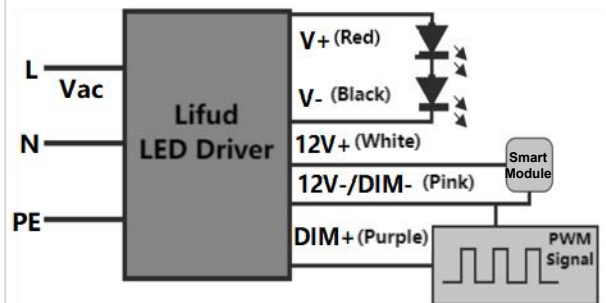
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■ Dimming Operation Instructions

PWM Dimming Operations

- Connect PWM signal to DIM terminal.
- Dimming depth: 10% (typical value), the maximum value <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

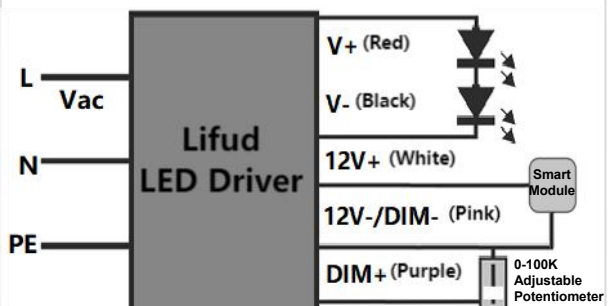


Input: 120Vac; output: 200Vdc/3000mA
(this data is measured by PWM signal generator Tektronix and the chart is for reference only)

Rx Dimming Operations

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

Wiring Diagram of Rx Dimming



■ Packaging Specifications

Model	LF-FAA600
Carton Size	465*365*185 mm (L*W*H)
Quantity	3 pcs/layer; 3 layers/ctn; 9 pcs/ctn
Weight	1.598±0.1 kg/pc; 15.89±1.0 kg/ctn

■ Transportation & 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.