

Features

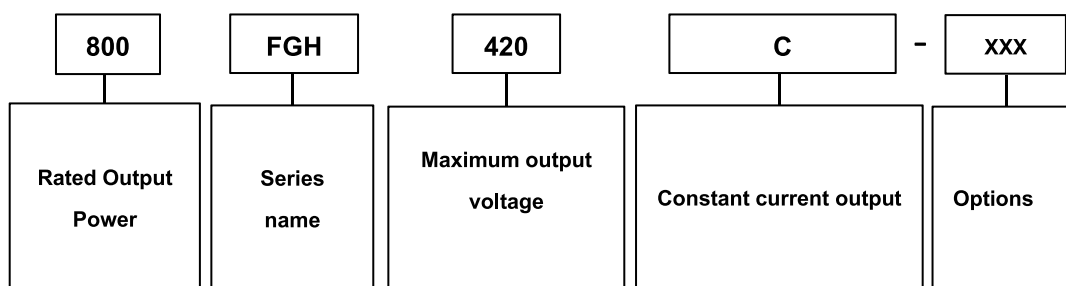
- High efficiency: 96% typical @400Vac, full load
- High power factor: 0.95 typical. @ 230Vac, full load
- Isolated 0-10V/PWM/ Resistor Dimming
- 12V/200mA AUX Output
- With Lightning Protection & all-round protections (OVP,OCP,SCP,OTP)
- CE
- 5-year warranty
- IP65



Description

This specification describes the performance characteristics of a 800W/4A versatile power supply for LED Driver. The output current of this series are programmable, and designed for 0-10V/PWM/Resistor dimming applications.

Model Name Definition



Specifications

Part Number	Max. Output Power	Programmable Current Range per channel	Output Voltage Range	Efficiency @400VAC/400Vdc
800FGH420C	800W	1.6-4A	150-420V	96%

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input AC Voltage	200 Vac	-	528 Vac	
Input Frequency	45 Hz	50/60 Hz	63 Hz	
Leakage Current	-	-	0.75 mA	At 440Vac / 60Hz input , grounding effectively
Input AC Current	-	-	2.4A	Measured at full load and 440 Vac input.
	-	-	2.8A	Measured at full load and 347 Vac input.
	-	-	3.5A	Measured at full load and 277 Vac input.
Inrush Current	-	-	35A	At 440Vac input, 25°C cold start.
PF	0.9	-	-	At 200-480Vac, 80%-100% Load
THD	-	-	20%	At 200-480Vac, 80%-100% Load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Io set	-	5%Io set	At full load condition
Total Output Current Ripple (pk-pk)	-	-	10%Io max	At full load condition, 20 MHz BW
Startup Overshoot Current	-	-	10%Io max	At full load condition
No Load Output Voltage	-	-	500V	
Line Regulation	-	-	±3%	Measured at full load
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	-	500mS	Measured at 277/347/440Vac input.
Temperature Coefficient of Io set	-0.03%/°C	-	0.03%/°C	Case temperature = 0°C ~Tc max
OTP Tc(Note2)	85°C	90°C	95°C	Output current will drop to 50% lowest, or shut down.
SCP				Shut down
12V Auxiliary Output Voltage	11V	12 V	15V	
12V Auxiliary Output Source Current	0 mA	-	200 mA	Return terminal is "Dim-"

Note1: 12V auxiliary source cannot be used in parallel.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Standby power	-	-	2 W	Measured at 277Vac/50Hz; Dimming off
MTBF	234,000 Hours	-	-	Measured at 277Vac input, 80%Load and 25 ° C ambient temperature (MIL-HDBK- 217F)
Lifetime	98,000 Hours	-	-	Measured at 230Vac input, 80%Load and 60°C case temperature; See lifetime vs. Tc curve for the details
Operating Case Temperature Tc(Note2)	-30°C	-	90°C	
Operating Ambient Temperature Ta	-30°C	-	50°C	
Storage Temperature	-40°C	-	+85°C	Humidity: 5%RH to 90%RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	9.49×4.52×2.18 241×114.8×55.4			
Net Weight/pcs	-	2.4kg	-	

Note2: There are three points could be maximum Tc point, depending on different Vac input and Vdc output. These three points (Tc, Tc1, Tc2) position are shown in below mechanical drawing.

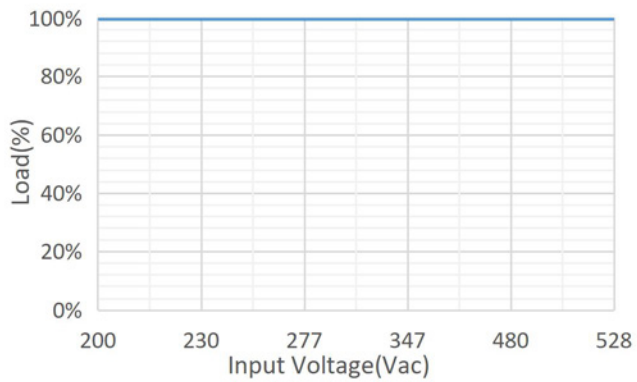
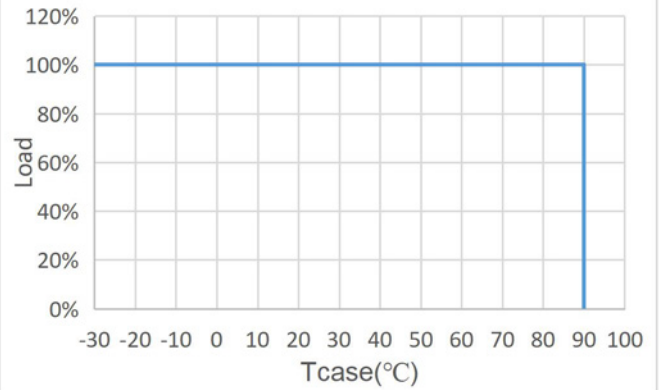
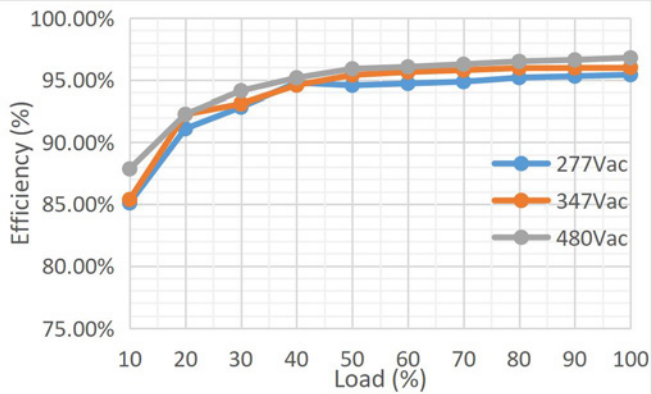
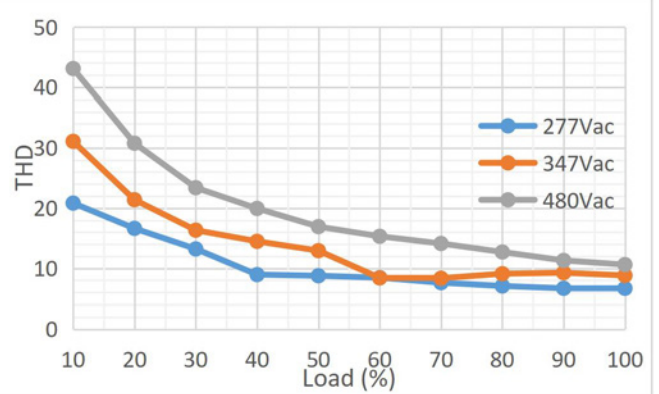
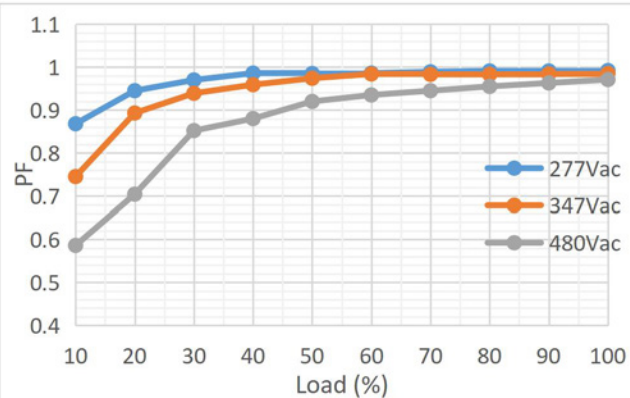
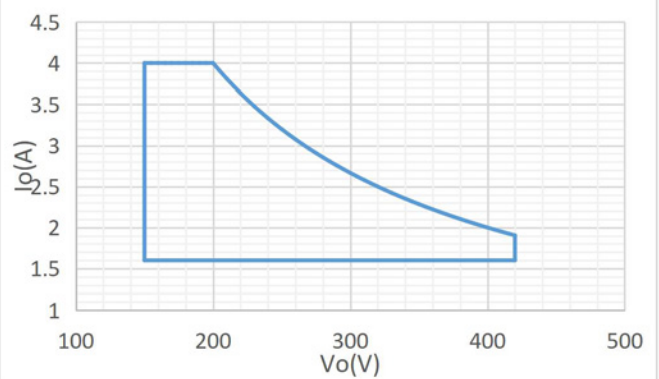
0-10V and PWM Dimming Specifications

Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the Vdim (+) Pin	-1 V	-	15 V	
Source Current on Vdim (+)Pin	90uA	100uA	110uA	
Dimming Output Range	10%Io set	-	Io set	80%Io max ≤ Io set ≤ 100%Io max

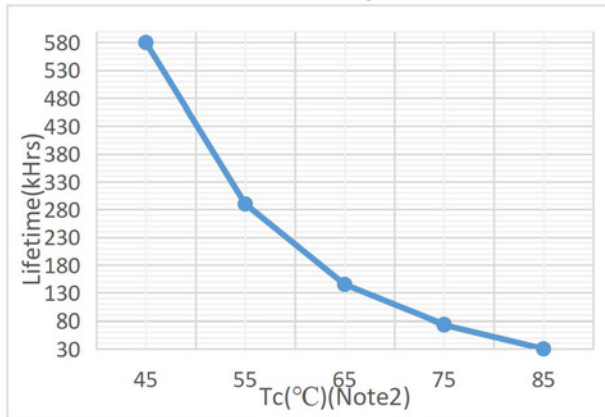
	8%I _o max	-	I _o set	I _o set < 80%I _o max
Recommended Dimming Input Range	0 V	-	10 V	Default 0-10V dimming mode.
Dim off Voltage	0.3 V	0.5 V	0.8V	
Dim on Voltage	0.5V	0.7 V	1 V	
Hysteresis	-	0.2 V	-	
PWM_in High Level	9.5 V	10V	10.5 V	
PWM_in Low Level	-0.3 V	-	0.6 V	
PWM_in Frequency Range	500 Hz	-	3 KHz	
PWM_in Duty Cycle	1%	-	98%	
PWM Dimming off	3%	5%	8%	
PWM Dimming on	5%	7%	10%	

Safety & EMC Compliance

Safety Category	Standard
UL/CUL	UL8750,CAN/CSA-C22.2 No. 250.13-12
CE	EN61347-1
EMI Standards	Notes
EN55015	Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT: level 3, criteria B
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 4 kV, line to earth 6 kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

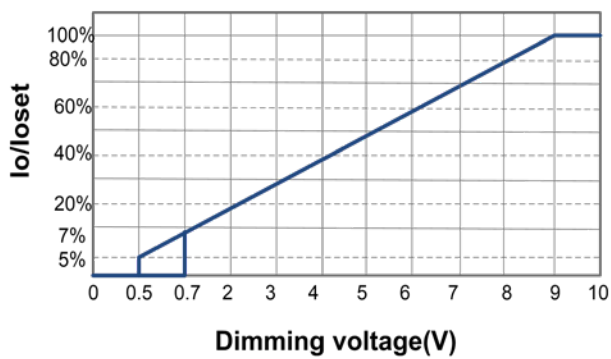
Performance Curve
Derating Curve

Output Load Vs Tcase

Efficiency Vs Different Loads(400Vdc 1.98A)

THD Vs Different Loads(400Vdc 1.98A)

Power Factor Vs Different Loads(400Vdc 1.98A)

I/V Operating Area


Life Vs Shell Temperature

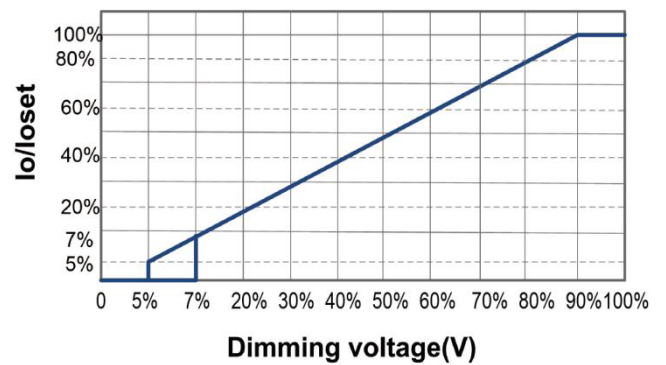


0-10V Analog Dimming & PWM Dimming

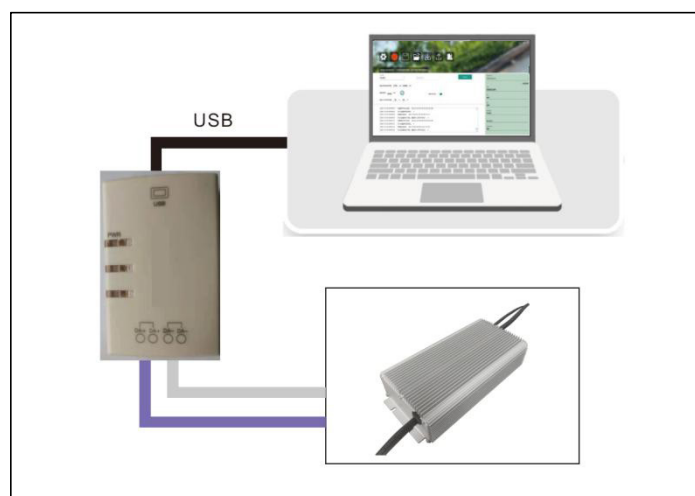
Io/Io_{set} vs. Dimming voltage



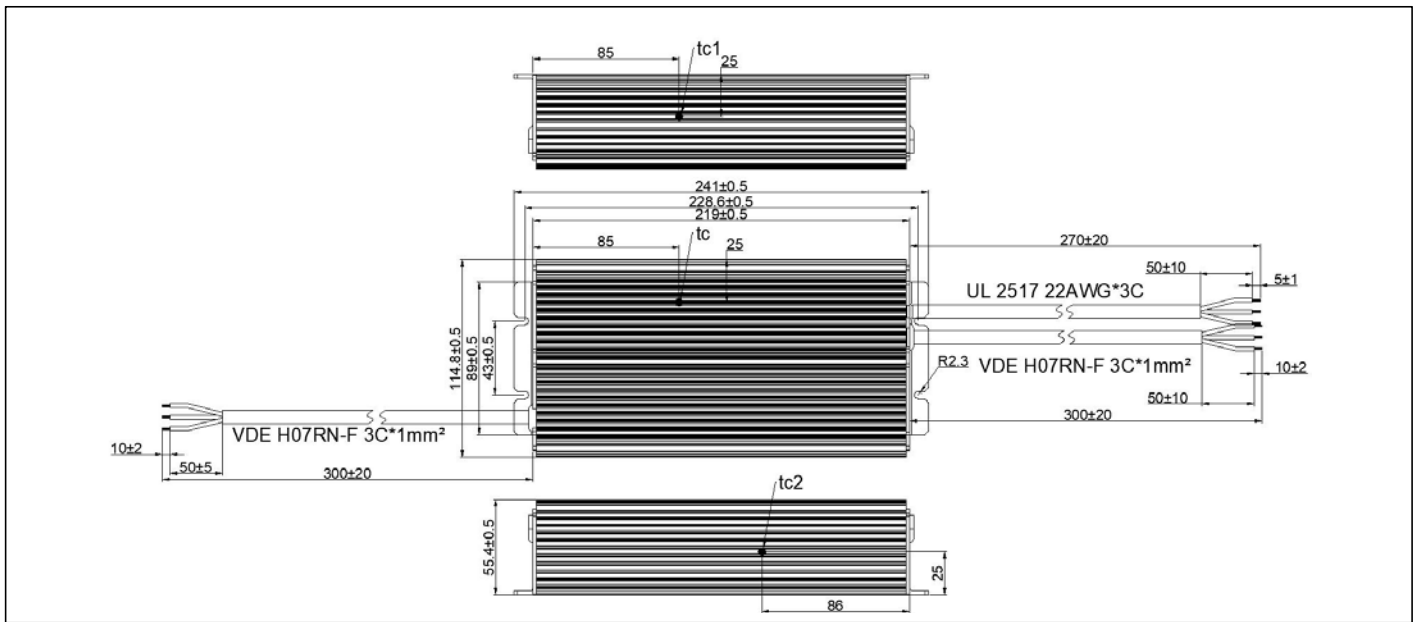
Io/Io_{set} vs. Dimming voltage



Programming wiring diagram



Mechanical Drawing



Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2022/11/22	V1.0			
2023/3/20	V1.1	Update Mechanical Drawing		Add tc point
		Add Performance Curve		
		Update 0-10V Analog Dimming & PWM Dimming		
2023/5/16	V1.2	Update Inrush Current	Max: 65A	Max: 35A
		Update OTP Tc	Max: 100	Max: 95
		Update SCP	Hiccup mode, Auto recover	Shut down
		Update surge capability	4KV/4KV	4KV/6KV
		Update Operating Case Temperature Tc	Min: -40℃	Min: -30℃
		Update Operating Ambient Temperature Ta	Min: -40℃	Min: -30℃
		Add Derating Curve		
		Add Output Load Vs Tcase Curve		