

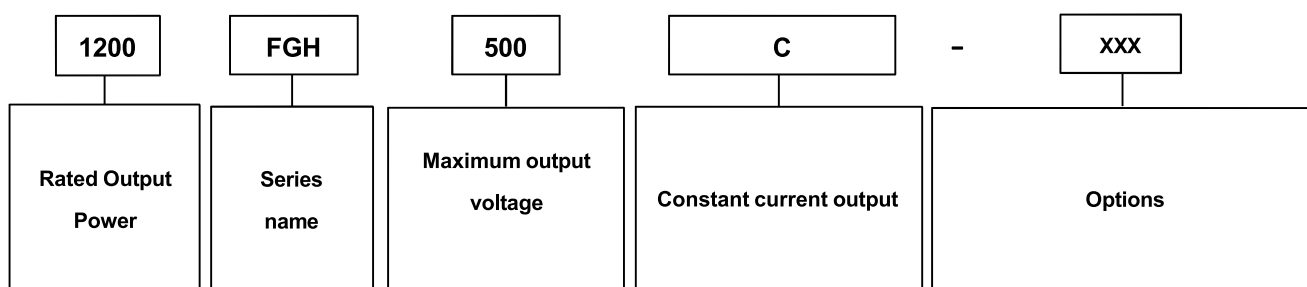
Features

- CC programmable outputs
- High efficiency: 96% typical @400Vac, full load
- High power factor: 0.97 typical. @ 230Vac, full load
- Isolated 0-10V/PWM Dimming optional
- With Lightning Protection & all-round protections (OVP, OCP,SCP,OTP)
- 5-year warranty
- IP65

Description

This specification describes the performance characteristics of a 1200W/4.5A versatile power supply for LED Driver. The output current of this series are programmable, and designed for 0-10V/PWM dimming applications.

Model Name Definition



Specifications

Part Number	Input voltage	Max. Output Power	Programmable Current Range per channel	Output Voltage Range	Efficiency
1200FGH500C	208-305V	1080W	1.6-4A	200-420V	95%@277Vac
	306-480V	1200W	1.6-4.5A	200-500V	96%@400Vac

Note: Efficiency value is typical value.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input AC Voltage	187 Vac	-	528 Vac	
Input Frequency	47 Hz	50/60 Hz	63 Hz	
Leakage Current	-	-	0.75 mA	At 480Vac / 60Hz input , grounding effectively
Input AC Current	-	-	3.2A	Measured at full load and 400 Vac input.
	-	-	5.5A	Measured at full load and 347 Vac input.
	-	-	6.3A	Measured at full load and 277 Vac input.
Inrush Current	-	-	35A	At 400Vac input, 25°C cold start.
PF	0.95	-	-	At 208-480Vac, 80%-100% Load
THD	-	-	20%	At 208-480Vac, 80%-100% Load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Io set	-	5%Io set	At 25°C and full load condition
Total Output Current Ripple (pk-pk)	-	-	10%Io max	At 25°C and full load condition, 20 MHz BW
Startup Overshoot Current	-	-	10%Io max	At 25°C and full load condition
Line Regulation	-	-	±3%	Measured at full load
Load Regulation	-	-	±3%	
Turn-on Delay Time	-	-	1s	Measured 400Vac input to 90% output current
Temperature Coefficient of Io set	-0.03%/°C	-	0.03%/°C	Case temperature = 0°C ~Tc max
OTP Tc	85°C	90°C	100°C	Output current will drop to 50% lowest
SCP				Shut down
12V Auxiliary Output Voltage	11V	12 V	15V	
12V Auxiliary Output Source Current	0 mA	-	300 mA	Return terminal is "Dim–"

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Standby power	-	-	1.5W	Measured at 277Vac/50Hz; Dimming off
MTBF	234,000 Hours	-	-	Measured at 230Vac input, 80%Load and 25 ° C ambient temperature (MIL-HDBK- 217F)
Lifetime	100000Hours	-	-	Measured at 230Vac input, 100%Load and 25°C Ta
Operating Case Temperature Tc	-40°C	-	90°C	
Operating Ambient Temperature Ta	-40°C	-	50°C	
Storage Temperature	-40°C	-	+85°C	Humidity: 5%RH to 90%RH
Dimensions				
Inches (L × W × H)	10.47×4.52×2.18			
Millimeters (L × W × H)	266×114.8×55.4			
Net Weight/pcs	-	3.1kg	-	
Warranty	-	5Years	-	

Note1: 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

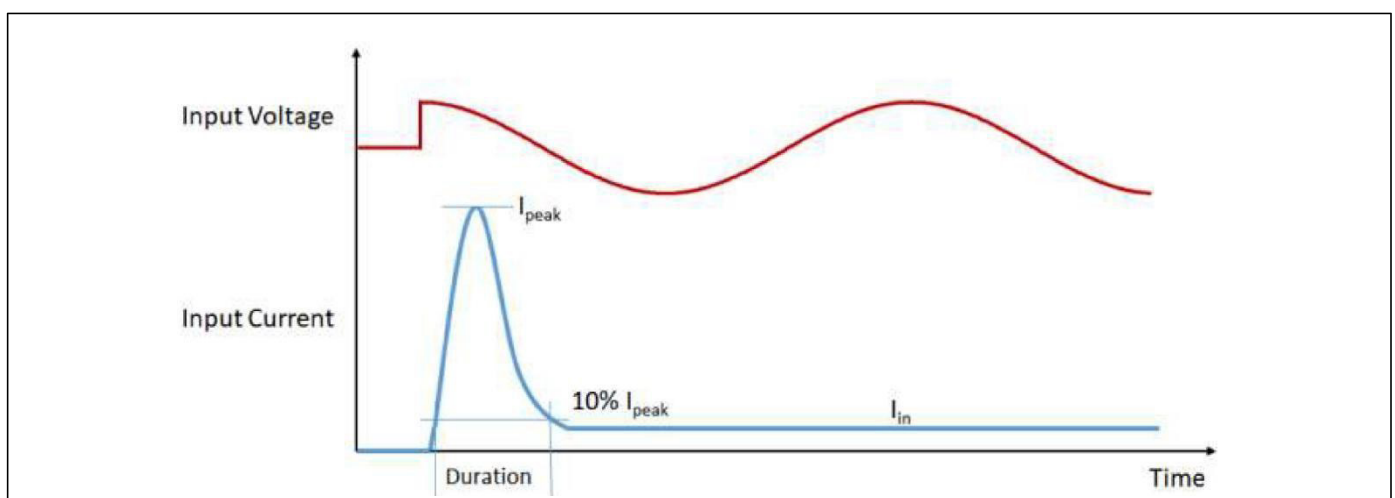
Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the Vdim (+) Pin	-1 V	-	15 V	
Source Current on Vdim (+)Pin	90uA	100uA	110uA	
Dimming Output Range	10%Io set	-	Io set	80%Io max ≤ Io set ≤ 100%Io max
	8%Io max	-	Io set	Io set < 80%Io max
Recommended Dimming Input Range	0 V	-	10 V	Default 0-10V 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%	9%

Safety & EMC Compliance

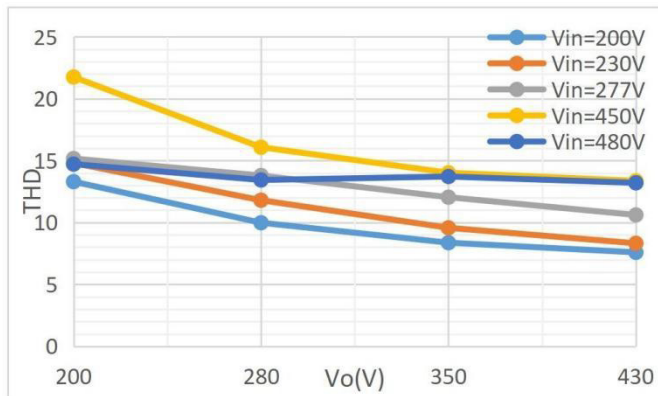
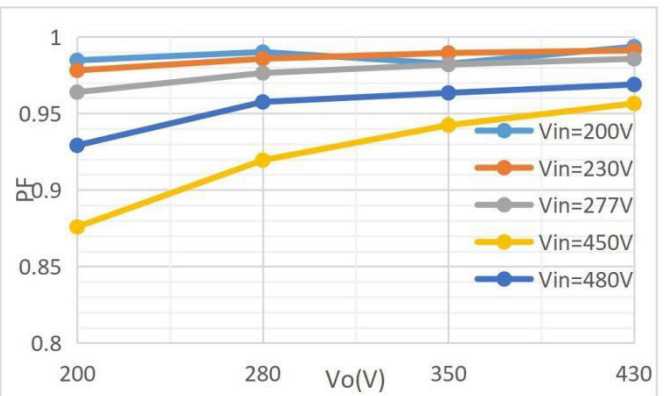
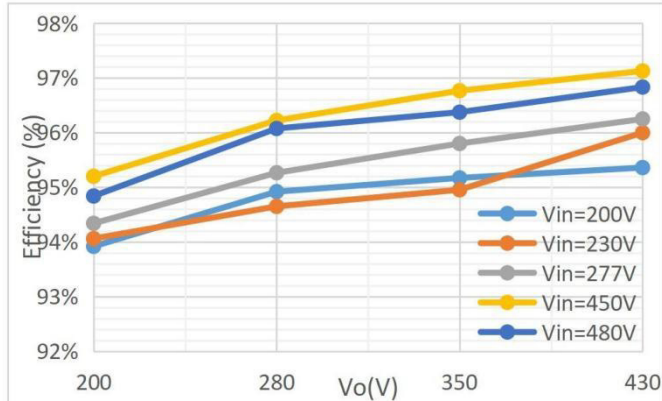
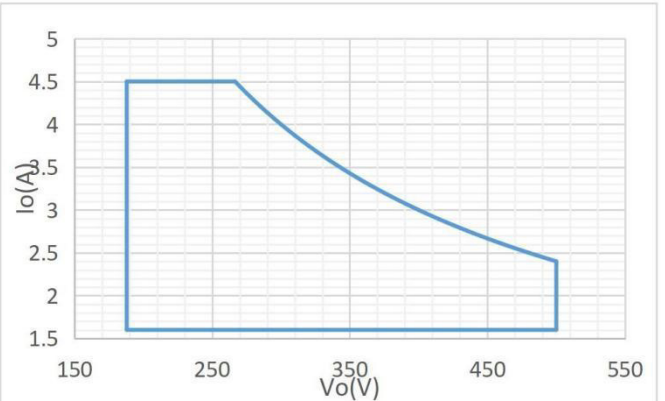
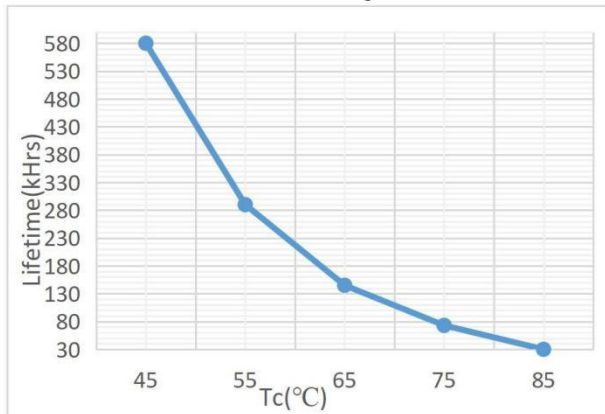
Safety Category	Standard
UL/CUL	UL8750,CAN/CSA-C22.2 No. 250.13-12
EMI Standards	Notes
EN55015	Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference 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 A
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

Inrush Current (@Full load and cold start)

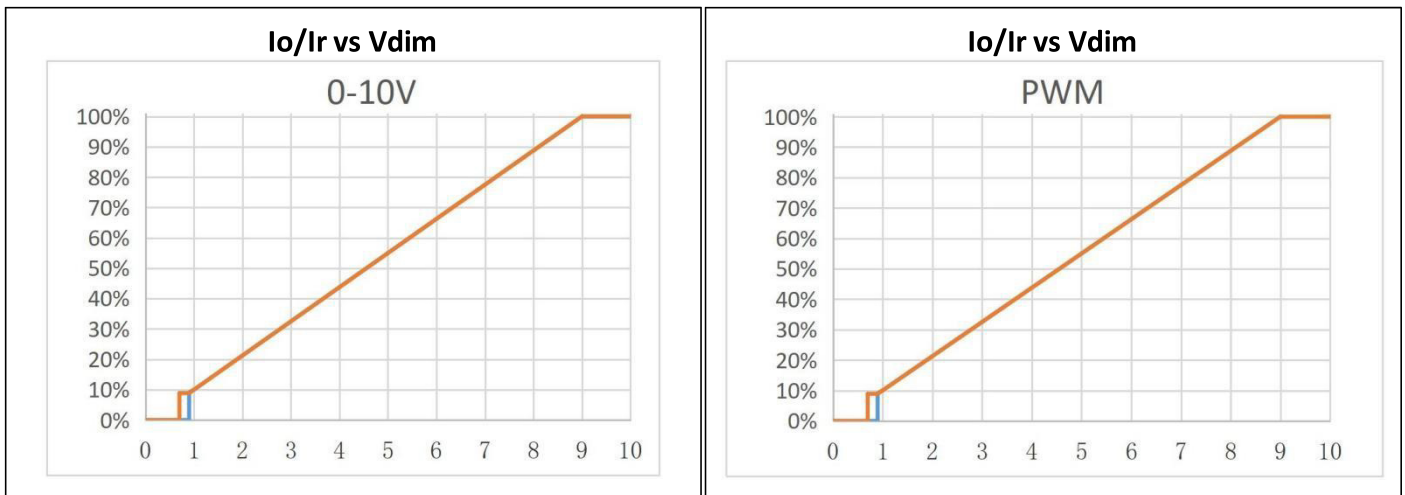


Vin(Vac)	Fin(Hz)	Spec(A)	I inrush(A)	T inrush(ms)
220	50	20	6.9	0.08
277	50	20	8.56	0.14
480	50	20	14.4	0.14

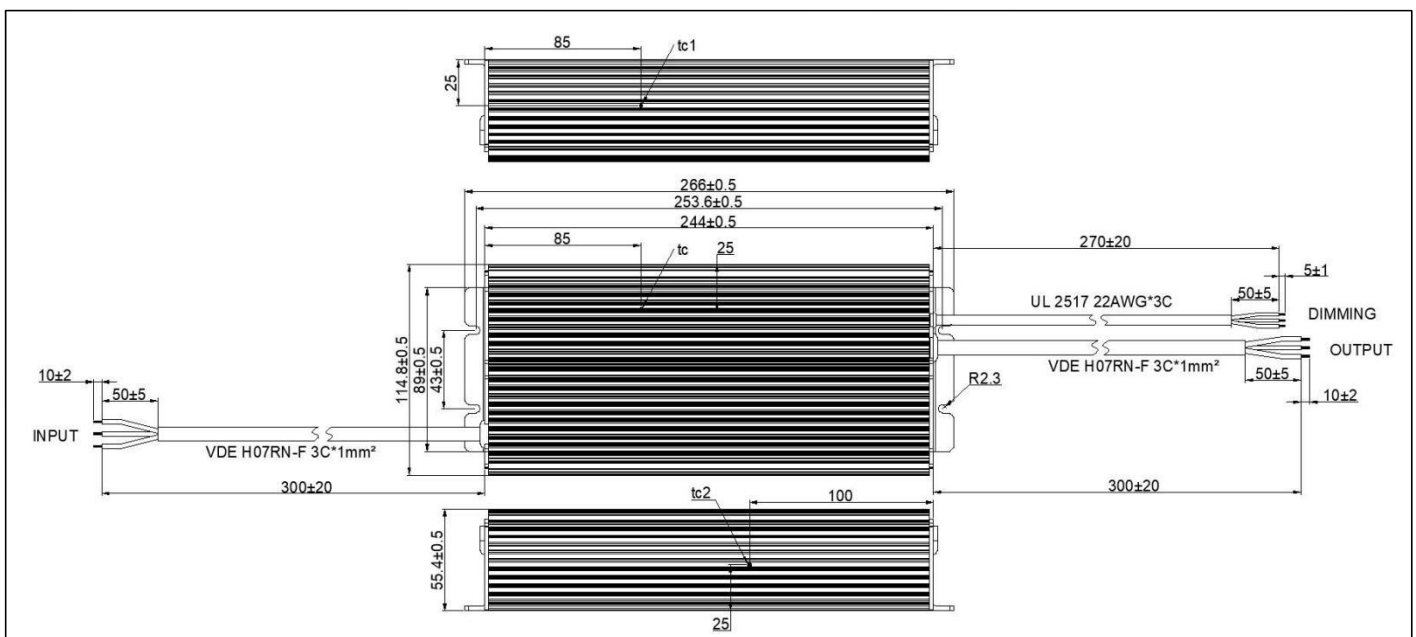
Performance Curve

Total Harmonics

PF

Efficiency

I/V Operating Area

Life Vs Shell Temperature


0-10V Analog Dimming & PWM Dimming



Mechanical Drawing



Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2023/3/3	V1.0			
2023/3/20	V1.1	Add 0-10V Analog Dimming & PWM Dimming		
		Add Inrush Current (@Full load and cold start)		
		Update Mechanical Drawing		Add tc points
		Update Performance Curve		
2023/7/6	V1.2	Update Specifications		
		Input AC Voltage	Min: 200Vac	Min: 187Vac

		Inrush Current	Max: 20A	Max: 35A
		Turn-on Delay Time	Max: 500ms	Max: 1s
		PF	Min: 0.9	Min: 0.95
		OTP Tc	Max: 95	Max: 100