Product Features

- Input voltage range: 108~305Vac;
- Constant power design, output current programming adjustable;
- 3-in-1 dimmable: 0~10Vdc, PWM, Timer dimming. Dim-to-off;
- Constant lumen output;
- Auxiliary power supply: 12V/300mA;
- Surge protection: 6KV line-line, 10KV line-earth;
- Protections: SCP, OVP, OTP;
- IP67 design for indoor and outdoor applications;
- Suitable for dry / damp / wet locations;
- 7 years warranty.

Application

- Suitable for horticulture lighting, high power lighting, etc.

DESCRIPTION

The P1-800W series is 800W outdoor offline programmable LED driver that operates in constant current with high PF value and universal input voltage range 108~305Vac model. Offline Monitored by dimming cable connected with an USB kit programming device, the fully programmed drivers offer all dimming, dim-to-off, constant lumen output options and a wide range of output current in a single driver, which deliver maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be programmed for many different luminaire designs. P1 provides built-in timer dimming schedules further increasing the energy savings and CO_2 reductions achieved with LED lighting. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enables the driver to operating with high reliability, and extending product lifetime. Overall protection is provided against lightening surge, output over voltage, short circuit, and over temperature, to ensure low failure rate.

MODELS

Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	PF
P1-800M268Z	800	134~268	180~268	3~4.45	4.45	95%	0.96

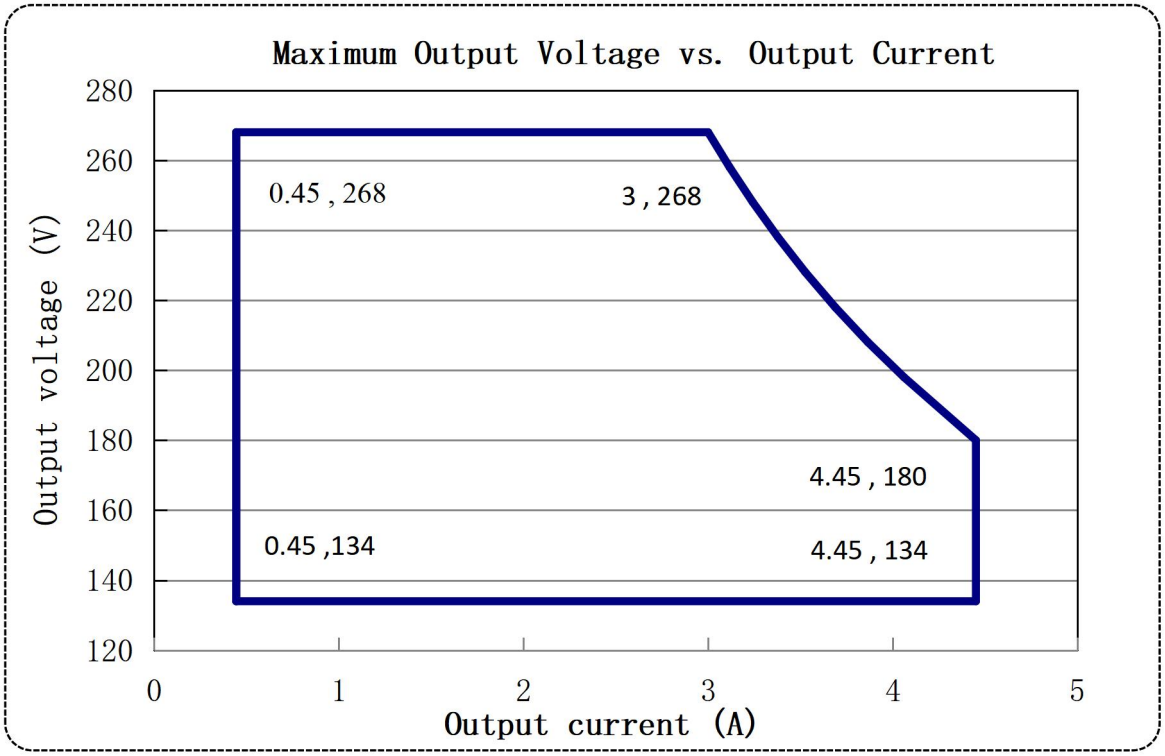
Notes:

[1].Z=A12 means the driver with 12V/300mA auxiliary power supply.

[2]. Output current adjustable range with constant power at max output power.

[3]. All specifications are measured at 25℃ ambient temperature, input voltage 230Vac, and the typical value tested by full load, if no specific note.

OPERATING AREA I-V



INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	108Vac	120-277Vac	305Vac	
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.75mA	277Vac/60Hz
Input AC Current	-	-	8A	120-277Vac &full load
Inrush Current	-	-	40A $5A^2S$	277Vac & full load
Standby Power Consumption			0.5W	Dim to off, AUX. Power no load
Power Factor	0.97	0.99	-	120Vac, 50-60Hz,full load
	0.95	0.97		230Vac, 50-60Hz, full load
	0.92	0.95		277Vac, 50-60Hz, full load
THD	-	5%	10%	120-230Vac,50-60Hz, 70%-100% load
	-	-	20%	277Vac, 50-60Hz, 70%-100% load

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Setting Range (A)	10% Imax	-	100%Imax	
Output Current Tolerance(%)	-5	-	5	
Output Current Setting Range (A)	0.45	-	4.45	
No Load Output Voltage （V）	-	-	290	
Total Output Current Ripple(pk-pk)	-	±5%	±10%	20MHz BW, full load& LED load, the ripple would be tiny different under different LED load.
Startup Overshoot Current (%)	-	-	10	120~277Vac &100% Load, load is LED
Line Regulation (%)	-1	-	1	25℃±10℃ ambient temperature, input voltage changes from 120Vac to277Vac.
Load Regulation (%)	-3	-	3	25℃±10℃ambient temperature, Input Voltage 230Vac, load changes from 60% to 100%.
AUX. Power output voltage (V)	11.4	12	12.6	
AUX. Power output current(mA)	0	300	-	
Turn-on Delay Time (S)	-	-	1	120-277Vac,100%load,10-90% Vo

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency @120Vac I_O=4.45A		91.5%	93%	-	Measured at full load and 25℃ambient temperature
Efficiency @230Vac I_O=4.45A		93.5%	95%	-	
Efficiency @277Vac I_O=4.45A		94%	95.5%	-	
Dielectric Strength	Input-Output	-	3750Vac	-	Max 5mA/60S
	Input-PE	-	1600Vac	-	
	Output-PE	-	1600Vac	-	
Grounding Resistance (Ω)		-	-	0.1	25A/60S, under 25℃±10℃ambient temperature
Insulation Resistance (MΩ)		10	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25℃/70%RH
MTBF (Hr)		-	500000	-	Telcordia SR-332,100% load, & Ta = 25°C
Lifetime (Hr)		-	72000	-	230Vac&100% load, 75℃ case temperature, refer to lifetime curve for details
Ambient Temperature (℃)		-40		+50	Reference derating curve
Operating Case Temperature for Safety Tc_s (℃)		-40	-	+90	
Operating Case Temperature for Warranty Tc_s (℃)		-40	-	+75	7 years warranty case temperature Humidity: 10% to 95% RH
Storage Temperature (℃)		-40	-	+85	Humidity：10% to 95% RH
Working elevation		-50m	-	4000m	

Dimensions (L*W*H)mm	L381*W106*H50mm	
Net Weight	3.2±0.3kg/pcs	
Package	L540xW490xH185 6PCS/Ctn, Gross Weight:20Kg	

DIMMING

Parameter	Min.	Typ.	Max.	Notes
0~10V Absolute Maximum Voltage on the Vdim (+) Pin (V)	-	10	-	
0~10V Source Current on Vdim(+)Pin (mA)	-	0.2	0.4	
Dimming Output Range	10%	-	100% I_{max}	I_{max}=4.45A
Recommended Dimming Range for 0-10V (V)	0	-	10	
PWM_in High Level (V)	9.7	-	10.5	
PWM_in Low Level (V)	0	-	0.3	
PWM_in Frequency Range	300Hz		2KHz	
PWM_in Duty Cycle	1%	-	99%	

SAFETY STANDARDS

Safety Category	Country / Territory	Standards	Approved
CCC	China	GB19510.1, GB19510.14	
CE	Europe	EN61347-1, EN61347-2-13	√
		EN62493	√
ENEC		EN62384	√
CB	CB Countries	IEC61347-1, IEC61347-2-13	√
UL	USA	UL 8750	
CUL	Canada	CSA C22.2 No.250.13	

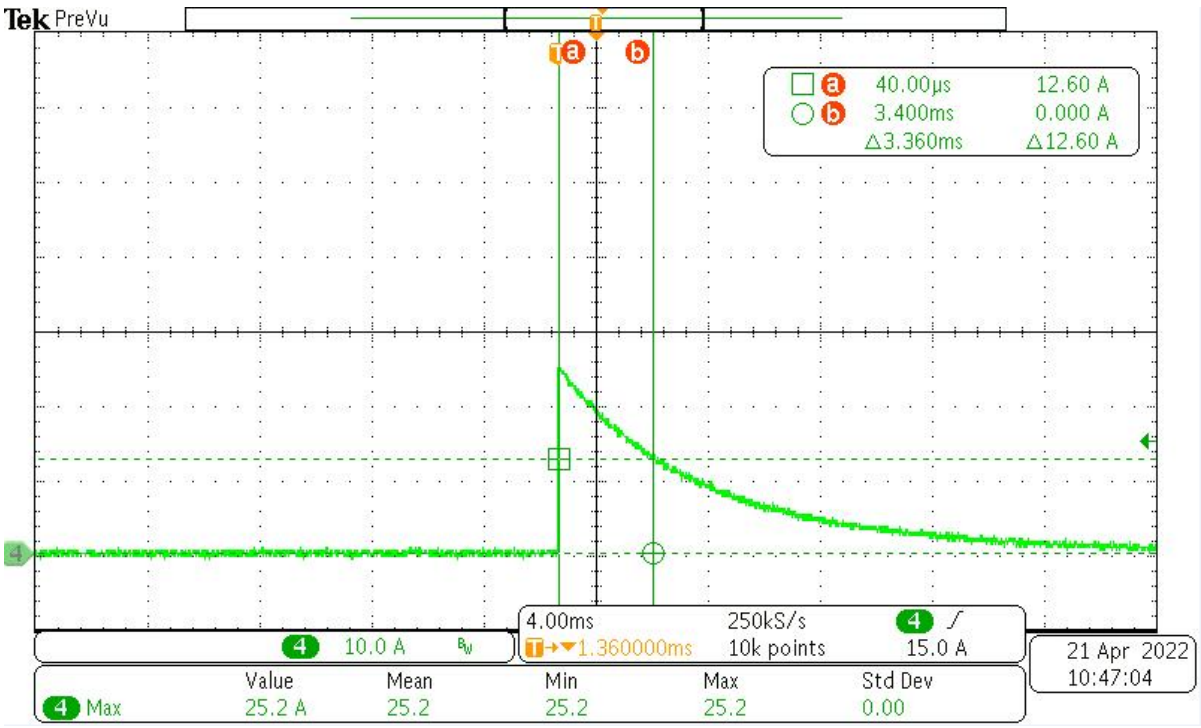
EMC STANDARDS

Safety Category	Country / Territory	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	
CE	Europe	EN 55015	Class B
		EN 61000-3-2, EN 61000-3-3	Class C
		EN61000-4-2,3,4,5,6,11	Class B
		EN 61547	
FCC	USA	FCC part 15	

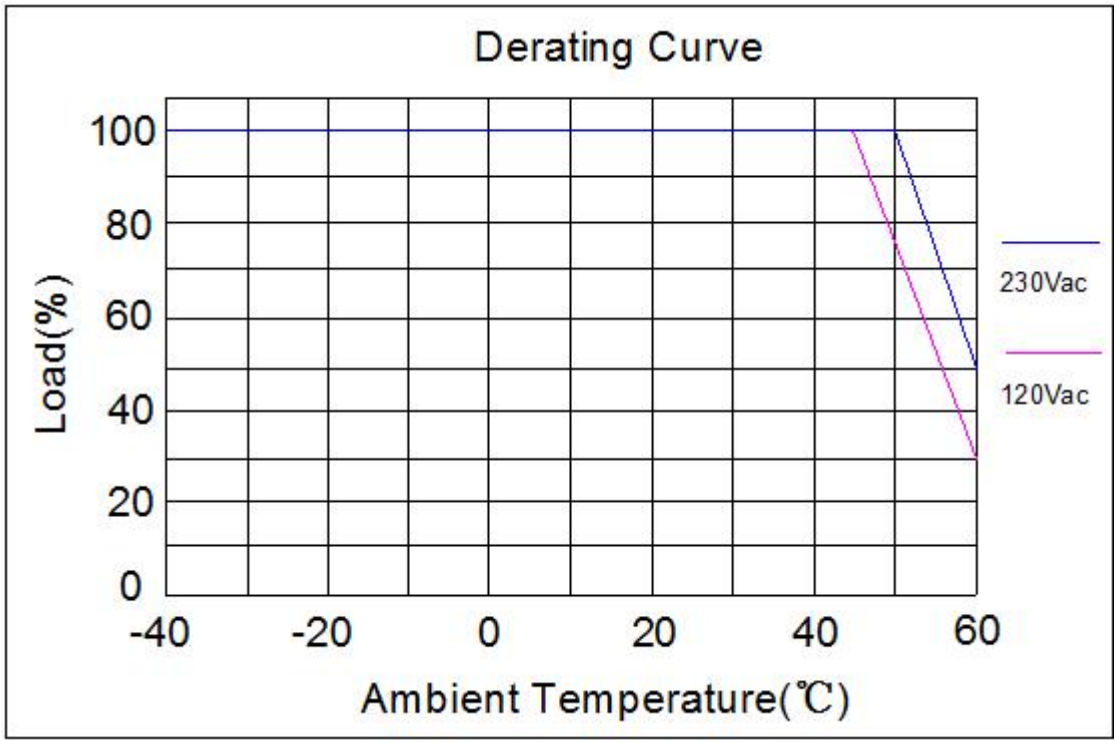
NOTE:

This LED driver meets the EMI specifications above, but as a component of a luminaire, end customer need to identify the EMI performance of a luminaire including LED driver, other devices connected to the driver and on the luminaire itself.

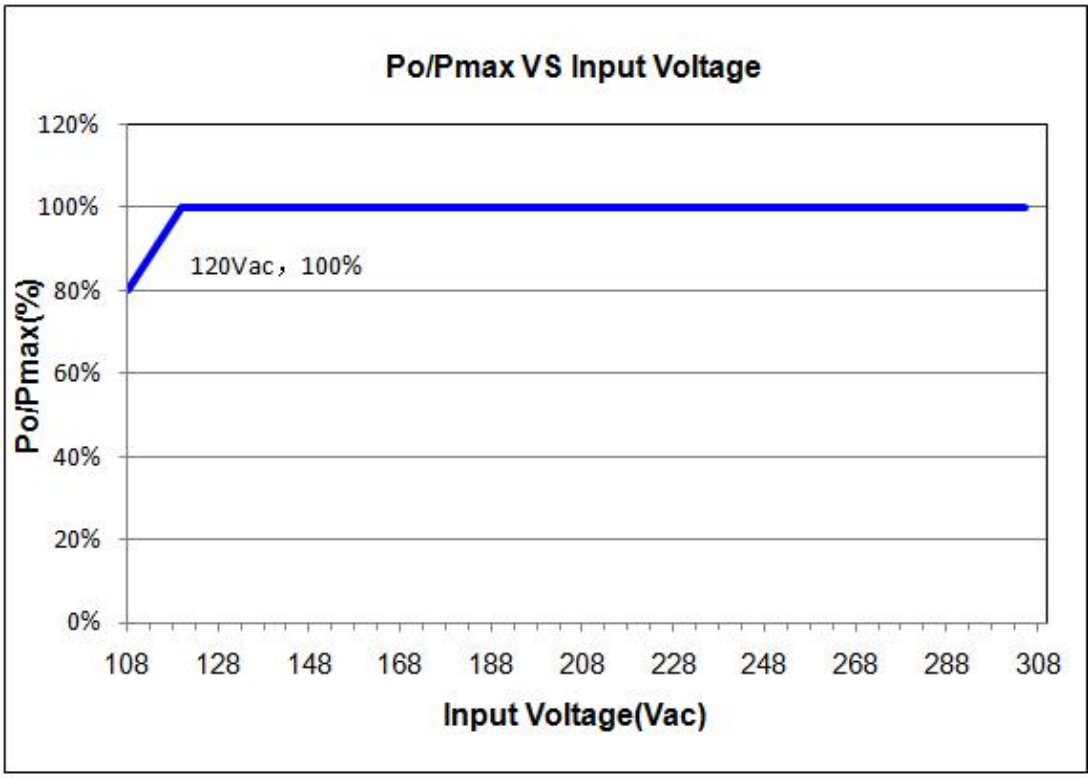
INRUSH CURRENT WAVEFORM



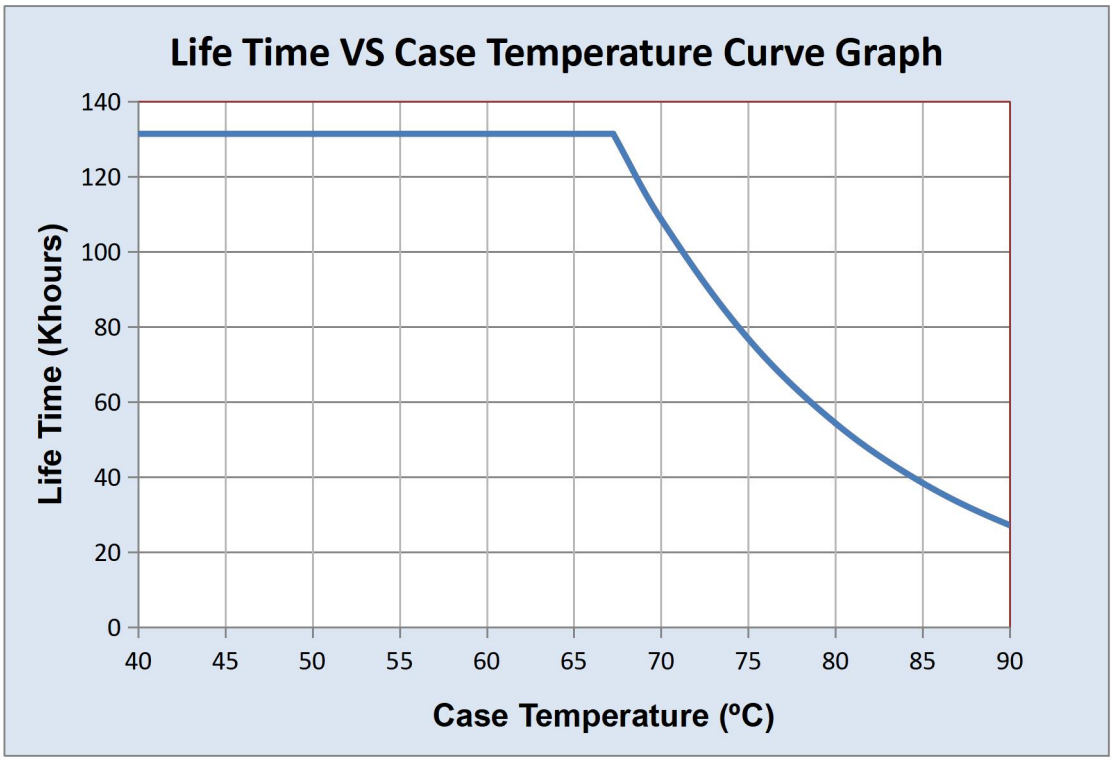
DERATING CURVE



OUTPUT POWER VS INPUT VOLTAGE

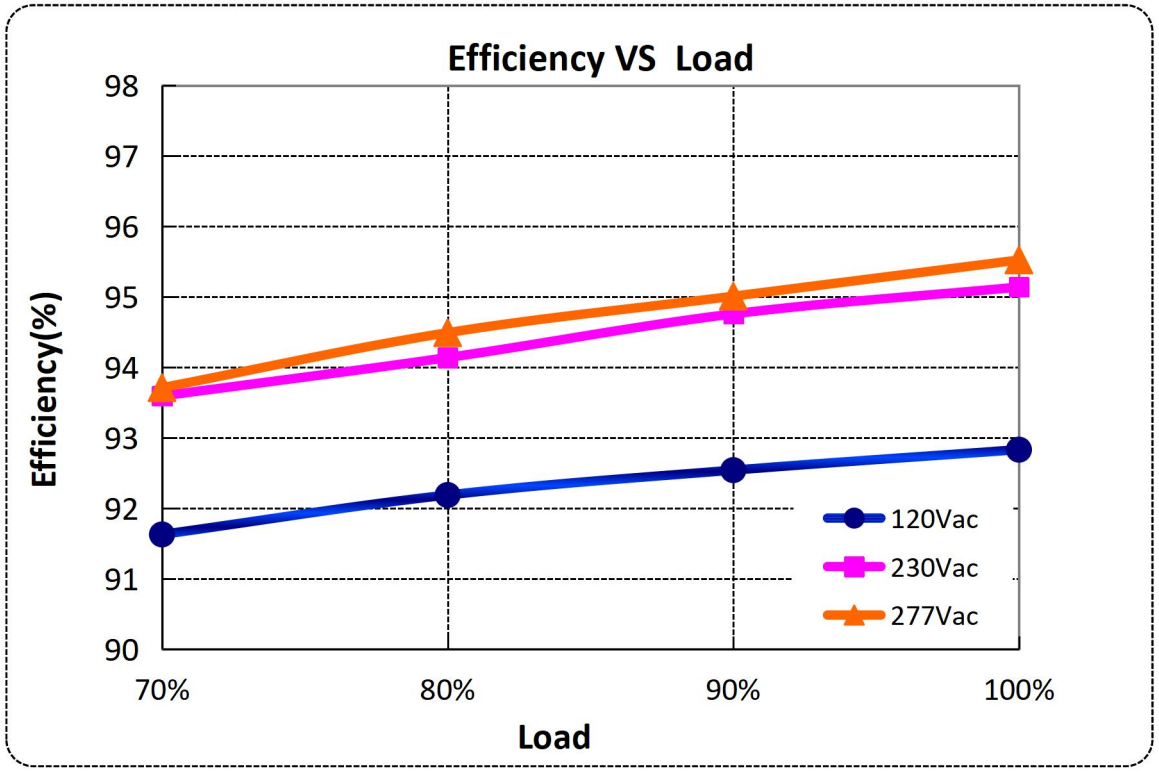


LIFETIME VS CASE TEMPERATURE



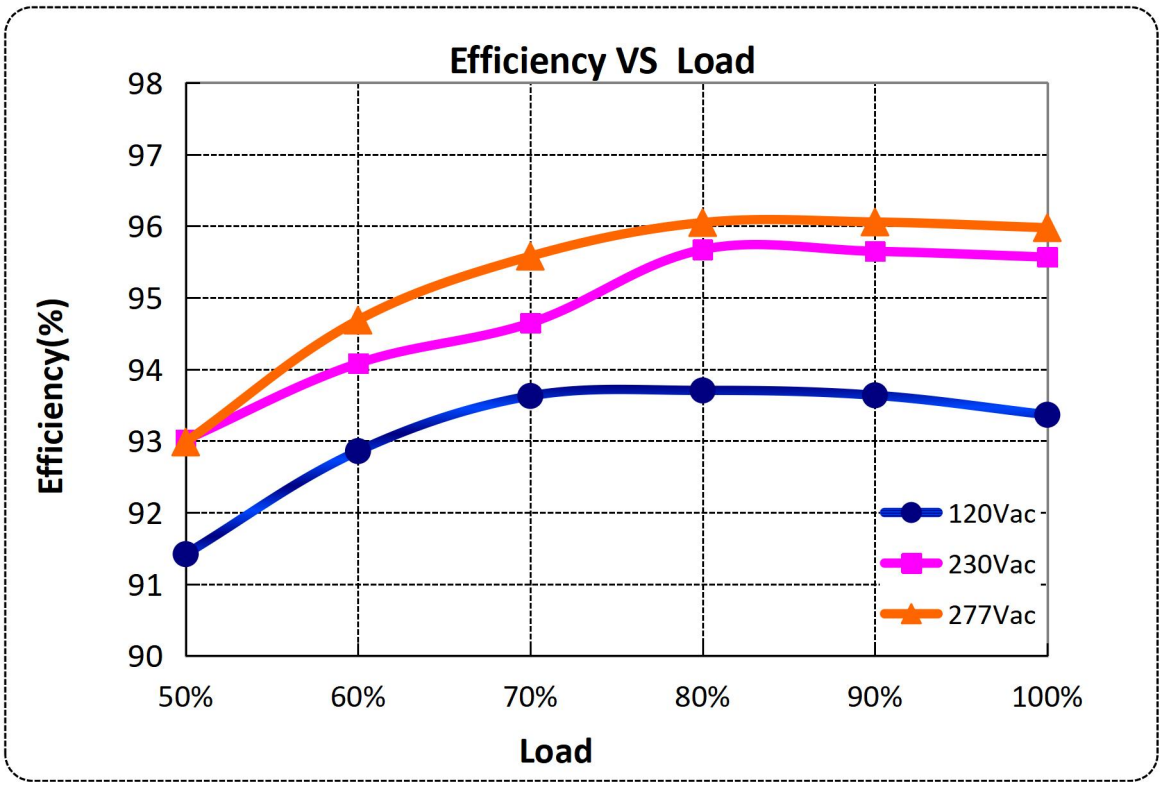
EFFICIENCY VS LOAD

Io=4.45A

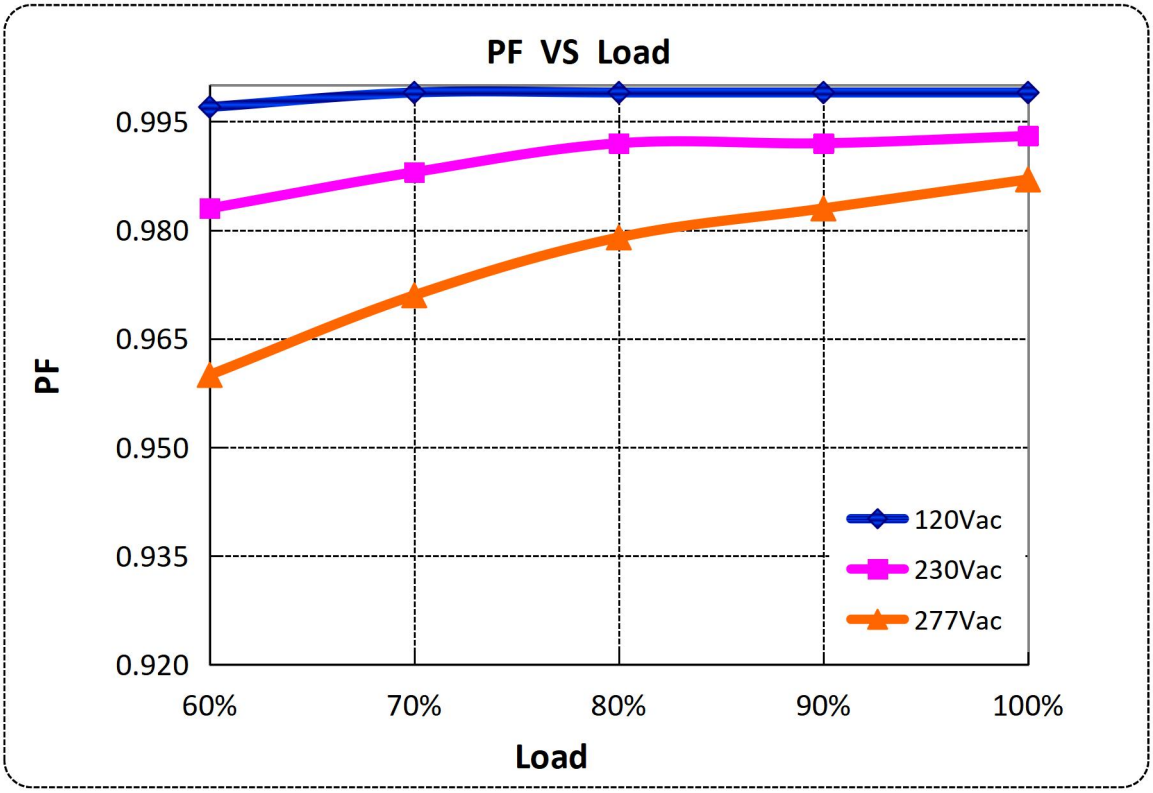


EFFICIENCY VS LOAD

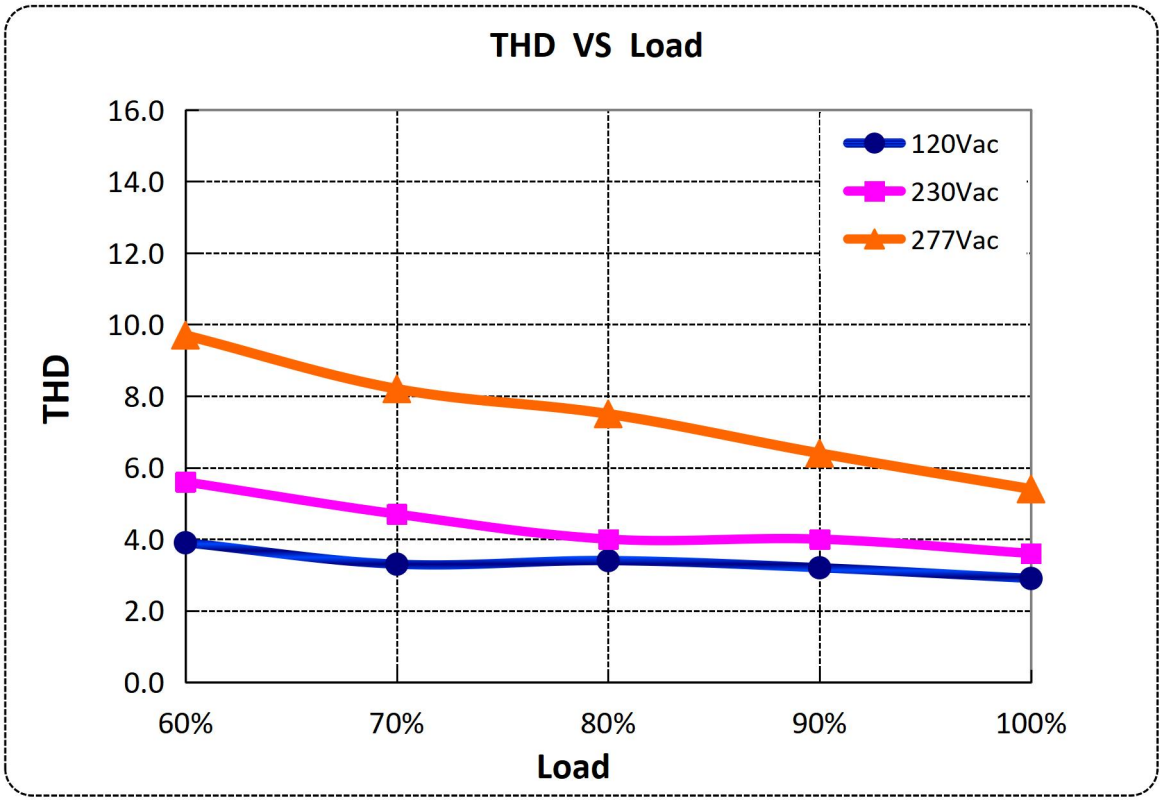
Io=3A



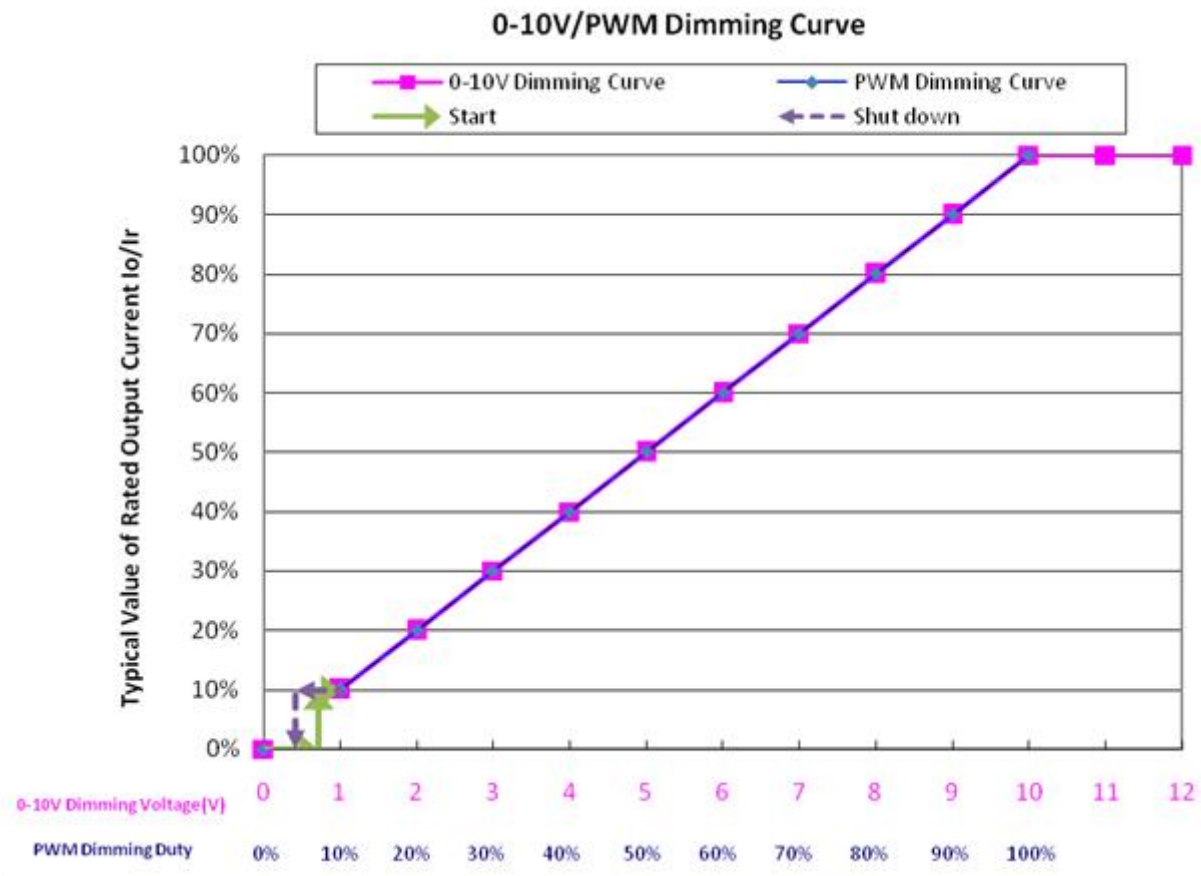
POWER FACTOR VS LOAD



TOTAL HARMONIC DISTORTION



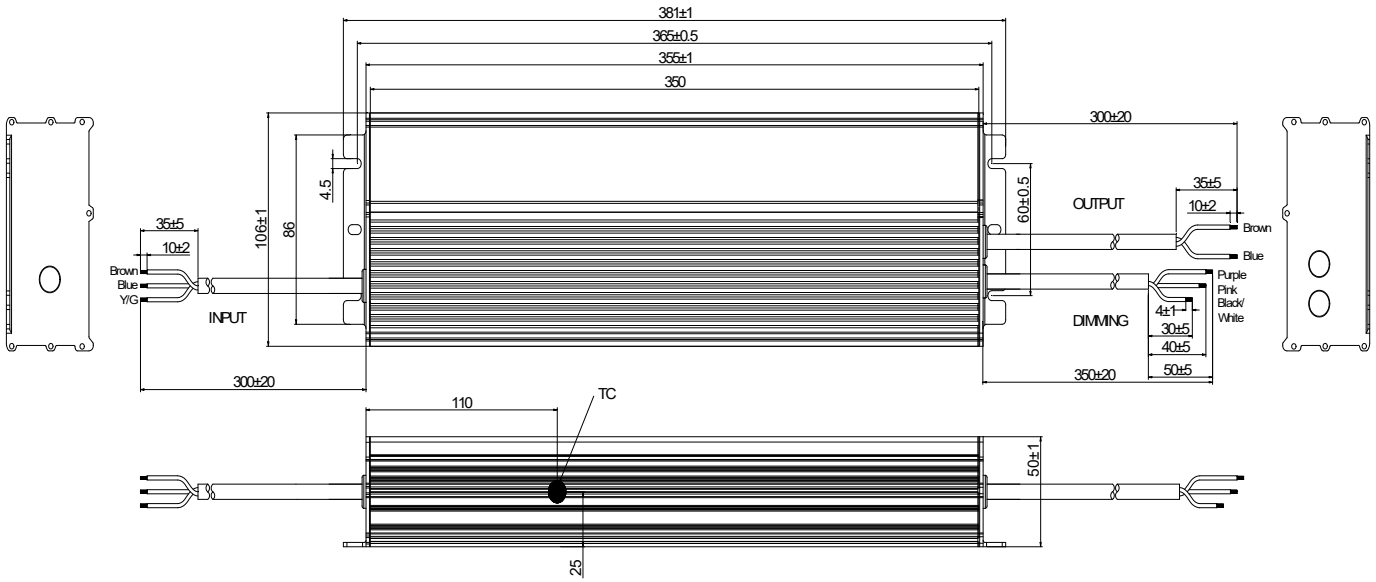
0-10V/PWM DIMMING



PROTECTIONS

Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	Constant current mode and auto recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.
Over Voltage Protection	Run into protection model when output voltage exceeds limit, and return to normal when the fault is eliminated and restart the power supply.

MECHANICAL OUTLINE



Wire	Specification	Note
Input	CCC+VDE H07RN-F *3C L=300±20mm	CCC/CE
Output	CCC+VDE H05RN-F *2C L=300±20mm	CCC/CE
Dimming	UL 21996 22AWG *3C L=350±20mm	Y=M

LABEL

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Draft Datasheets Release	2023-11-03	

Specification for Approval

Product Name: 800W Off-line Programmable Driver

Product Model: P1-800M268A12

Rev. A.1

Sample Date: _

CUSTOMER AUTHORIZED SIGNATURE		
Tested By	**Checked By**	**Approved By**
(Company seal)Return one copy to MOSO with approved signature and company seal.		

Address: XiLi Songbai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R.China
Post Code: 518108
TEL: 0755-27657000
FAX: 0755-27657908
E-mail: info@mosopower.com
Web site: http://www.mosopower.com

Prepared By	Checked By	Approved By

Product Specification

Product Name: 800W Off-line Programmable Driver

Product Model: P1-800M268A12

Rev. A.1

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