Specification for Approval

Product Name: 100W Constant Voltage Switching Power Supply

Product Model: V8-100B012

Rev. A.1

Address: Xi Li Song bai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

Post Code: 518108

TEL: 0755-27657000

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E-mail: info@mosopower.com

Web site: http://www.mosopower.com

Prepared By	Checked By	Approved By

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

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ECN History

A.1	First edition	2025-07-07

Description

The V8-100 series is a 100W constant-voltage, the power supply that operates from 180~264Vac input. It is designed for landscape lighting. The high efficiency of the power supply and compact, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over current, short circuit, and over temperature.

Product Features

- Input voltage: 180~264Vac;
- Surge immunity: DM 2KV;
- Protection: Output SCP, OTP, OCP;
- IP65,Glue potted, suitable for dry / wet / damp locations;
- 3 years warranty.

Application

Suitable for landscape lighting.

Models

Model	Input Voltage (Vac)	MAX Output Power (W)	Output Voltage (Vdc)	Output Current Range (A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.)
V8-100B012	200~240	100	12	8.33	90%	-	-

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

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage Range	180Vac	-	264Vac	
Rated Input Voltage	200Vac	-	240Vac	Refer to Output Power vs. Input Voltage Curve
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	1.2A	200Vac & full load
Max Input Power	-	-	115W	200Vac & full load
Leakage	-	-	0.7mA	IEC 60598-1; 240Vac/50Hz
Inrush Current	-	-	170A	220Vac, 100% load
Power Factor	-	-	-	
THD	-	-	-	
MCB(B16)	-	6	-	220Vac, 100% load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Range	10.8Vdc	12Vdc	13.2Vdc	
Output Voltage Tolerance	-3%		+3%	
Output Current Range	-	-	8.33A	
Output ripple & noise(V)Vp-p	-	-	1V	Full load, Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor.
Startup Overshoot Voltage	-5%	-	+5%	200~240Vac &Full Load
Line Regulation	-2%	-	+2%	25℃±10℃ ambient temperature, input voltage changes from 200Vac to 240Vac
Load Regulation	-2%	-	+2%	25℃±10℃ambient temperature, 230Vacinput, load changes from 50% to 100%
Turn-on Delay Time	-	-	1S	230Vac,100% load
Temperature Coefficient	-	±0.03%/°C	-	-40°C ~ +50°C

General Specification

Parameter	Min.	Typ.	Max.	Notes
Efficiency @230Vac	88%	90%	-	100% load, 25℃ ambient temperature
MTBF	-	200Khours	-	25℃±10℃ambient temperature, 230Vac,80% load (MIL-HDBK-217F@SR332)
Lifetime	-	30Khours	-	230Vac&100% load,80℃case temperature, refer to lifetime VS Tc curve for details
Operating Temperature Ta	-35℃	-	+50℃	50℃ above,refer to Output Power vs. Ambient Temperature curve.
Operating Case Temperature for Safety Tc_s	-35℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w	-35℃	-	+80℃	3 years warranty case temperature Humidity: 10% to 95% RH
Storage Temperature Ta	-40℃	-	+90℃	Humidity: 10% to 95% RH
Altitude	-60m	-	4000m	
Over Temperature Protection Tc	90℃	95℃	100℃	Turn off the output current, returning to normal after over temperature is removed
Short Circuit Protection	-	-	15W	Hiccup mode. The output shall return to normal when the fault condition is removed.
Output Over-Current Protection	10A	10.8A	13.3A	Hiccup mode. The output shall return to normal when the fault condition is removed
Dimensions (L*W*H)	158*45*24mm			
Net Weight	300±20g/PCS			
Package (L*W*H)	415*335*150 mm; 40PCS/Ctn., GW:14Kg			

Safety Specifications

Parameter		Note
Dielectric Strength (Input-Output)	3000Vac	60s, Current not exceeding 5mA
Grounding Resistance	-	
Insulation Resistance	⩾10MΩ	Input-Output, 500Vdc/60s/25℃

Safety Compliance

Safety Category	Safety normative standards	Certification	Notes
CCC	GB/T 19510.213, GB/T 19510.1		
CE	EN61347-1, EN61347-2-13, EN62493	√	
ENEC	EN61347-1, EN61347-2-13, EN62384		
CB	IEC61347-1, IEC61347-2-13		
BIS	IS 15885(PART 2/SEC 13)		
UL	UL 8750		
CUL	CSA C22.2 No.250.13		
KC	K61347-1, K61347-2-13		
PSE	J61347-1, J61347-2-13		
SAA	AS/NZS IEC 61347.2.13		
SAA	AS/NZS 61347.1		

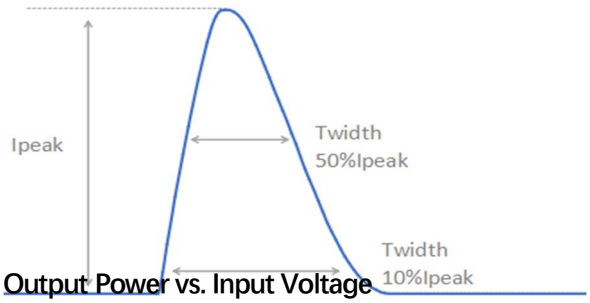
EMC Compliance

EMC Category	Standards	Approved	Notes
CCC	GB/T 17743, GB 17625.1		
CE	EN 55032:2015/A1:2020	√	CLASS A
CE	EN 61000-3-2, EN 61000-3-3	√	
CE	EN61000-4-2,3,4,5,6,11		
CE	EN 61547		
KC	K61547		
KC	K00015		
PSE	J55015		
FCC	FCC part 15		
Surge Shock Immunity	ANSI/C82.77-5-2017		
	IEC/EN 61000-4-5		
Ringing Wave	IEC/EN 61000-4-12		
	ANSI/IEEE C62.41.2		

RoHS

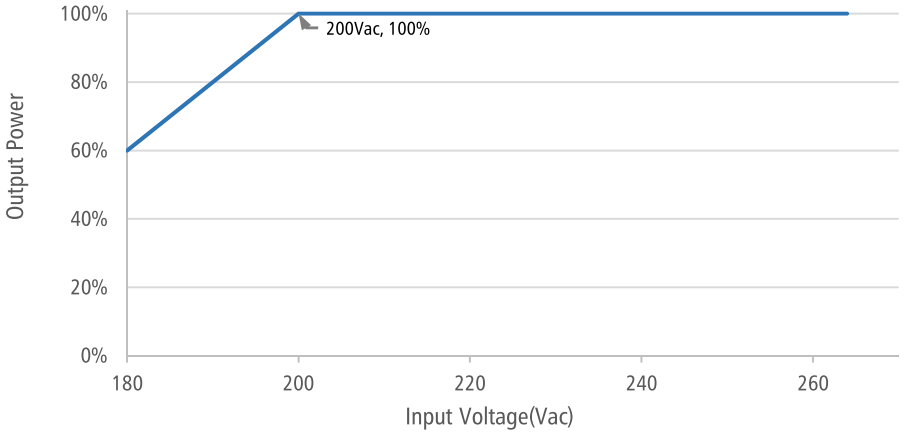
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current Waveform

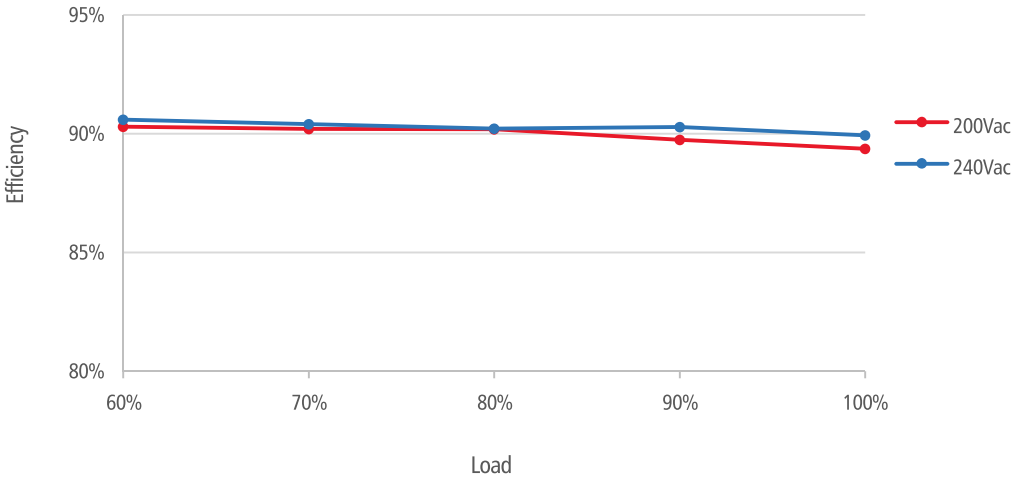


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
230Vac	170A	100μs	68μs

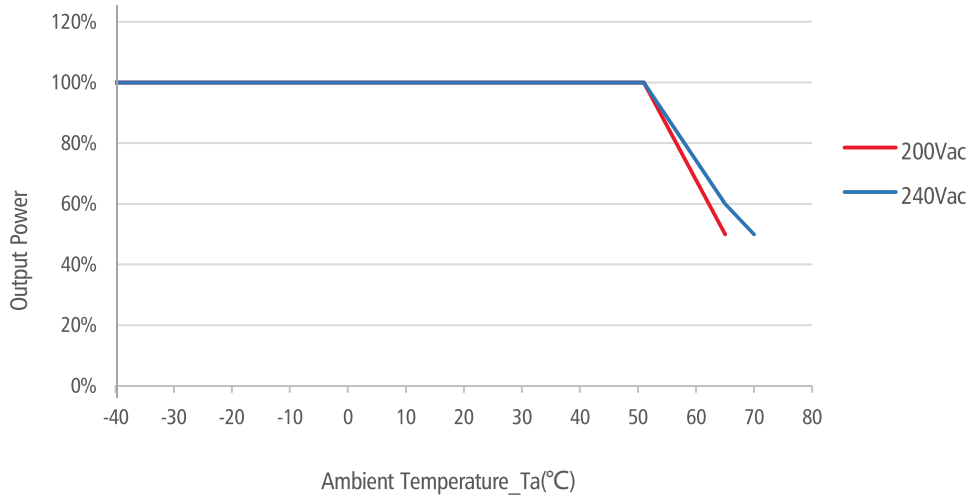
Output Power vs. Input Voltage



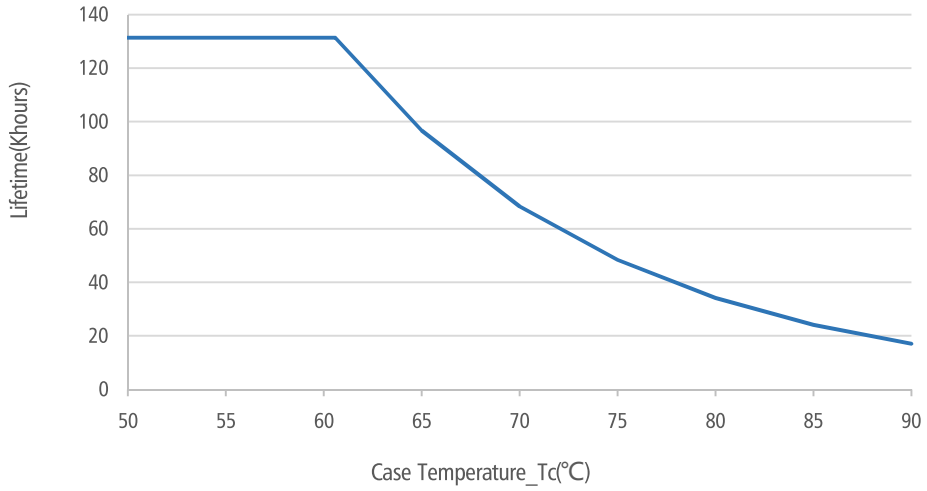
Efficiency vs. Load



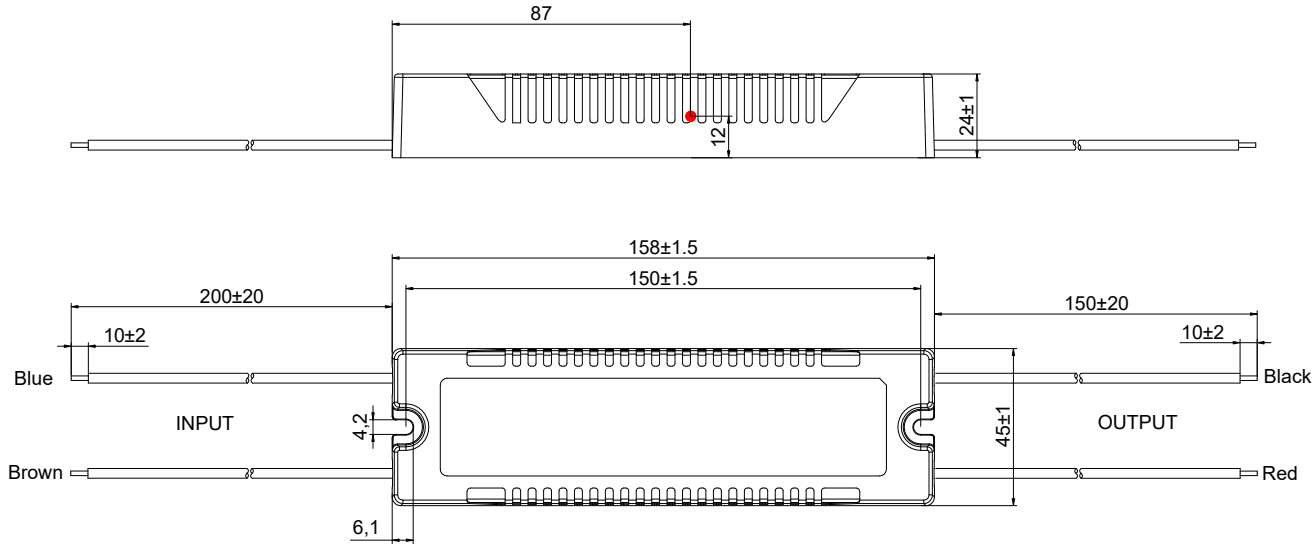
Output Power vs. Ambient Temperature



Lifetime vs. Case Temperature



Mechanical Outline



Specifications

Input	UL1015 18AWG L=200±20mm	UL
Output	UL1569 14AWG L=150±20mm	UL

Label