Specification for Approval

Product Name:	320W Constant Voltage LED Driver
Product Model:	V6E-320B012
Rev.	B.2
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
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Web site: http://www.mosopower.com

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REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Datasheets Release	2022-06-14	
B.2		ERL202307035	2023-08-28	Li.tan

Product Features:

◆Input voltage: 176~264Vac;

◆Constant voltage output;

◆High power factor >0.97(230Vac& full load);

◆THD<10%;

◆Protection: Input UVP, output SCP, OVP, OTP, OCP;

◆Surge immunity: DM 6KV, CM 10KV;

◆IP67, glue potted, suitable for dry / wet / damp locations;

◆5 years warranty.

Application

◆Suitable for landscape lighting.

DESCRIPTION

The V6E-320 series is a 320W constant-voltage, the LED driver that operates from 176~264Vac input with excellent power factor and low THD. It is designed for landscape lighting. The high efficiency of the driver and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, under voltage, output over current, over voltage, short circuit, and over temperature.

MODELS

Model Number	Max Output Power(W)	Output Voltage (Vdc)	Output Current Range (A)	Typical Efficiency	Typical PF	Typical THD
V6E-320B012	320	12	0~26.7	92%	0.98	10%

Notes:

1. All performance parameters are measured at 25℃ambient temperature, 230Vac input, full load conditions, except for those specified;
2. The drivers are not allowed to work in over-load condition, otherwise warranty will expire.

INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	176Vac	200-240Vac	264Vac	
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.70mA	240Vac/60Hz
Input AC Current	-	-	2.2A	200-240Vac & full load
Inrush Current	-	-	5.5 A^2S	Cold start, 10%Ipeak，230Vac & full load
Power Factor	0.96	0.98	-	230Vac & full load
	0.95	0.97		230Vac & 75% load
	0.90	0.93		230Vac & 50% load
THD	-	10%	15%	230Vac, 80%~100% load
	-	15%	20%	230Vac, 50%~80% load
Max. No. of PSUs on CIRCUIT BREAKER	B10 1 / C10 1	B16 1 / C16 2	B25 2 / C25 4	230Vac

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Tolerance	-5%	-	+5%	Full load
Total Output Voltage Ripple(pk-pk)	-2%	-	+2%	Full load, Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor.
Output overshoot	-10%	-	+10%	When the power is on
Line Regulation	-0.5%	-	+0.5%	25℃±10℃ ambient temperature, input voltage changes from 200Vac to 240Vac.
Load Regulation	-5%	-	+5%	25℃±10℃ambient temperature, 230Vacinput, load changes from 50% to 100%.
Turn-on Delay Time	-	-	0.5S	230Vac,100% load

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency@230Vac V6E-350B024		91%	92%	-	40%~100% load
Dielectric Strength	Input-Output	-	3750Vac		5mA/60S
	Input-PE	-	1600Vac		
	Output- PE	-	500Vac		
Grounding Resistance		-	-	0.1Ω	25A/60S
Insulation Resistance		10MΩ	-	-	Input-Output,Input-PE,Output-PE,500Vdc/60S/ 25℃/70%RH
MTBF		-	200Khrs	-	230Vac,80% load (MIL-HDBK-217F)
Lifetime		-	50000Hours	-	230Vac&100% load,75℃case temperature, refer to lifetime VS Tc curve for details
Ambient Temperature		-40℃		+50℃	
Operating Case Temperature for Safety Tc_s		-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w		-40℃	-	+75℃	5 years warranty case temperature Humidity: 10% to 95% RH
Storage Temperature		-40℃	-	+90℃	Humidity: 10% to 95% RH
Dimensions (L*W*H)mm		L224.5*W96.9*H41.8			
Net Weight		1700±100g/PCS			
Package		L610*W370*H160mm; 10PCS/Ctn.; Gross Weight:18.8kg			

SAFTY 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	
BIS	India	IS 15885(PART 2/SEC 13)	
UL	USA	UL 8750	
CUL	Canada	CSA C22.2 No.250.13	
KC	South Korea	K61347-1, K61347-2-13	
PSE	Japan	J61347-1, J61347-2-13	
SAA	Australia	AS/NZS IEC 61347.2.13	
		AS/NZS 61347.1	

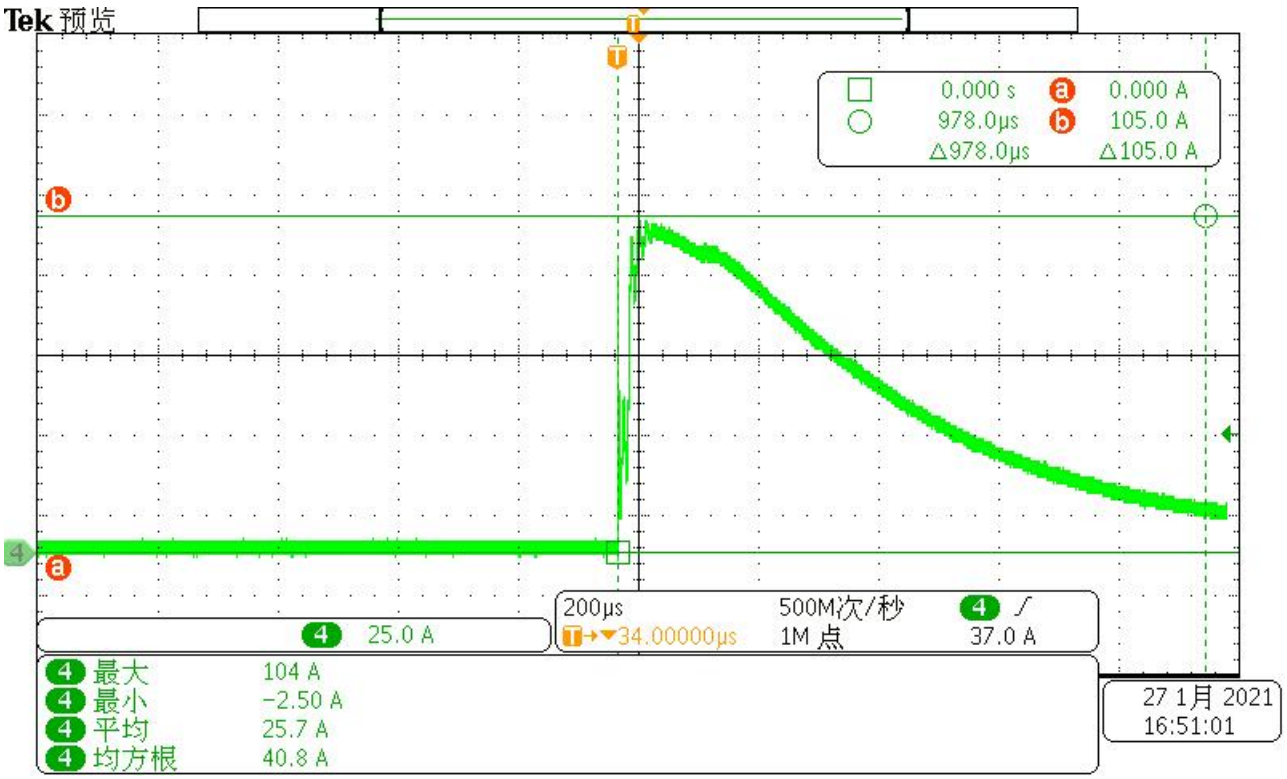
EMC COMPLIANCE

EMC Category	Country / Territory	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	√
CE	Europe	EN 55015	√
		EN 61000-3-2, EN 61000-3-3	√
		EN61000-4-2,3,4,5,6,11	√
		EN 61547	√
KC	South Korea	K61547	
		K00015	
PSE	Japan	J55015	
FCC	USA	FCC part 15	

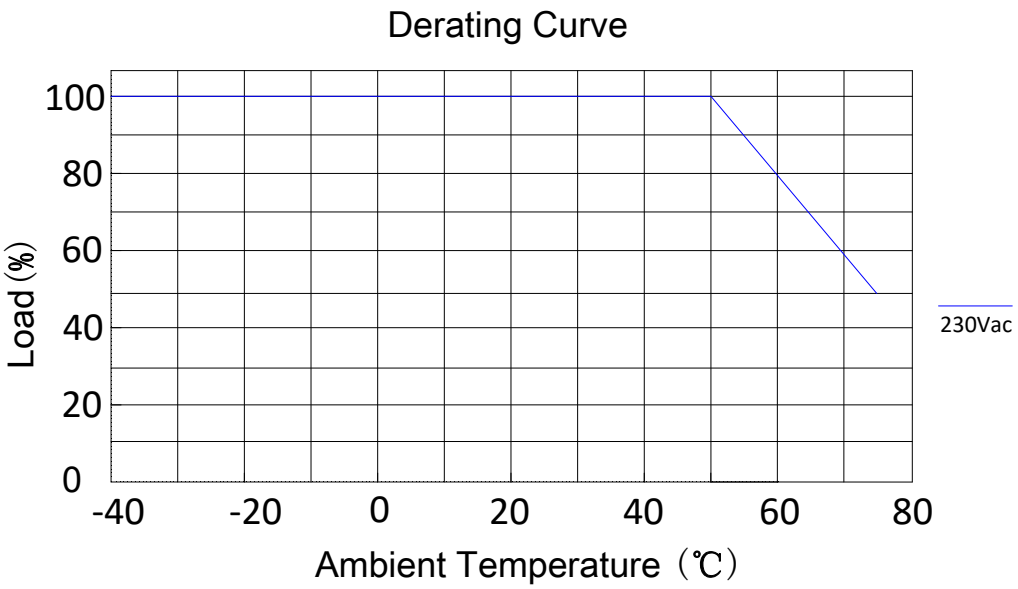
NOTE:

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.

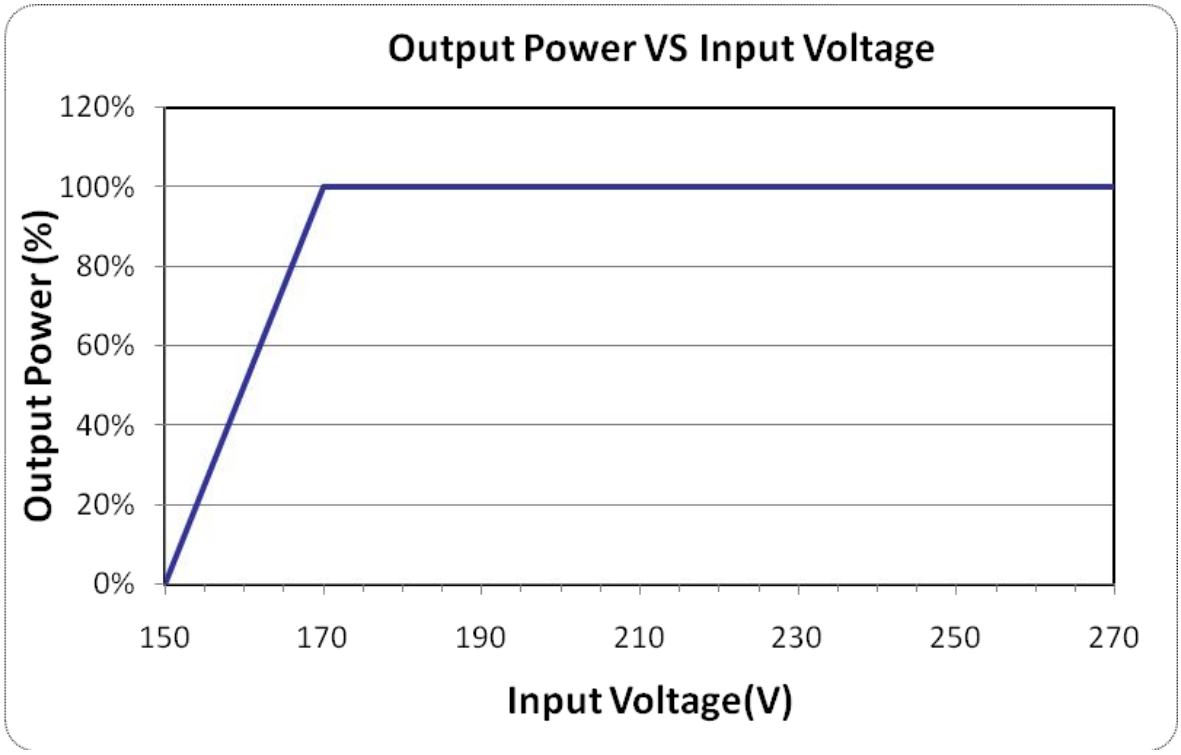
INRUSH CURRENT WAVEFORM



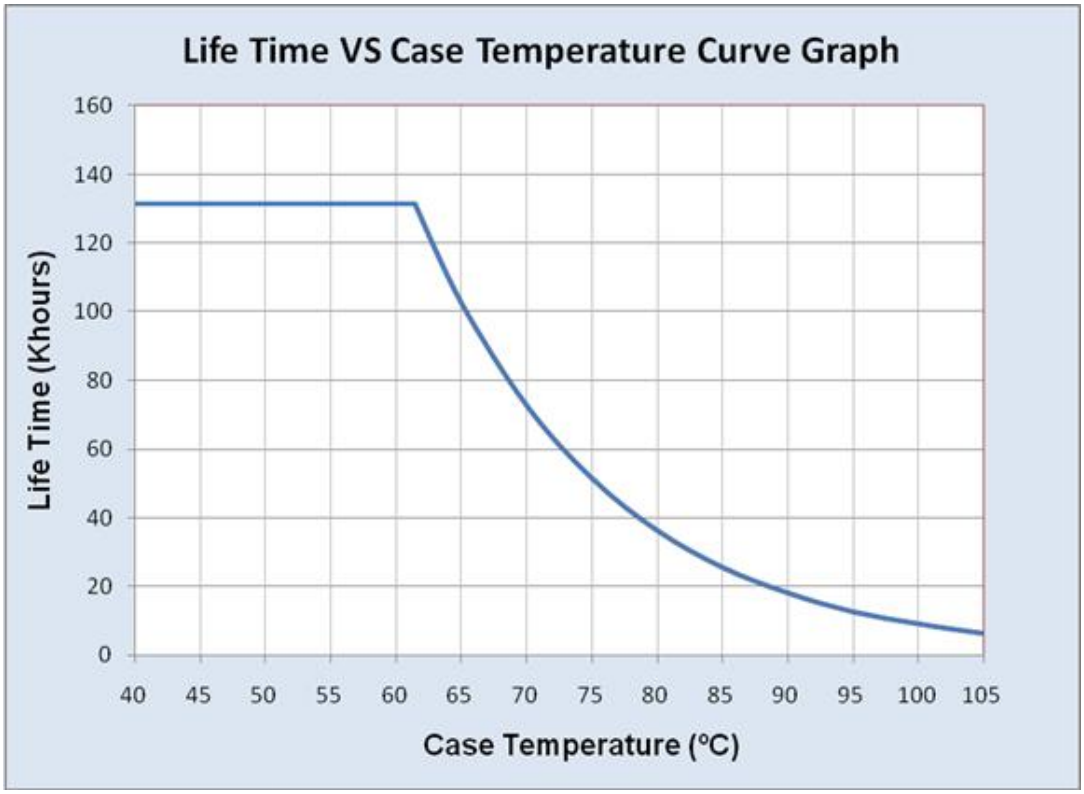
DERATING CURVE



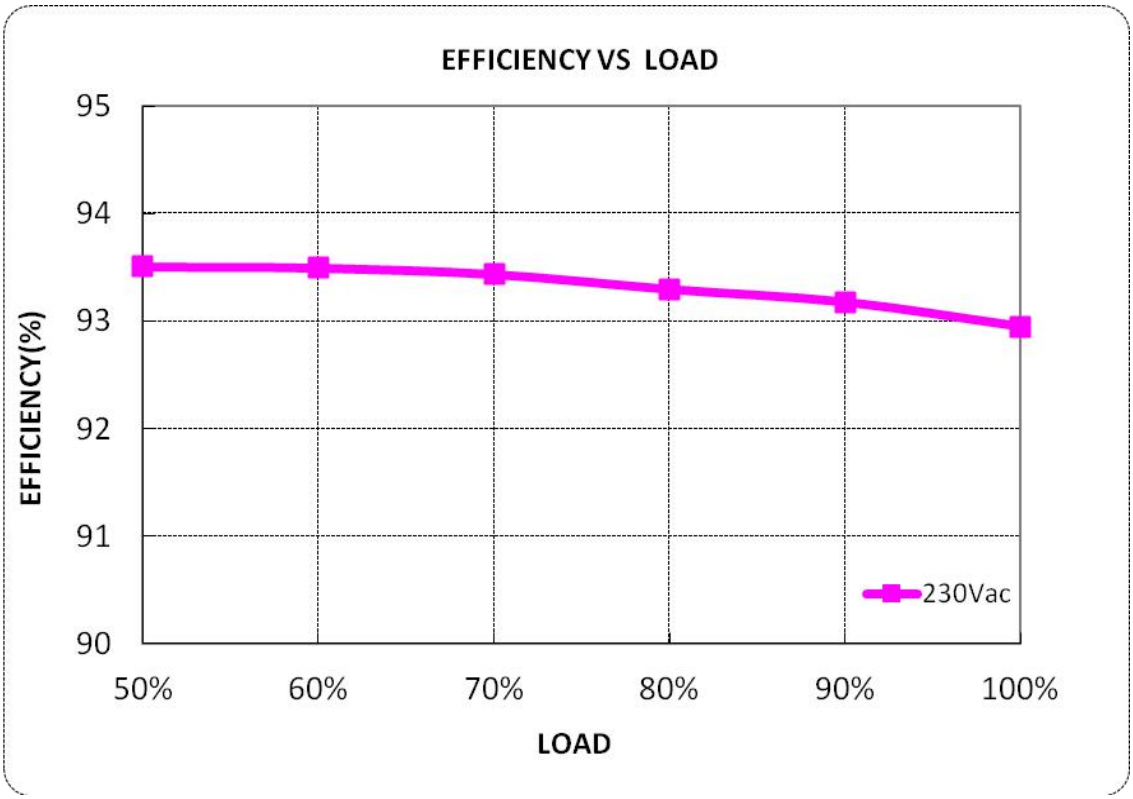
OUTPUT POWER VS INPUT VOLTAGE CURVE



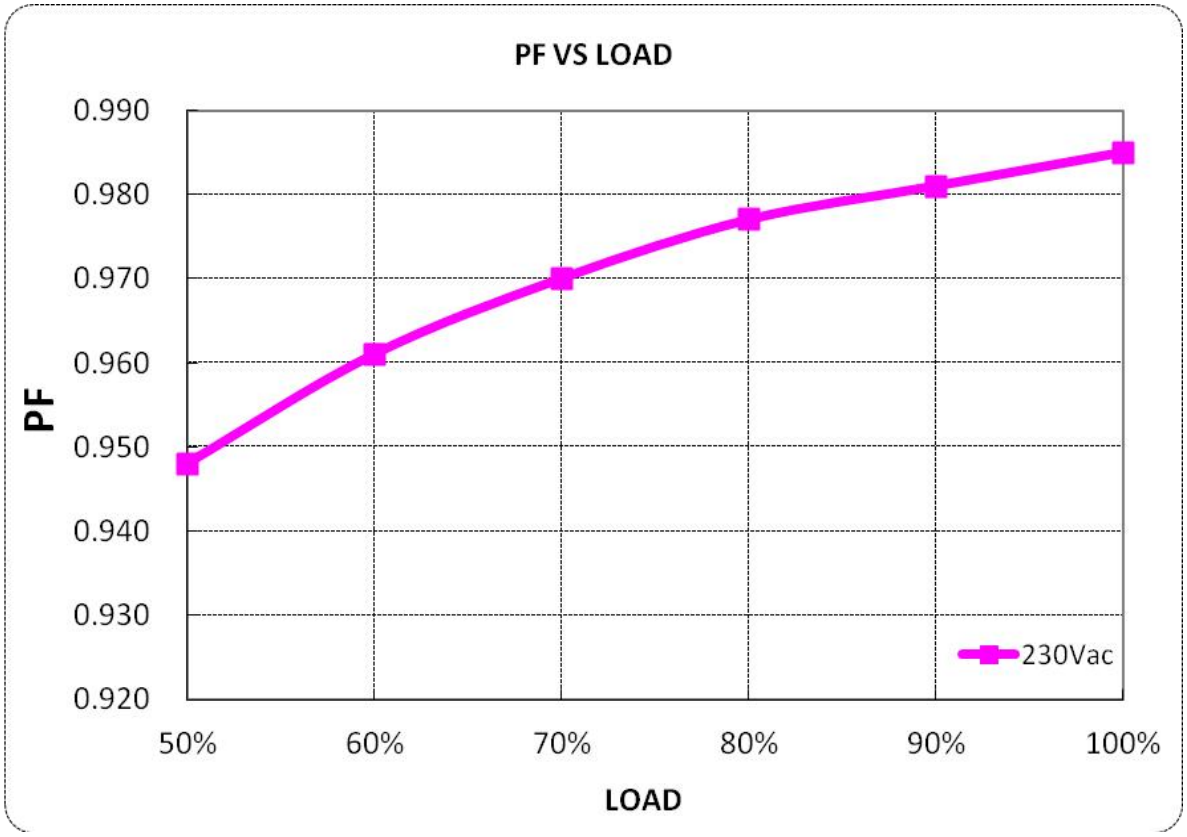
LIFETIME VS CASE TEMPERATURE



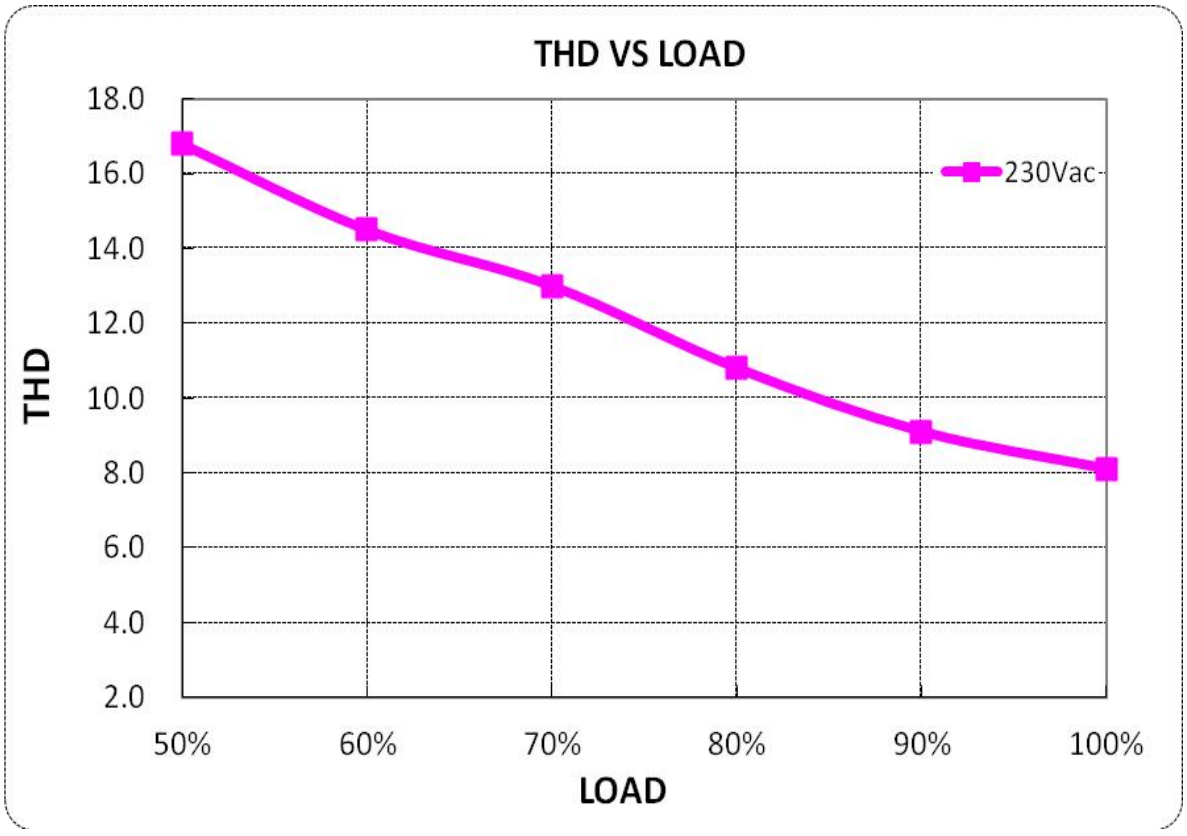
EFFICIENCY VS LOAD



POWER FACTOR VS LOAD



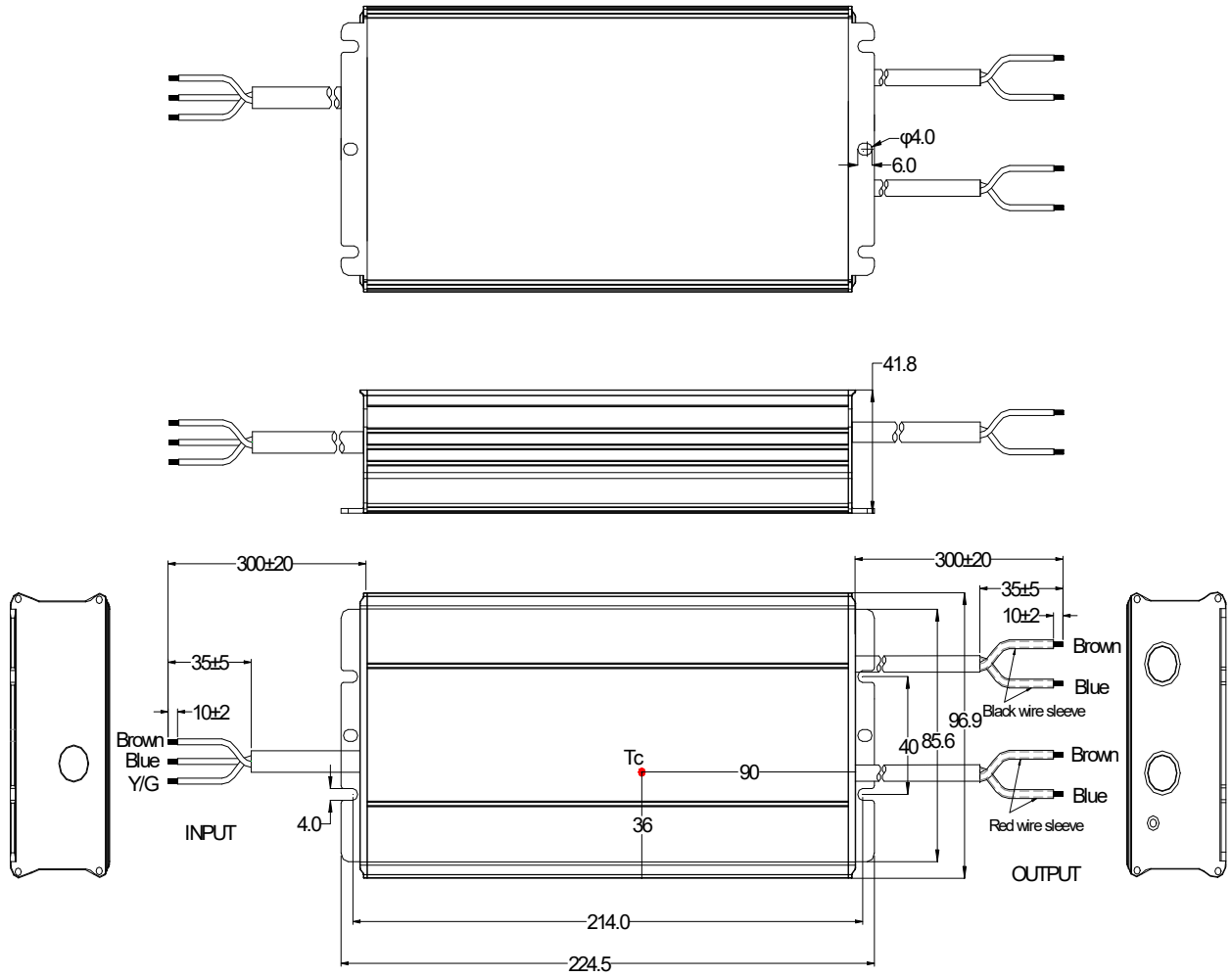
TOTAL HARMONIC DISTORTION



PROTECTIONS

Parameter	Min.	Typ.	Max.	Notes
Input under voltage protection	156Vac	-	176Vac	Turn off the output when the input voltage falls below protection voltage.
Over temperature protection	Output drop current. Returning to normal after over temperature is removed.			
Short circuit protection	Hiccup mode. The output shall return to normal when the fault condition is removed.			
Over current protection	Hiccup mode. The output shall return to normal when the fault condition is removed.			
Over voltage protection	Turn off the output voltage, when the fault is removed, restart and resume.			

MECHANICAL OUTLINE



Note: two black output wires (Vo-) must be connected to the negative channel of the load end at the same time, and two red output wires (Vo+) must be connected to the positive channel of the load at the same time.

Wire	Specification	Note
Input	CCC+VDE 3*1.0mm^2 L=300±20mm	CCC/CE
Output	CCC+VDE 2*2*2.5mm^2 L=300±20mm	CCC/CE

LABEL


200.00 mm
44.50 mm
INPUT
L (BROWN 棕)
G (Y/G 黄/绿)
N (BLUE 蓝)
MOSO®
V6E-320B012
LED DRIVER Constant voltage type Integrated SPD
LED 控制装置
INPUT (输入) 200-240V～50/60Hz,2.2A Max.
OUTPUT (输出) Output current:26.7A Max. Urated 12V⎓,Prated:320W Max.
tc:90°C ta:50°C Input:200-240V～
中国制造 仅适用LED模块 MADE IN CHINA For LED module only
深圳茂硕电子科技有限公司 SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD No.1061, Songbai Road, Xili Town, Nanshan District, Shenzhen, CHINA
SELV
IP67
RoHS
OUTPUT
(BLACK 黑) Vo－ Vo－
(RED 红) Vo＋ Vo＋