

Specification for Approval

Product Name : 100W Constant Voltage LED Driver
Product Model: V6E-100B036
Rev. A.1

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

Prepared By	Checked By	Approved By

Product Specification

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Product Model: V6E-100B036
Rev. A.1

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Prepared By	Checked By	Approved By



Product Features:

- ◆ Input voltage: 176~264Vac;
- ◆ Constant voltage output;
- ◆ High power factor >0.97(230Vac& full load);
- ◆ THD<10%;
- ◆ Surge immunity: DM 6KV, CM 10KV;
- ◆ Protection: Input UVP, Output SCP, OVP, OTP, OCP;
- ◆ IP67 protection;
- ◆ 5 years warranty.

Application

- ◆ Suitable for landscape lighting.

DESCRIPTION

The V6E-100 series is a 100W 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-100B036	100	36	0~2.8	90%	0.97	10%

Notes:

1. All performance parameters are measured at 25°C ambient temperature, 230Vac input, full load conditions, except for those specified
2. The maximum output power is 100W, it is strictly forbidden to use excessive power, otherwise the warranty will be invalid

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	-	-	0.8A	200-240Vac & full load					
Inrush Current	-	-	75 A	Cold start, 10%I _{peak} , 230Vac & full load,					
Power Factor	0.96	0.98	-	220-240Vac & 50-60Hz & full load					
	0.94	0.96	-	220-240Vac & 50-60Hz& 75% load					
	0.90	0.92	-	220-240Vac & 50-60Hz&50% load					
THD	-	10%	15%	220-240Vac,50-60Hz, 50%~100% load					
Max. No. of PSUs on CIRCUIT BREAKER	B10	5	B16	7	B20	9	B25	11	230Vac
	C10	8	C16	12	C20	15	C25	19	

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Tolerance	-2%	-	+2%	
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	-5%	-	+5%	200~240Vac & Full Load
Line Regulation	-0.5%	-	+0.5%	25°C±10°C ambient temperature, input voltage changes from 176Vac to 264Vac with full load
Load Regulation	-1%	-	+1%	25°C±10°C ambient temperature, 230Vac input, load changes from 50% to 100%.
Turn-on Delay Time	-	0.5S	0.7S	230Vac, 100% load
Temperature Coefficient		±0.03%/°C		-40°C ~ +60°C

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency@230Vac		89%	90%	-	100% load, 25°C ambient temperature
		86%	88%		75% load, 25°C ambient temperature
		84%	86%		50% load, 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac		For 60 seconds, the current does not exceed 5mA
	Input-PE	-	1875Vac		
	Output- PE	-	500Vac		
Grounding Resistance		-	-	0.1Ω	At 25°C±10°C ambient temperature, pass 25A current, the time is 1 minute
Insulation Resistance		10MΩ	-	-	Under the condition of 25°C±10°C ambient temperature and less than 70%RH, 500VDC voltage is applied between Input-Output, Input-PE, and Output-PE, respectively, for 60 seconds
MTBF		-	200Khrs	-	230Vac,25°C,80% load (MIL-HDBK-217F)
			1232.28Khrs		Telcordia SR-332 (Bellcore)
Lifetime		-	50000Hours	-	230Vac&100% load,75°C case temperature, refer to lifetime VS Tc curve for details
Ambient Temperature		-40°C		+60°C	
Operating Case Temperature for Safety Tc_s		-40°C	-	+90°C	
Operating Case Temperature for Warranty Tc_w		-40°C	-	+75°C	5 years warranty case temperature Humidity: 10% to 100% RH
Storage Temperature		-40°C	-	+90°C	Humidity: 10% to 100% RH
Dimensions (L*W*H)mm		L147.5.5xW67.2xH37			
Net Weight		650±50g/PCS			
Package		L500mm*W310mm*H160mm 10PCS/Ctn			

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	

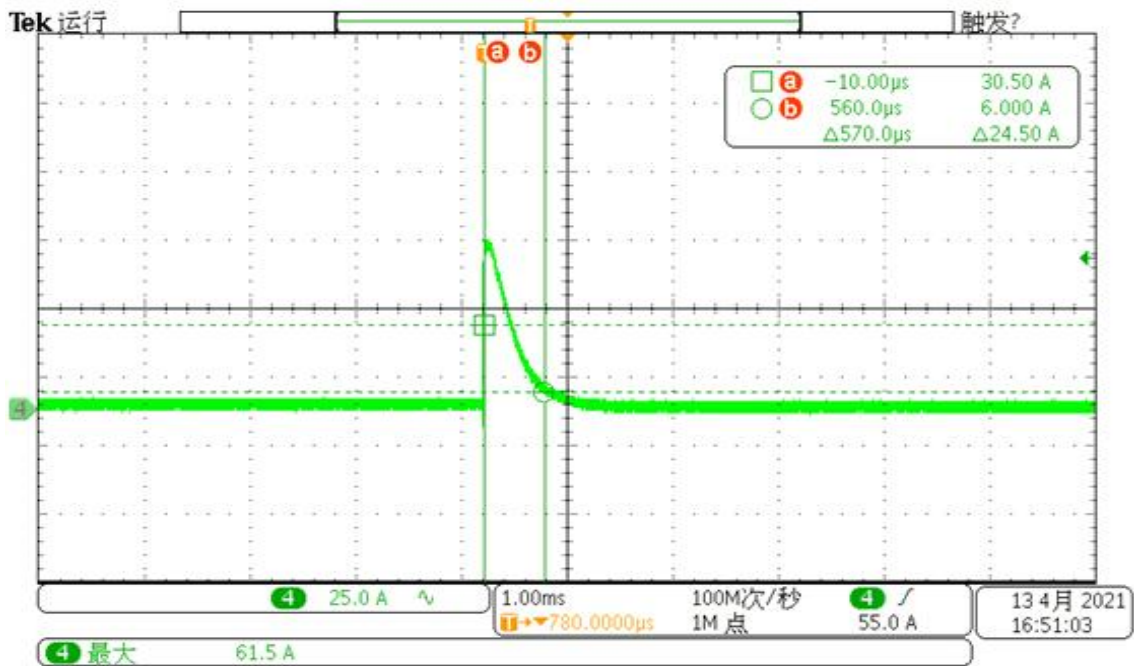
EMC COMPLIANCE

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	

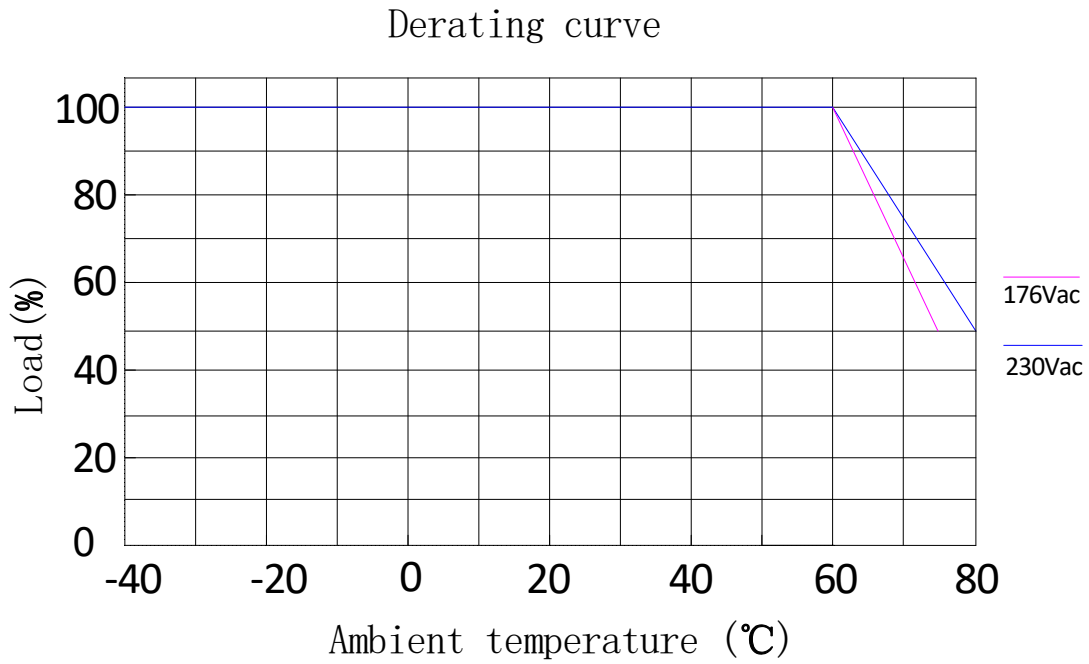
NOTE:

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.

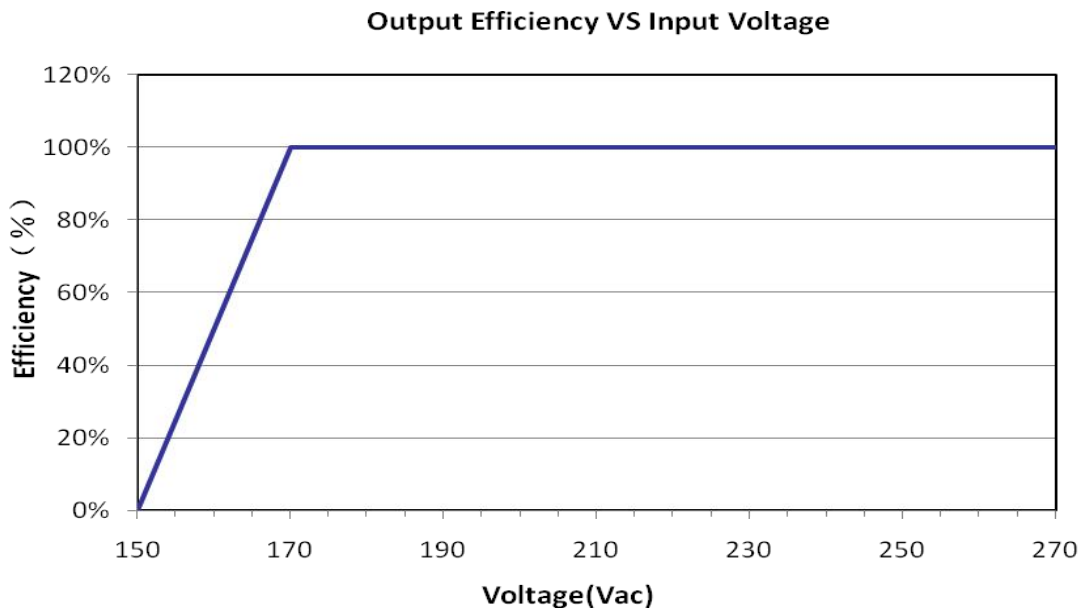
INRUSH CURRENT WAVEFORM



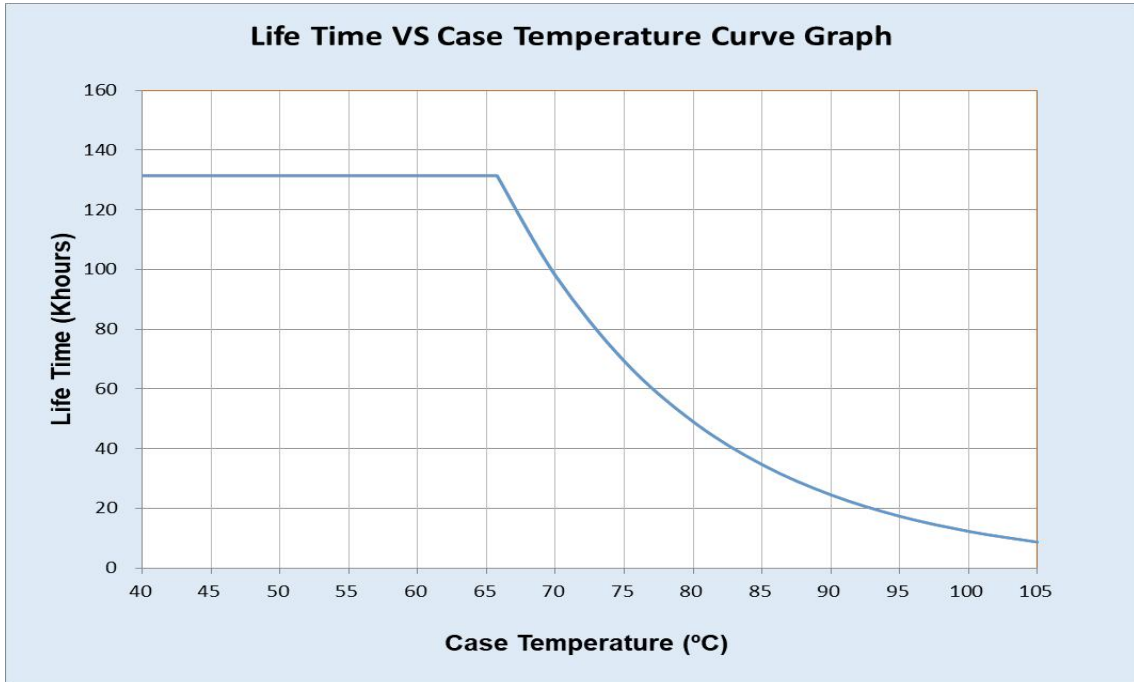
DERATING CURVE



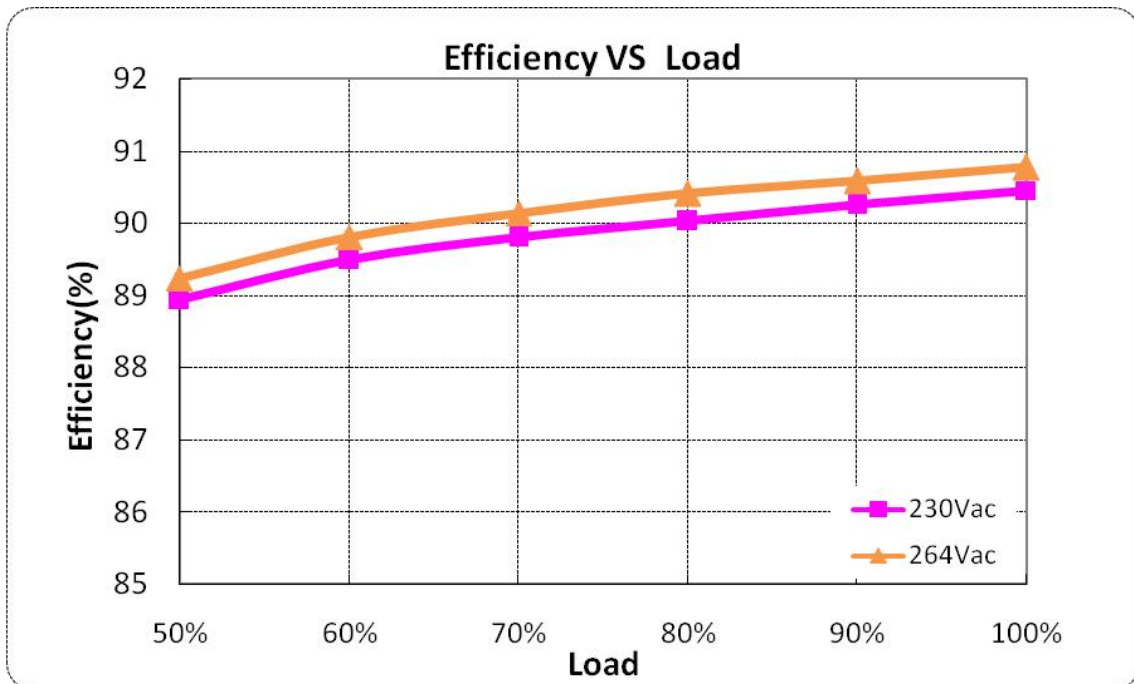
OUTPUT POWER VS INPUT VOLTAGE CURVE



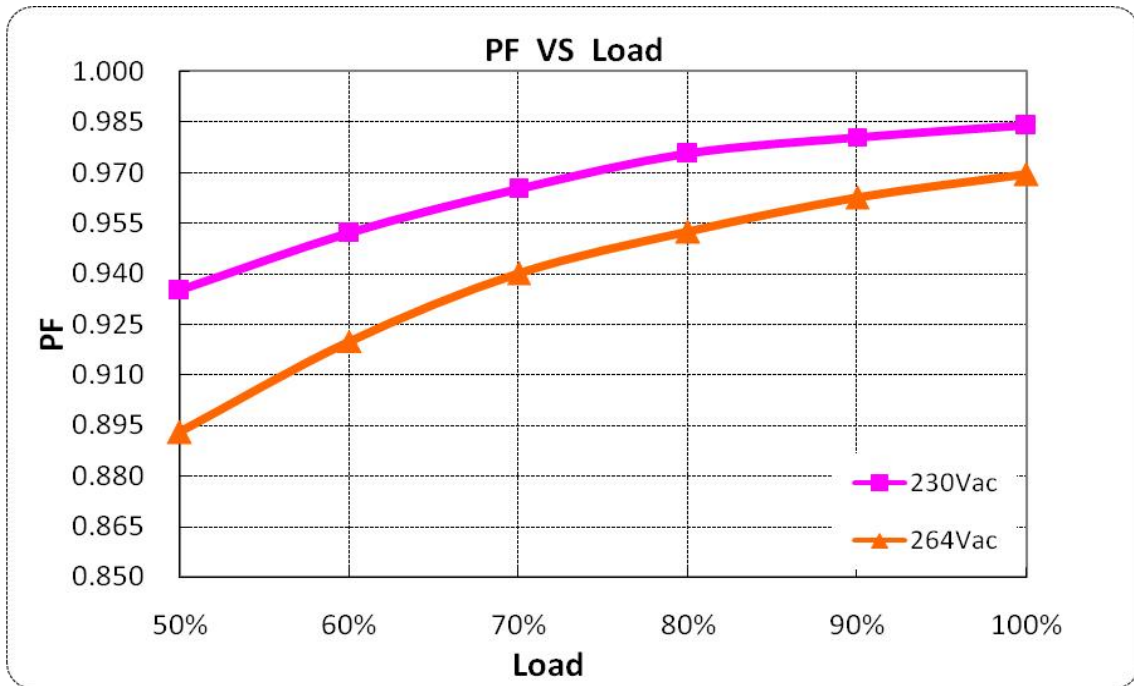
Life Time VS Temperature Curve



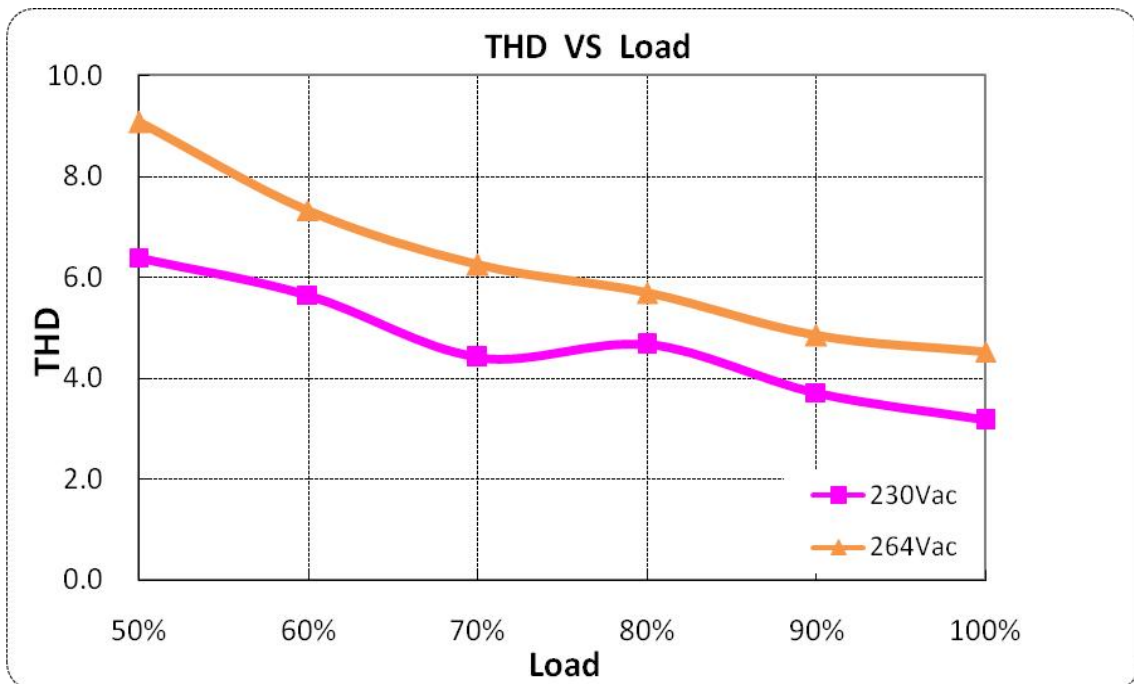
EFFICIENCY VS LOAD



POWER FACTOR VS LOAD



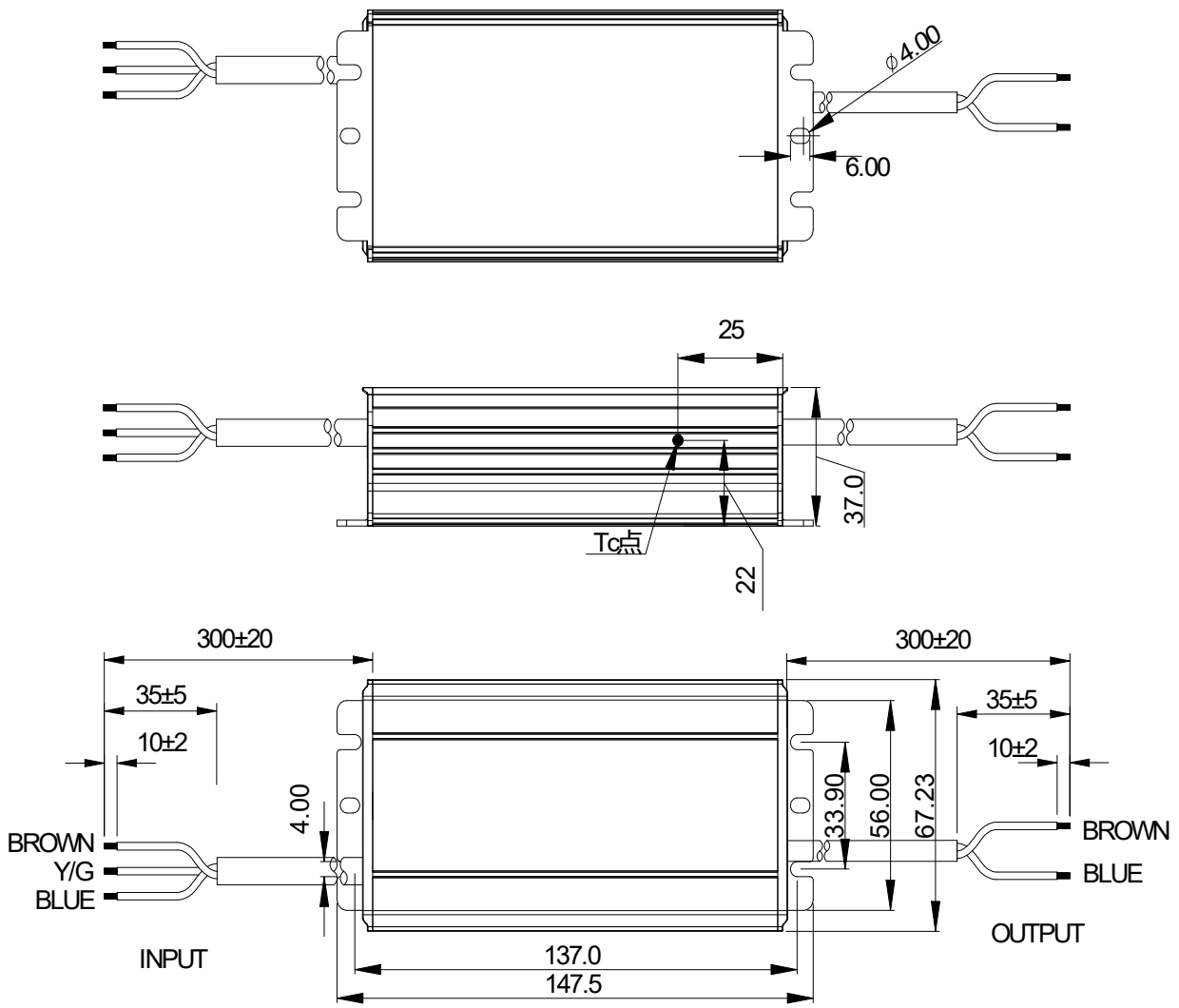
TOTAL HARMONIC DISTORTION



PROTECTIONS

Parameter	Min.	Typ.	Max.	Notes
Input under voltage protection	156Vac	-	176Vac	Turn off the output or hiccup when the input voltage falls below protection voltage.
Over temperature protection	Meet the requirements of double 85 standard, no damage for 500 hours, automatic recovery after over temperature lifting			
Short circuit protection	Hiccup mode. The output shall return to normal when the fault condition is removed.			
Over current protection	When the load is 1.1-2 times as high as the standard load, the driver will be in hiccup state. Hiccup mode. The output shall return to normal when the fault condition is removed			
Over voltage protection	When the product exceeds the limited range, it enters the protection state, and when the fault is resolved and powered back on, the product will automatically return to normal			

MECHANICAL OUTLINE



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

ROHS

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

LABLE

122.00 mm

32.00 mm

INPUT

L (BROWN 棕)

G (Y/G 黄/绿)

N (BLUE 蓝)

MOSO[®] V6E-100B036

LED DRIVER
LED 控制装置(恒压恒流型)

INPUT (输入)	200-240V~50/60Hz, 0.7A Max
OUTPUT (输出)	Output current: 2.80A Max. U _{rated} 36V , Prated:100W Max.
t _c : 90°C t _s : 60°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
 Suitable for Dry, Damp and Wet locations
 SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD
 No. 1061, Songhai Road, Xili Town, Nanshan District,
 Shenzhen, CHINA

OUTPUT

(BROWN 棕) Vo +

(BLUE 蓝) Vo -

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