

## Specification for Approval

Product Name : 240W Constant Voltage LED Driver  
Product Model: V6E-240B024  
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





REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Datasheets Release	2023-07-07	



### 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-240 series is a 240W 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-240B024	240	24	0~10.0	93%	0.98	5%

### 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 240W, 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	-		-		1.6A		200-240Vac & full load		
Inrush Current	-		-		75 A		Cold start, 10%Ipeak, 230Vac & full load,		
Power Factor	0.97		0.99		-		220-240Vac & 50-60Hz & full load		
	0.95		0.97		-		220-240Vac & 50-60Hz& 75% load		
	0.92		0.95		-		220-240Vac & 50-60Hz&50% load		
THD	-				10%		220-240Vac,50-60Hz, 50%~100% load		
Max. No. of PSUs on CIRCUIT BREAKER	B10	2	B16	4	B20	5	B25	6	230Vac
	C10	4	C16	6	C20	8	C25	10	

**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	-2%	-	+2%	25°C±10°C ambient temperature, 230Vac input, load changes from 0% to 100%.
Turn-on Delay Time	-	-	0.5S	230Vac, 100% load
Temperature Coefficient	-	±0.03%/°C	-	-40°C ~ +60°C

### GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency@230Vac		91%	93%	-	100% load, 25°C ambient temperature
		91%	93%	-	75% load, 25°C ambient temperature
		91%	93%	-	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)
Lifetime		-	50000Hours	-	230Vac&100% load,75°C case temperature, refer to lifetime VS Tc curve for details
Ambient Temperature		-40°C		+55°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		L193.5xW67.2xH37			
Net Weight		900±100g/PCS			
Package		L502mm*W372mm*H222mm 15PCS/Ctn Gross weight 16.2KG			

### SAFTY STANDARDS

Safety Category	Country / Territory	Standards	Approved
CCC	China	GB19510.1, GB19510.14	√
CE	Europe	EN61347-1, EN61347-2-13	√
		EN62493	√
		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	

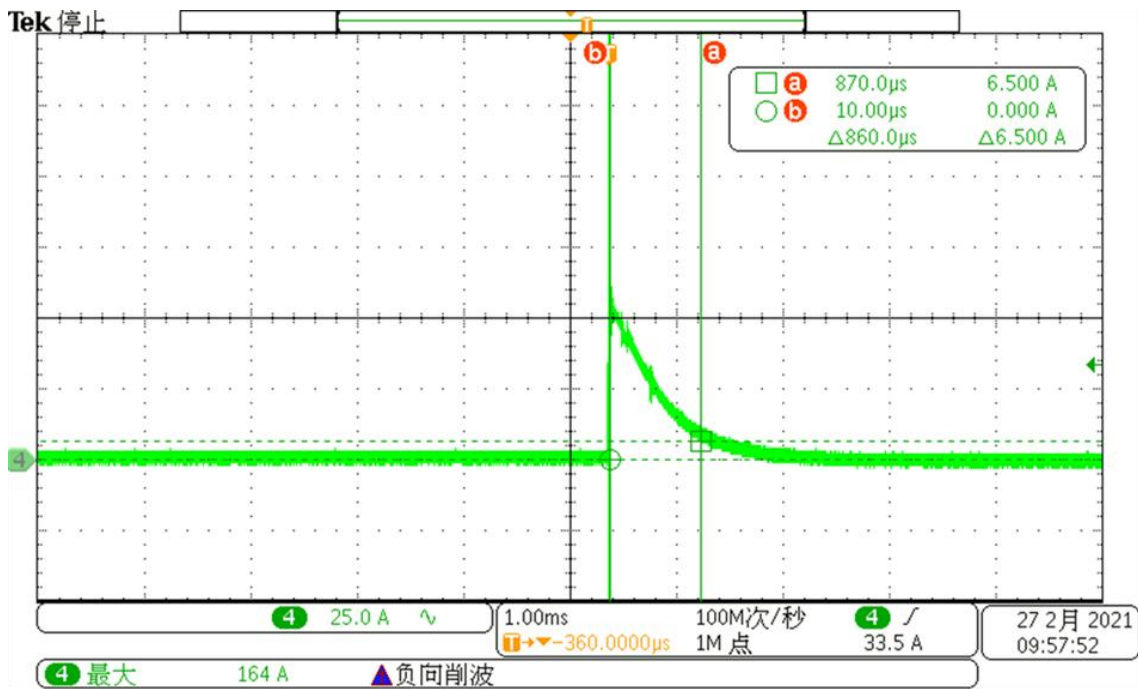
### EMC COMPLIANCE

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	

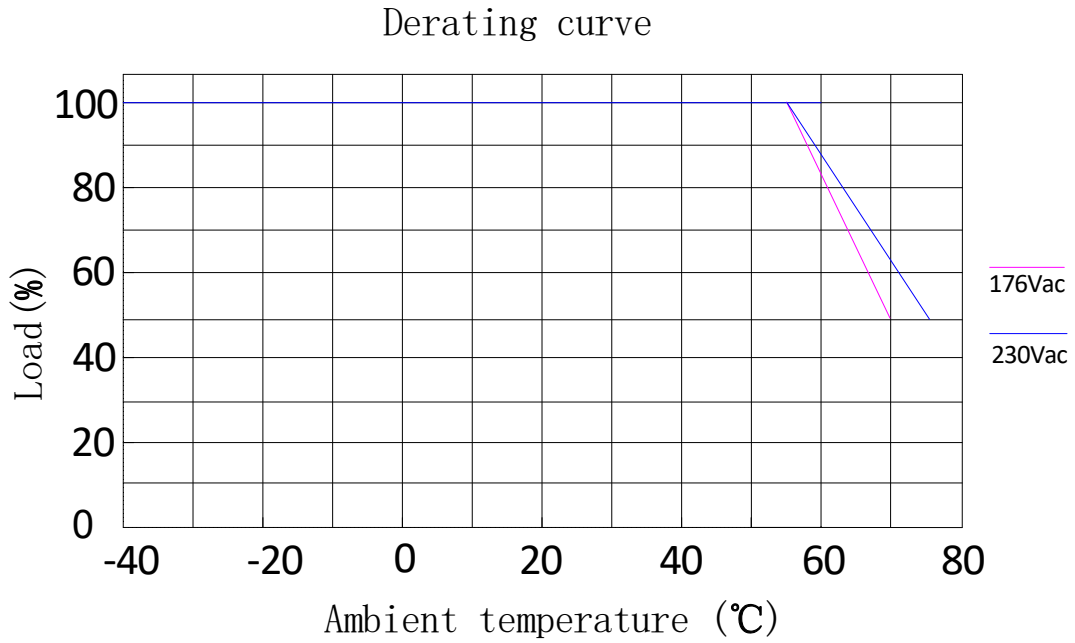
### NOTE:

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.

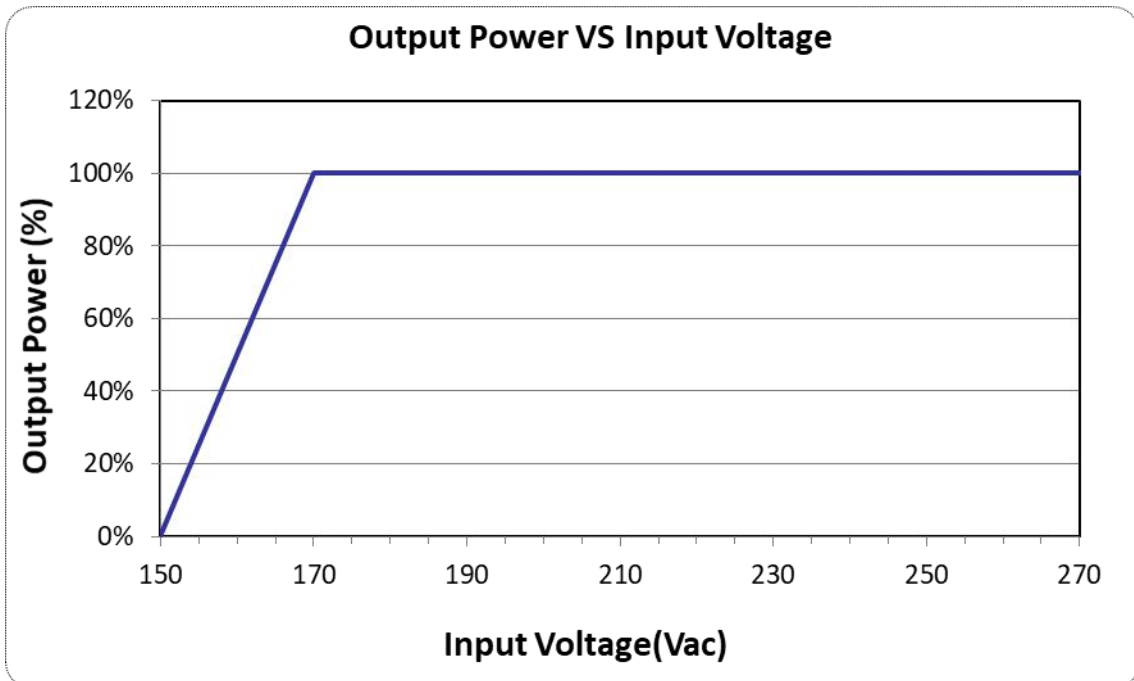
### INRUSH CURRENT WAVEFORM



### DERATING CURVE

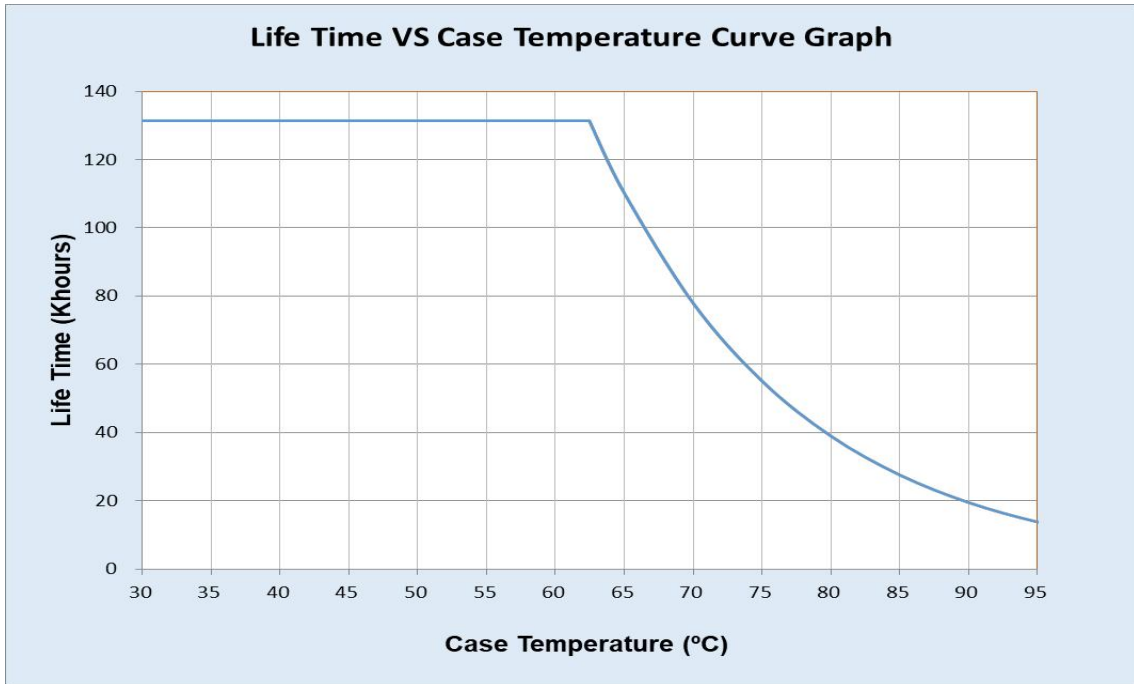


### OUTPUT POWER VS INPUT VOLTAGE CURVE

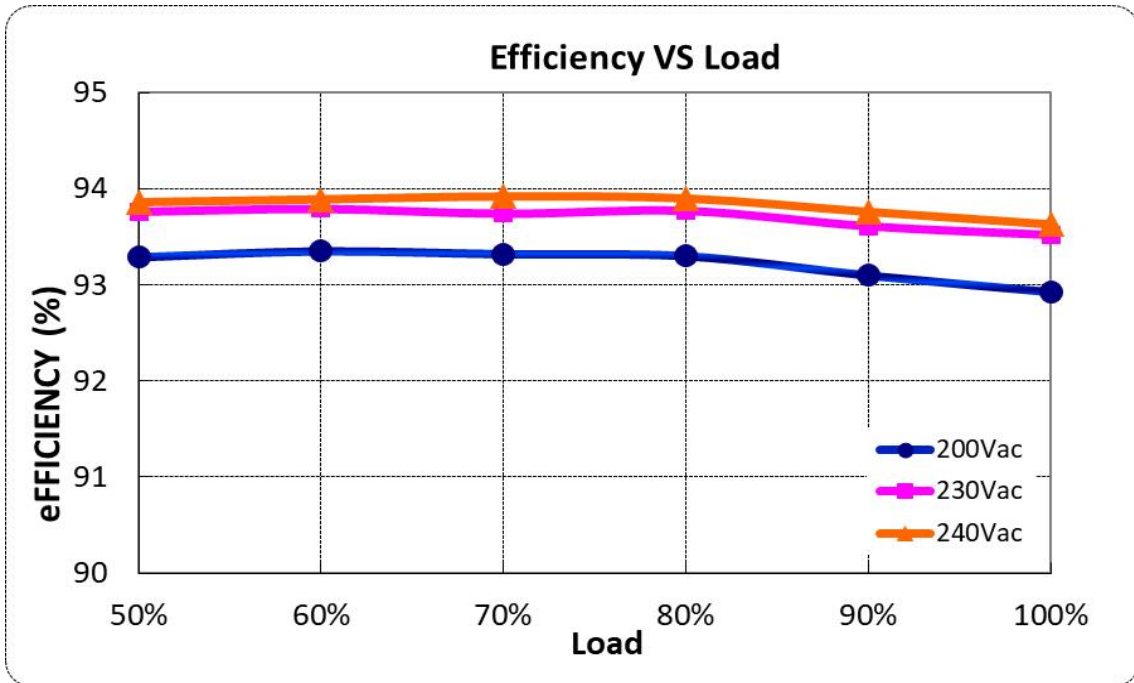




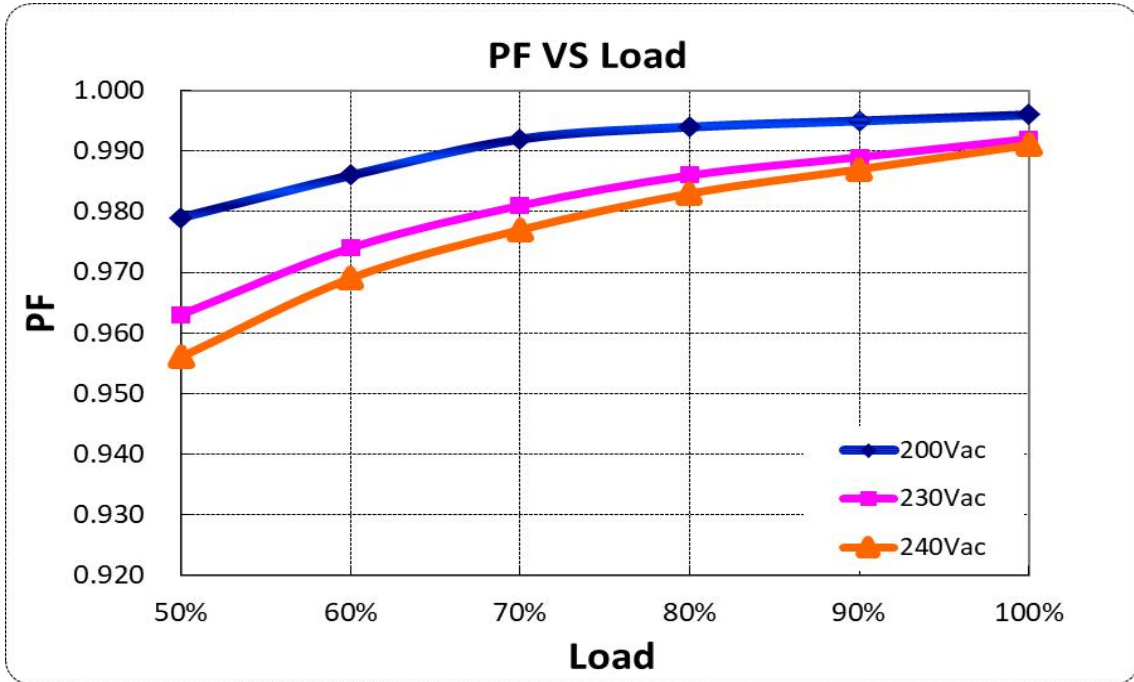
## Life Time VS Temperature Curve



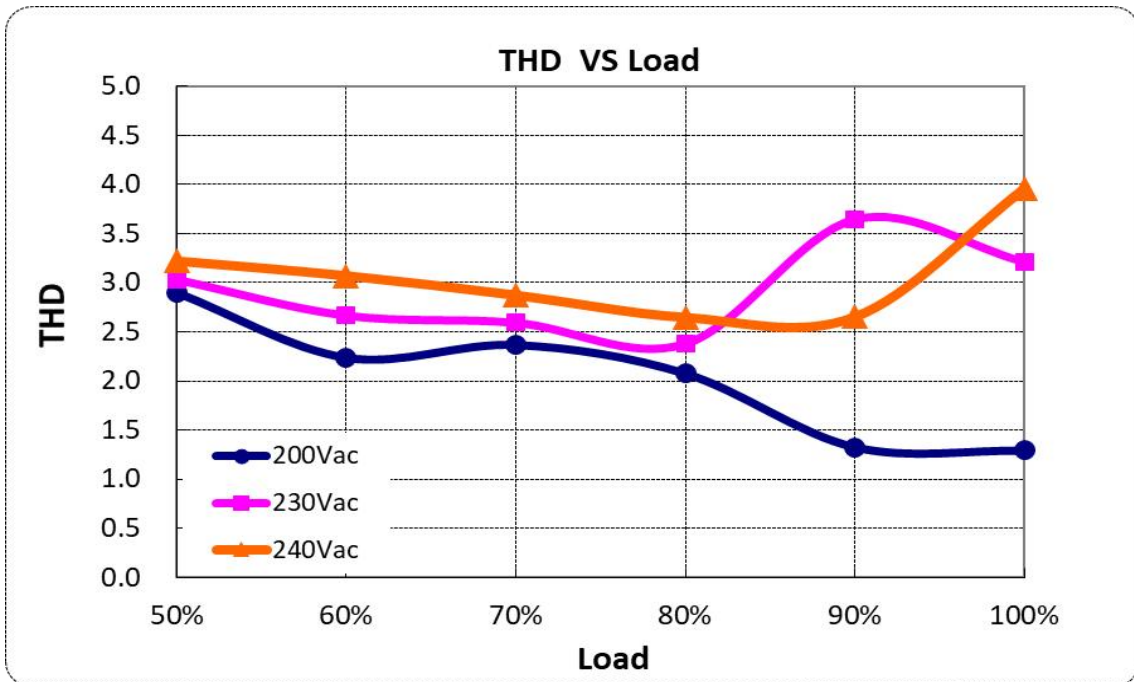
## EFFICIENCY VS LOAD



### POWER FACTOR VS LOAD



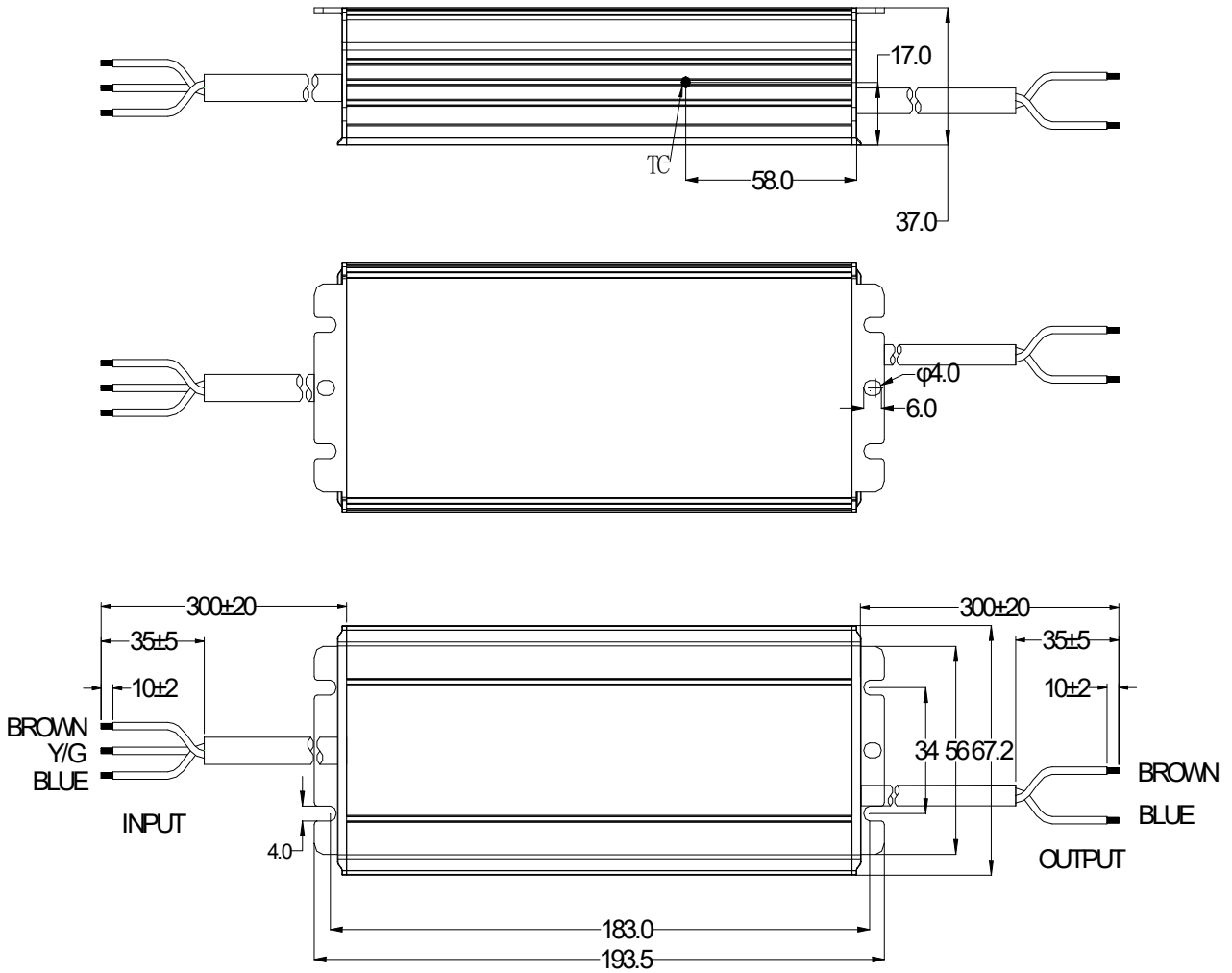
### TOTAL HARMONIC DISTORTION



**PROTECTIONS**

Parameter	Min.	Typ.	Max.	Notes
Input under voltage protection	156Vac	-	176Vac	Turn off the output 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 product exceeds the limited range, it will enter the protection state, and when the fault is resolved, the product will automatically return to normal.			
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*1.0 mm <sup>2</sup> L=300±20mm	3C/CE
Output	CCC+VDE	2*1.5 mm <sup>2</sup> L=300±20mm	3C/CE









### ROHS

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

### TABLE

168.00 mm

32.00 mm

<p><b>INPUT</b></p> <p>L (BROWN 棕)</p> <p>G (Y/G 黄/绿)</p> <p style="text-align: center;"></p> <p>N (BLUE 蓝)</p>	<p><b>MOSO<sup>®</sup> V6E-240B024</b> LED DRIVER LED 控制装置</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">INPUT (输入)</td> <td style="font-size: 8px;">200-240V~ 50/60Hz, 1.6A Max</td> </tr> <tr> <td style="font-size: 8px;">OUTPUT (输出)</td> <td style="font-size: 8px;">Output current: 10.0A Max. U<sub>rated</sub> 24V<sup>±</sup>, Prated: 240W Max.</td> </tr> <tr> <td style="font-size: 8px;">t<sub>a</sub>: 90°C</td> <td style="font-size: 8px;">t<sub>a</sub>: 55°C Input: 200-240V~</td> </tr> </table> <p style="font-size: 8px;">中国制造 制造商: MOSO <b>MADE IN CHINA</b> For LED module only</p> <p style="font-size: 8px;">深圳茂硕电子科技有限公司 SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD No. 1051, Songhai Road, Xili Town, Nanshan District, Shenzhen, CHINA</p>	INPUT (输入)	200-240V~ 50/60Hz, 1.6A Max	OUTPUT (输出)	Output current: 10.0A Max. U <sub>rated</sub> 24V <sup>±</sup> , Prated: 240W Max.	t <sub>a</sub> : 90°C	t <sub>a</sub> : 55°C Input: 200-240V~	  	  	  		<p><b>OUTPUT</b></p> <p>(BROWN 棕) Vo +</p> <p>(BLUE 蓝) Vo -</p>
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