

Specification for Approval

Product Name: 100W Constant Voltage LED Driver
Product Model: V6E-100B024
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.		

XiLi Songbai Road 1061, Nanshan


Address: District, Shenzhen City, Guangdong Post Code: 518108
 Province, P.R.China

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: 100W Constant Voltage LED Driver
Product Model: V6E-100B024 
Rev. A.1

XiLi Songbai Road 1061, Nanshan
Address: 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

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Datasheets Release	2023-07-04	



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: DM6KV,CM10KV;
- ◆ IP67, glue potted, suitable for dry / wet / damp locations;
- ◆ 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-100B024	100	24	0~4.20	89%	0.97	10%

Notes:

All performance parameters are measured at 25°C ambient temperature, 230Vac input, and full load conditions, except for those specified.

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	-		-		75A		Cold start, 10%Ipeak, 230Vac & full load		
Power Factor	0.96		0.98		-		220-240Vac, 50-60Hz, 100% load		
	0.95		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%	Full load
Total Output Voltage Ripple(pk-pk)	-2%	-	+2%	Full load, Measured by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor.
Outputovershoot	-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.
Load Regulation	-1%	-	+1%	25°C±10°C ambient temperature, 230Vac input, load changes from 50% to 100%.
Turn-on Delay Time	-	-	0.5S	230Vac, 100% load
Temperature Coefficient		0.03%/°C		0°C ~ +60°C

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency@230Vac		87%	89%	-	Full load. Measured at 25°C ambient temperature
		86%	88%	-	75% load. Measured at 25°C ambient temperature
		84%	86%	-	50% load. Measured at 25°C ambient temperature
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°C/70%RH
MTBF		-	1232.28Khrs	-	Telcordia SR-332 (Bellcore)
		-	200Khrs	-	230Vac,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		+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)		L147.5mm*W67.2mm*H37mm			
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	

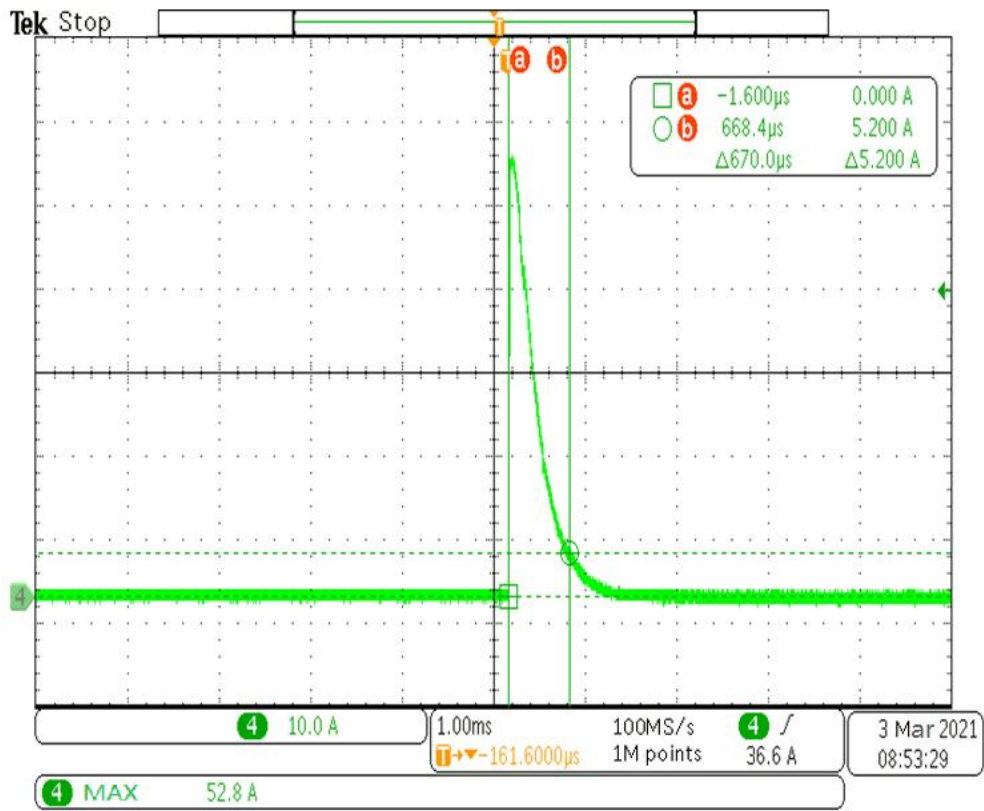
EMC COMPLIANCE

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:

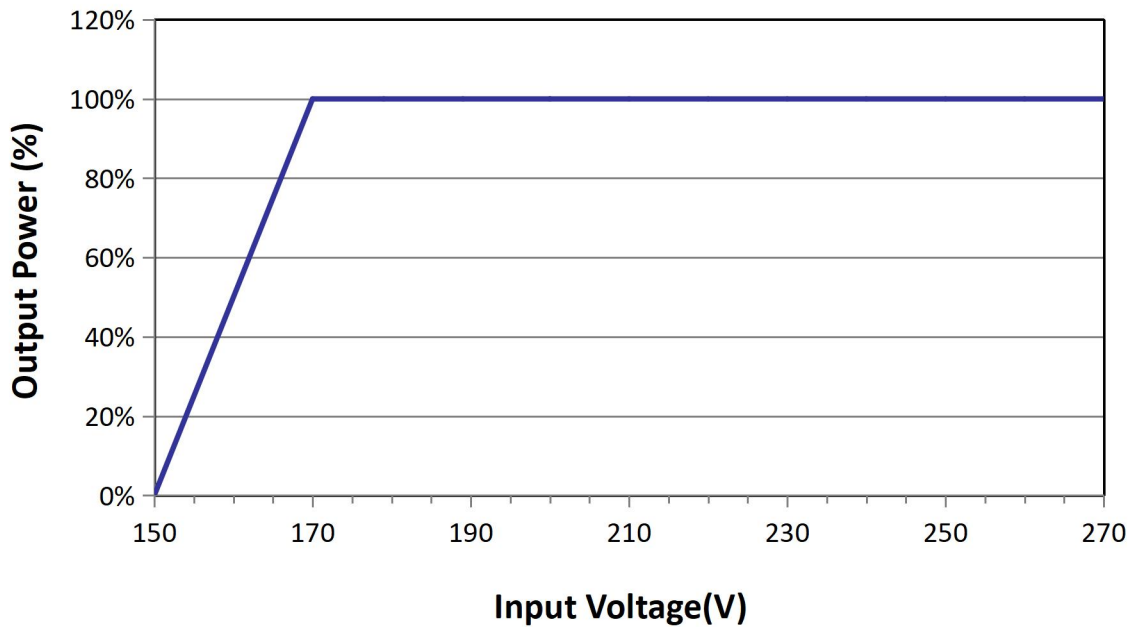
This LED driver meets the EMI specifications above, but as a component of a luminaire, end customer need to identify the EMI performance of a luminaire including LED driver, other devices connected to the driver and on the luminaire itself.

INRUSH CURRENT WAVEFORM

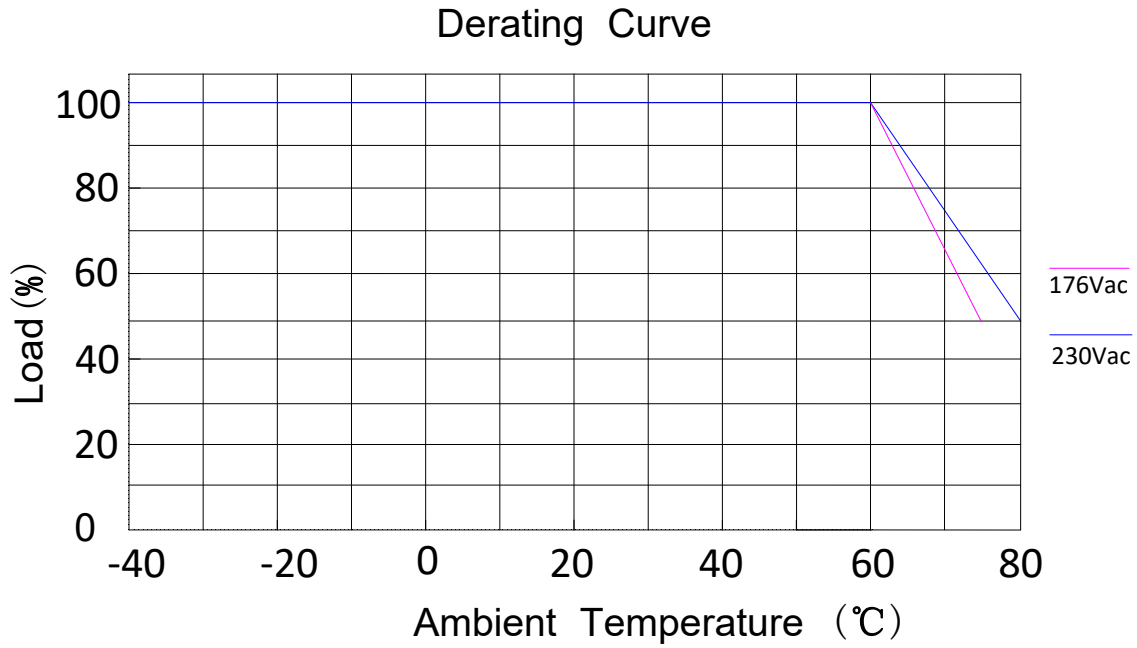


OUTPUT POWER VS INPUT VOLTAGE CURVE

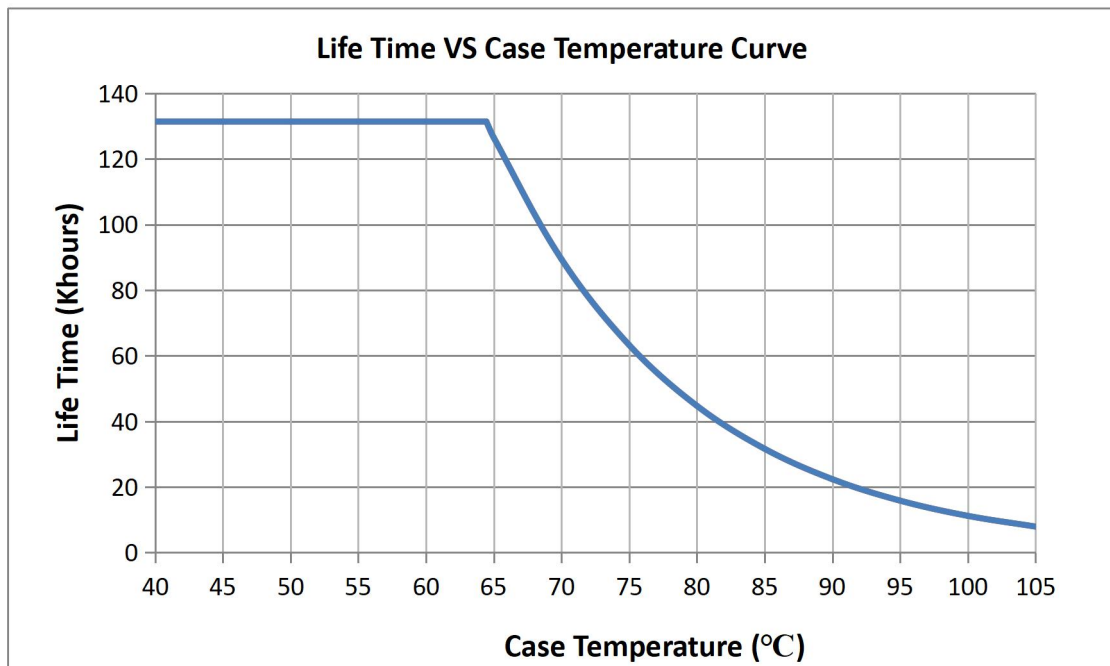
Output Power VS Input Voltage



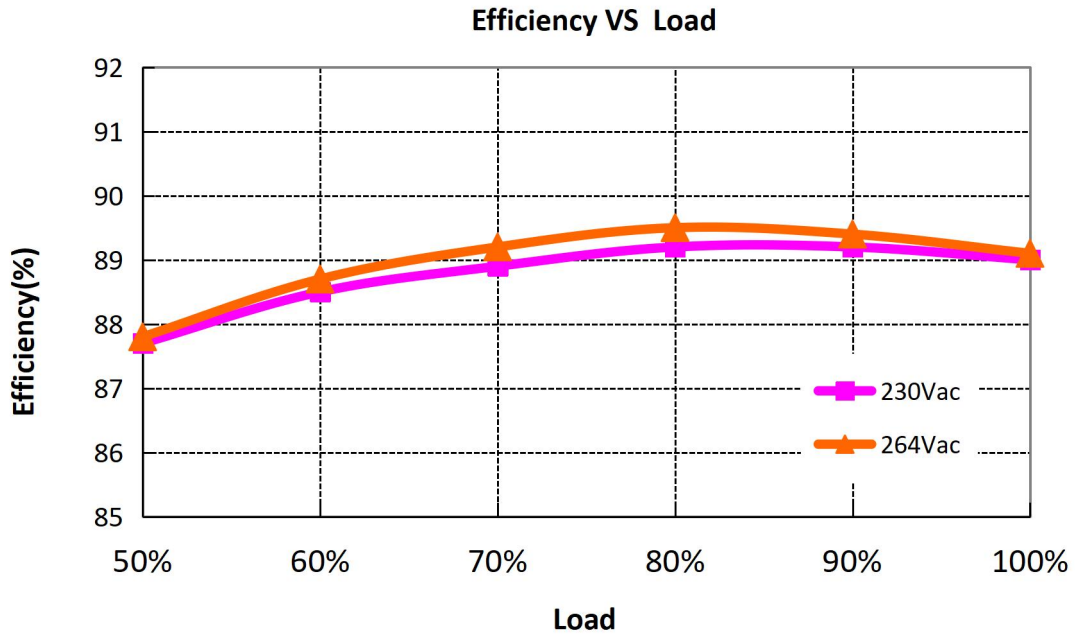
DERATING CURVE



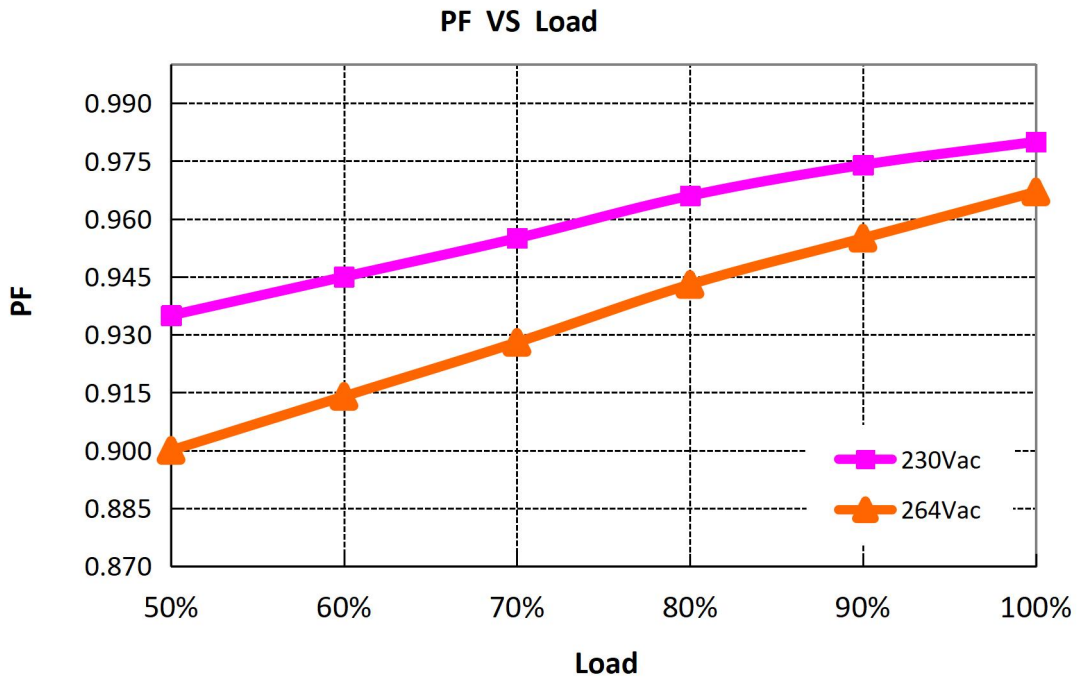
LIFETIME VS CASE TEMPERATURE



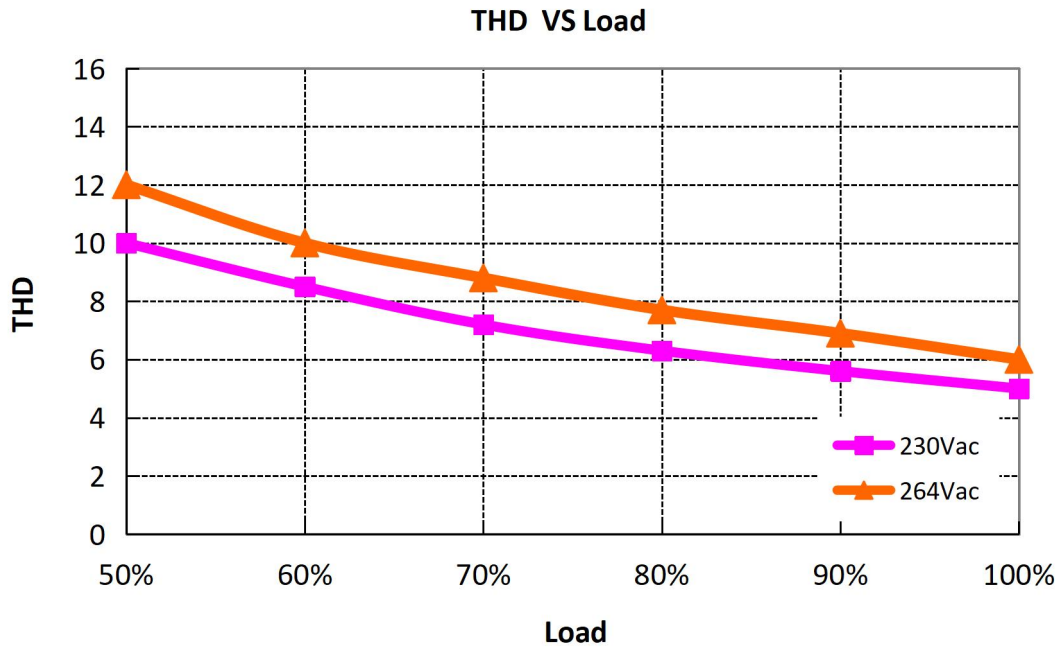
EFFICIENCY VS LOAD



POWER FACTOR VS LOAD



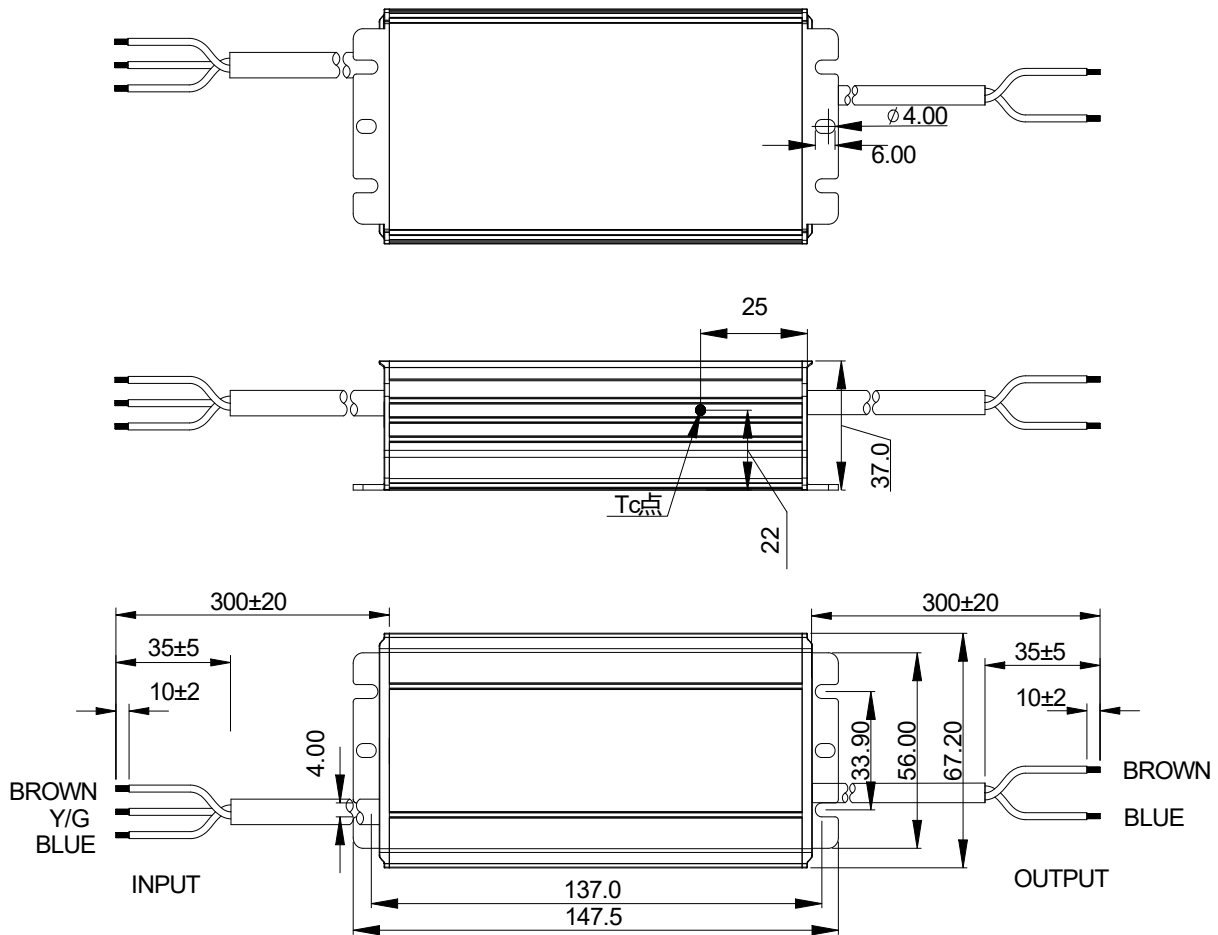
TOTAL HARMONIC DISTORTION



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	Turn off the output. 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	When the load is 1.2-1.6 times as high as the rated load, the driver will be in hiccup state. 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



Wire	Specification	Note
Input	CCC+VDE3*1.0mm ² L=300±20mm	CCC/CE
Output	CCC+VDE2*1.0mm ² L=300±20mm	CCC/CE

ROHS

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

LABEL

