

## Description

The X6E series is outdoor programmable LED driver that operates in constant current and also provide multiple isolated dimming controls, Dim-to-Off. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enable the driver to operate with high reliability, it provides extreme durability with an IP67 rating and extends product lifetime. Overall protection is provided against lightning surge, output over voltage, short circuit and over temperature to ensure low failure rate.



## Product Features

- Universal input voltage: 90~305Vac;
- Isolate constant power design;
- High surge protection: DM 6KV, CM 10KV;
- Protections: SCP / OVP / OTP;
- IP67 design for indoor and outdoor applications;
- Suitable for dry / damp / wet locations;
- 5 years warranty.

## Application

Road and street lighting  
Tunnel lighting  
Area and flood lighting  
High-bay lighting

## Models

Model Number	Input Voltage Range (Vac)	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Current Range (A)	Default Current(A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.)
X6E-150V150-G	100~277	150	85~150	0.9~1.5	1.5	93.5%	0.95	5%

### NOTES:

- [1]. M means 0-10V/PWM dimming.  
[2]. All specifications are measured at 25°C ambient temperature, input voltage 230Vac, and the typical value tested by full load, if no specific note.

## Input Specifications

Parameter	Min	Typ.	Max	Notes
Input Voltage Range	90Vac	120/220~240/ 277Vac	305Vac	
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	2.0A	120Vac & 100% load
Max Input Power	-	-	185W	120Vac & 100% load
Leakage Current	-	-	0.70mA	IEC 60598-1; 240Vac/60Hz
Inrush Current	-	-	75A	230Vac, 100% load
Power Factor (PF)	0.97	0.98	-	120Vac, 50-60Hz, 70%-100% load
Power Factor (PF)	0.95	0.97	-	230Vac, 50-60Hz, 70%-100% load
Power Factor (PF)	0.93	0.95	-	277Vac, 50-60Hz, 70%-100% load
Total Harmonic Distortion (THD)	-	5%	10%	120-230Vac, 50-60Hz, 70%-100% load
Total Harmonic Distortion (THD)	-	10%	15%	277Vac, 50-60Hz, 70%-100% load
MCB(B16)	-	6	-	230Vac; 100%load

## Output Specifications

Parameter	Min	Typ.	Max	Notes
Output Voltage Range	85Vdc	-	150Vdc	
Open Circuit Voltage	-	168Vdc	190Vdc	
Full Power Current Range	1.00A	-	1.50A	
Current Accuracy	-5%	-	+5%	
Total Output Current Ripple (pk-pk)	-	5%	10%	20MHz BW full load & LED load the LED load ripple is slightly different for different leds
Startup Overshoot Current	-	-	10%	
Line Regulation	-1%	-	+1%	25°C ±10°C ambient temperature, input changes from 120Vac to 277Vac
Load Regulation	-3%	-	+3%	Load varies from 70% to 100% with 230Vac Input at 25°C ±10°C ambient temperature
Turn-on Delay Time	-	-	1.0s	240Vac, 100% load, 25°C ±10°C ambient temperature

## General Specifications

parameter	Min	Typ.	Max	Notes
Efficiency@120Vac Io=1.0A Io=1.5A	89.0% 89.0%	91% 91%	-	100% load, 25°C±10°C ambient temperature
Efficiency@230Vac Io=1.0A Io=1.5A	91.0% 91.5%	93.0% 93.5%	-	100% load, 25°C±10°C ambient temperature
Efficiency@277Vac Io=1.0A Io=1.5A	91.4% 91.9%	93.4% 93.9%	-	100% load, 25°C±10°C ambient temperature
Mean Time Between Failure	-	200Khours	-	25°C±10°C ambient temperature, 230Vac, 80% load condition (MIL-HDBK-217/SR-332)
Lifetime	-	67Khours	-	230Vac& 100% load, Tc 75°C, reference lifetime vs. case temperature curve
Operating Temperature Ta	-40°C	-	+50°C	100~200Vac, Output Power vs. Ambient Temperature curve
Operating Temperature Ta	-40°C	-	+55°C	200~277Vac, Output Power vs. Ambient Temperature curve
Operating Tc for Safety Tc_s	-40°C	-	+90°C	
Operating Tc for Warranty Tc_w	-40°C	-	+75°C	5-year warranty shell temperature, humidity: 10% to 95% RH
Storage Temperature Ta	-40°C	-	+85°C	Humidity: 5% to 100% RH
Altitude	-60m	-	4000m	
Input Under voltage Protection	60Vac	75Vac	90Vac	Turn off the output or hiccup when the input voltage falls below protection voltage.
Over Temperature Protection Tc	-	90°C	-	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	-	-	-	Constant current mode. The output shall return to normal when the fault condition is removed.
Dimensions (L*W*H)	158*68*37mm			
Net Weight	750±100g/PCS			
Package (L*W*H)	421*322*172mm; 14PCS/Ctn, Gross Weight: 13Kg			

## Safety Specification

Dielectric Strength (Input-Output)	-	3750Vac	-	60s, Current not exceeding 5mA
Dielectric Strength (Input-Ground)	-	1554Vac	-	60s, Current not exceeding 5mA
Dielectric Strength (Output-Ground)	-	1540Vac	-	60s, Current not exceeding 5mA
Grounding Resistance	-	-	0.1Ω	25°C±10°C Ambient Temperature, pass 25A Current, 60s.
Insulation Resistance	10MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60s/25°C

## Safety Compliance

Safety Category	Standards	Approved	Notes
CCC	GB/T19510.1,GB/T19510.213	√	
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 61347.2.13, AS/NZS 61347.1	√	
EAC	ГОСТ Р МЭК 61347-1 ГОСТ IEC 61347-2-13	√	

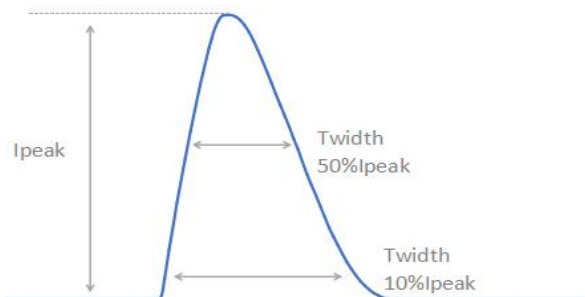
## EMC Compliance

EMC Category	Standards	Approved	Notes
CCC	GB/T 17743, GB 17625.1	√	
CE	EN 55015	√	
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		
Ringing Wave			
EAC	ГОСТ IEC 62493, СТБ EH 55015 ГОСТ IEC 61547	√	
EAC	ГОСТ 30804.3.2 (IEC 61000-3-2) ГОСТ 30804.3.3 (IEC 61000-3-3)	√	

## RoHS

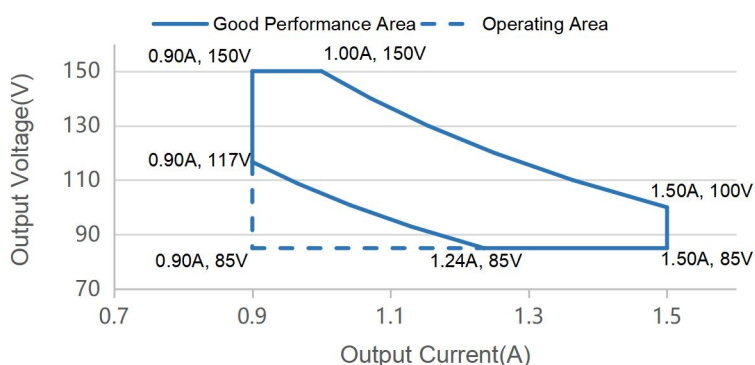
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

**Inrush Current**



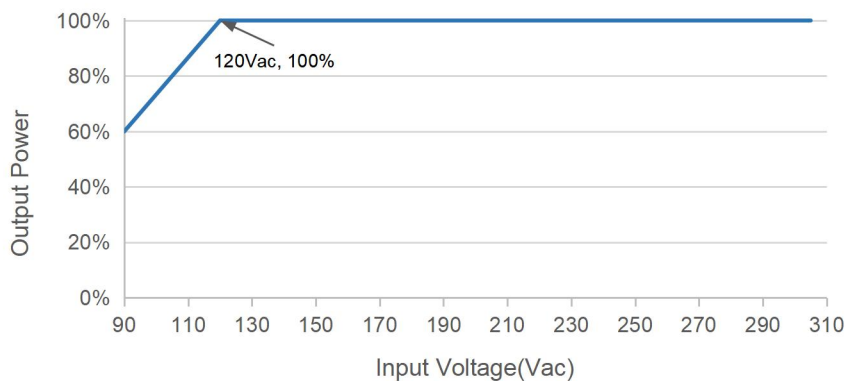
$V_{in}$	$I_{peak}$	$T(@10\% \text{ of } I_{peak})$	$T(@50\% \text{ of } I_{peak})$
230Vac	66.5A	528 $\mu$ s	256 $\mu$ s

**Output Voltage vs. Output Current**

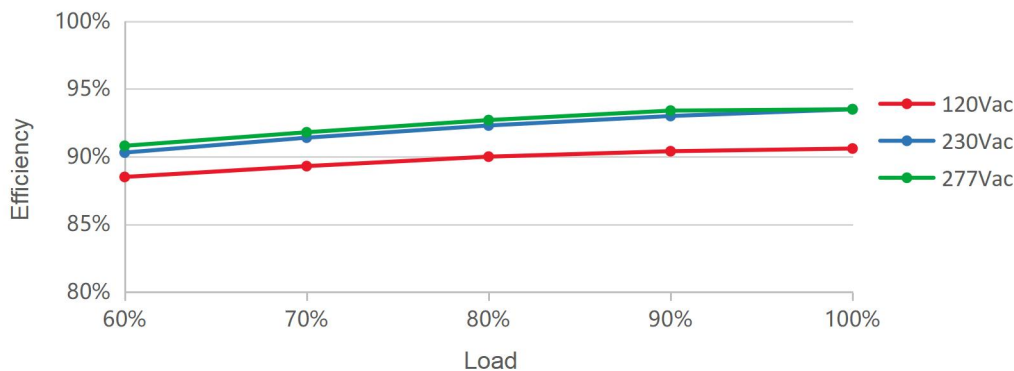


Red curve: good performance area

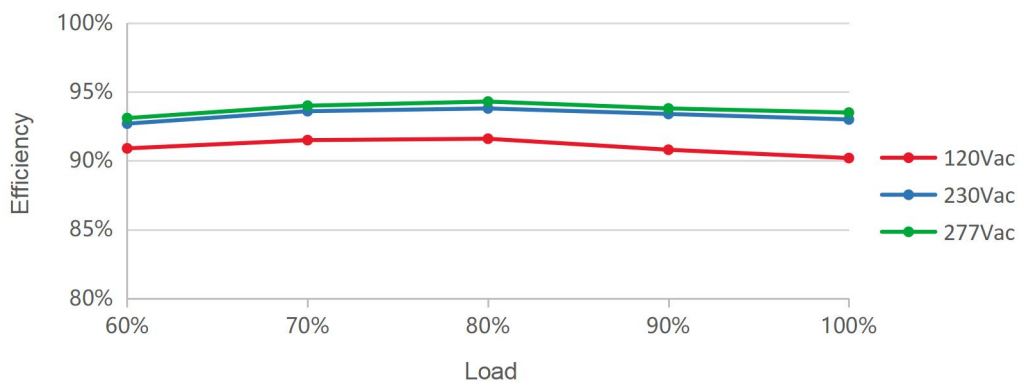
**Output Power vs. Input Voltage**



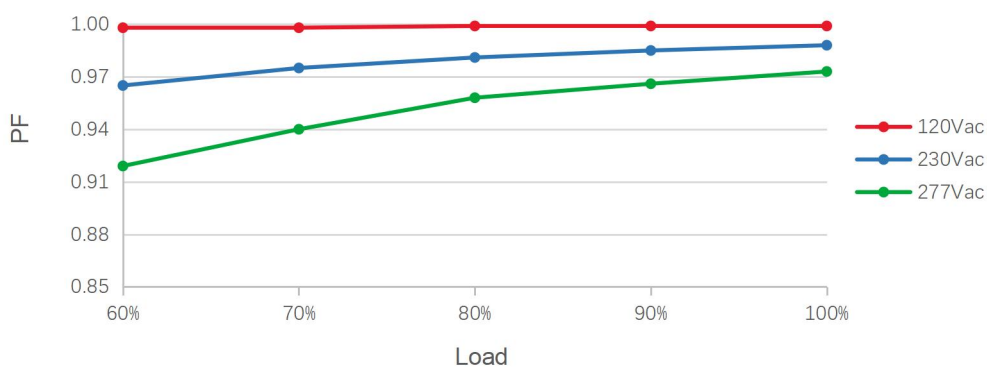
**Efficient vs. Load ( $I_o=1.50A$ )**



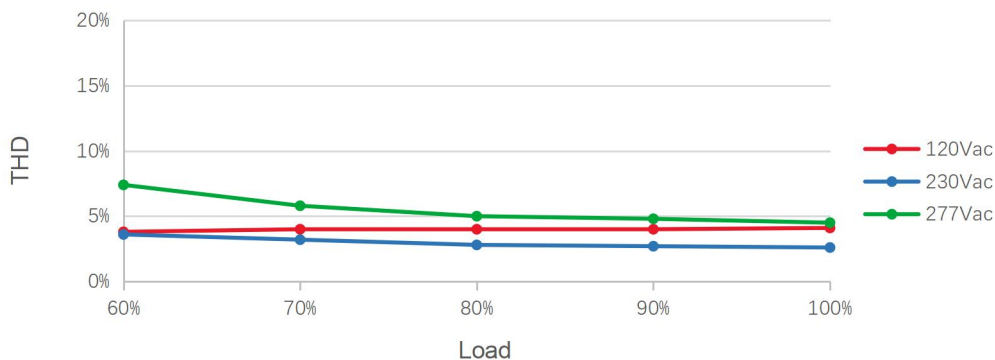
**Efficient vs. Load (Io=1.0A)**



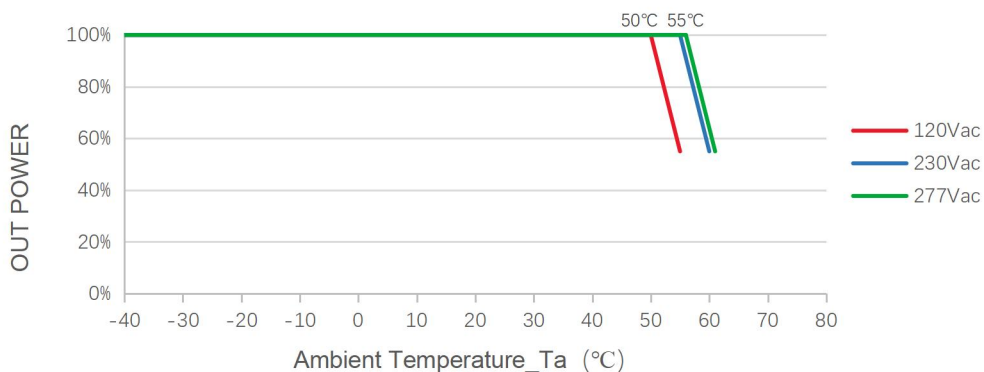
**PF vs. Load**



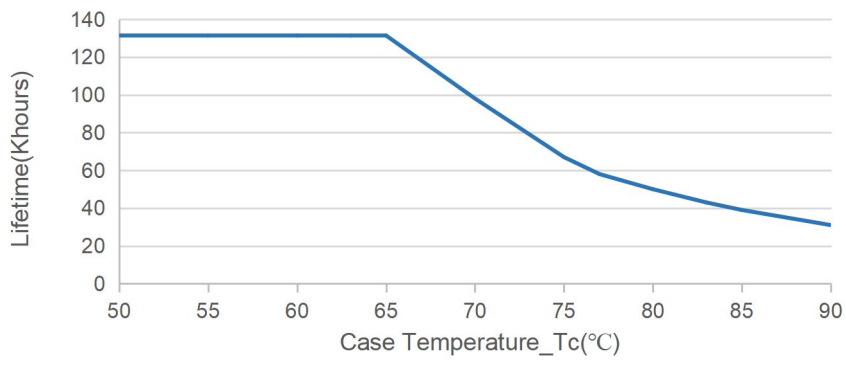
**THD vs. Load**



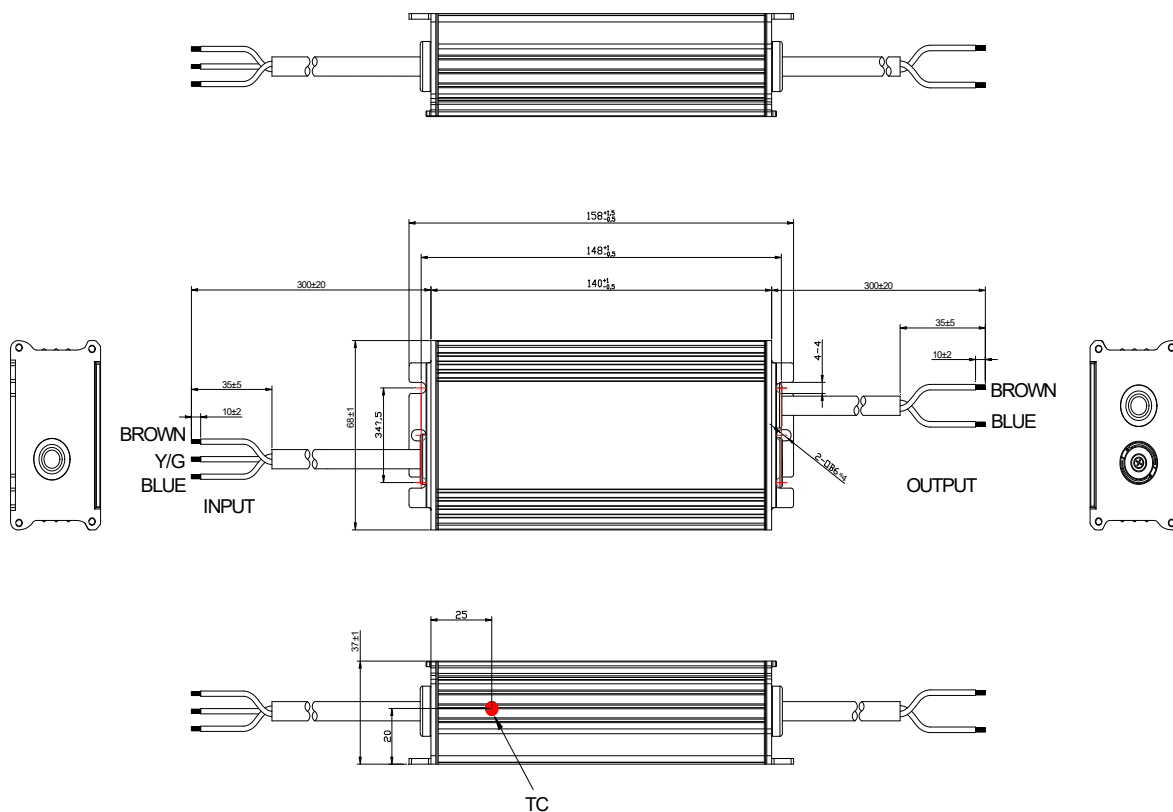
**Output Power vs. Ambient Temperature**



**Lifetime vs. Case Temperature**



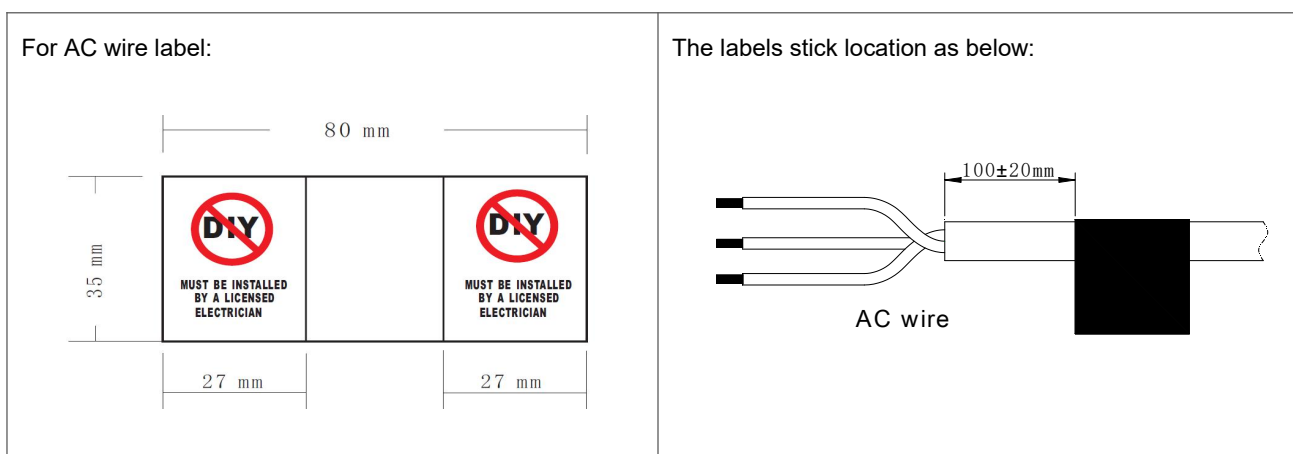
**Mechanical Outline**



**Specification**

Input	CCC+VDE+SAA H05RN-F 3*1.0 mm <sup>2</sup> L=300±20mm	CCC/CE/SAA
Output	CCC+VDE+SAA H05RN-F 2*1.0 mm <sup>2</sup> L=300±20mm	CCC/CE/SAA

**AC wire labels**



Label



133.00 mm



37.00 mm

<p><b>INPUT</b></p> <p>L (BROWN 棕)</p> <p>G (Y/G 黄/绿)</p> <p>N (BLUE 蓝)</p> <p>中国制造 仅适用LED模块 MADE IN CHINA For LED module only</p>	<p><b>MOSO</b><sup>®</sup> X6E-150V150-G 恒流型, 内置防雷管</p> <p>LED DRIVER Constant current type</p> <p>LED 控制装置 Integrated SPD</p> <p>U<sub>out</sub>(最大电压): 170V<sub>DC</sub></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20%;">INPUT (输入)</td> <td>100-277V~ 50/60Hz, 185W Max. 2.0A Max. PF: (P<sub>out</sub> ≥ 105W) = 0.9C-0.95</td> </tr> <tr> <td>OUTPUT (输出)</td> <td>85-150V<sub>DC</sub>, 0.9-1.5A Max. 150W</td> </tr> <tr> <td>t<sub>c</sub>: 90°C</td> <td>                     t<sub>a</sub>: 50°C Input: 100-200V ~                      t<sub>a</sub>: 55°C Input: 200-277V ~                 </td> </tr> </table>	INPUT (输入)	100-277V~ 50/60Hz, 185W Max. 2.0A Max. PF: (P <sub>out</sub> ≥ 105W) = 0.9C-0.95	OUTPUT (输出)	85-150V <sub>DC</sub> , 0.9-1.5A Max. 150W	t <sub>c</sub> : 90°C	t <sub>a</sub> : 50°C Input: 100-200V ~ t <sub>a</sub> : 55°C Input: 200-277V ~	<p style="text-align: right;"><b>OUTPUT</b></p> <p>(BROWN 棕) Vo +</p> <p>(BLUE 蓝) Vo -</p> <p>Io ADJ ⊕</p> <p>GMA-519763</p>
INPUT (输入)	100-277V~ 50/60Hz, 185W Max. 2.0A Max. PF: (P <sub>out</sub> ≥ 105W) = 0.9C-0.95							
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 <p style="font-size: small;">深圳茂硕电子科技有限公司/深圳市南山区西丽松白路1061号 SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD No.1061, Songbai Road, Xili Town, Nanshan District, Shenzhen, CHINA</p>								

**Version**

A.1	First release	2025-02-17

## Specification for Approval

Product Name: 150W LED Driver

Product Model: X6E-150M150-G

Rev: A.1

Address: XiLiSongbai Road 1061, Nanshan District, Shenzhen City, Guangdong, China

Tel: 0755-27657000

FAX: 755-27657908

E-mail: [info@mosopower.com](mailto:info@mosopower.com)

Web Site: <http://www.mosopower.com>

Prepared By	Checked By	Approved By

## Specification for Approval

Product Name: 150W LED Driver

Product Model: X6E-150M150-G

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.		

Address:XiLiSongbai Road 1061, Nanshan District, Shenzhen City, Guangdong, China

Tel: 0755-27657000

FAX: 755-27657908

E-mail:info@mosopower.com

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

Prepared By	Checked By	Approved By