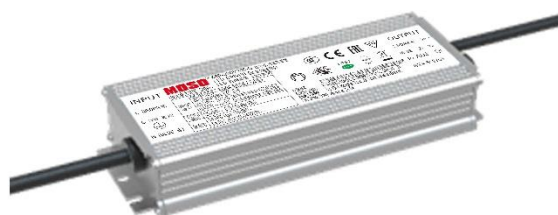


## Description

The X6E series is outdoor LED driver that operates in constant current with high PF value. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enables 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: 6KV line-line, 10KV line-earth;
- 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-200V200-G | 100~277                   | 200                  | 120-200                    | 1.0~1.5                             | 1.5                | 93.5%       | 0.97     | 5%        |

### NOTES:

[1]. V means non-dimmable, adjustable output current with potentiometer.

[2]. All specifications are measured at 25℃ ambient temperature, input voltage 230Vac, and the typical value tested at full load, if no specific note.

## Input Specifications

| Parameter                       | Min   | Typ.                   | Max    | Notes                              |
|---------------------------------|-------|------------------------|--------|------------------------------------|
| Input Voltage Range             | 90Vac | 120/220~240/<br>277Vac | 305Vac |                                    |
| Input Frequency AC              | 47Hz  | 50/60Hz                | 63Hz   |                                    |
| Max Input Current               | -     | -                      | 2.8A   | 120Vac & 100% load                 |
| Max Input Power                 | -     | -                      | 240W   | 120Vac & 100% load                 |
| Leakage Current                 | -     | -                      | 0.70mA | IEC 60598-1; 240Vac/60Hz           |
| Inrush Current                  | -     | -                      | 75A    | 240Vac, 100% load                  |
| Power Factor (PF)               | 0.96  | 0.98                   | -      | 120Vac, 50-60Hz, 70%-100% load     |
| Power Factor (PF)               | 0.95  | 0.97                   | -      | 230Vac, 50-60Hz, 70%-100% load     |
| Power Factor (PF)               | 0.90  | 0.93                   | -      | 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)                        | -     | 5                      | -      | 230Vac; 100%load                   |

## Output Specifications

| Parameter                           | Min    | Typ.    | Max    | Notes                                                                                      |
|-------------------------------------|--------|---------|--------|--------------------------------------------------------------------------------------------|
| Output Voltage Range                | 120Vdc | -       | 200Vdc |                                                                                            |
| Open Circuit Voltage                | -      | 205 Vdc | 220Vdc |                                                                                            |
| Output Current Range                | 0.76A  | -       | 1.5A   | Adjustable output current with potentiometer, full power performance range 1.00A-1.50A     |
| Full Power Current Range            | 1.00A  | -       | 1.5A   |                                                                                            |
| 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<br>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<br>Io=1.0A<br>Io=1.5A | 90.0%<br>90.0%                               | 91.5%<br>91.5% | -     | 100% load, 25°C±10°C ambient temperature                                             |
| Efficiency@230Vac<br>Io=1.0A<br>Io=1.5A | 91.5%<br>91.5%                               | 93.5%<br>93.5% | -     | 100% load, 25°C±10°C ambient temperature                                             |
| Efficiency@277Vac<br>Io=1.0A<br>Io=1.5A | 92.0%<br>92.0%                               | 93.5%<br>93.5% | -     | 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                                | -                                            | 80Khours       | -     | 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          | 65Vac                                        | 75Vac          | 90Vac | Turn off the output or hiccup when the input voltage falls below protection voltage. |
| Over Temperature Protection_Tc          | -                                            | 95°C           | -     | Decreases output 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.  |
| Dimensions (L*W*H)                      | 178*68*37mm                                  |                |       |                                                                                      |
| Net Weight                              | 850±50g/PCS                                  |                |       |                                                                                      |
| Package(L*W*H)                          | 421*322*172mm; 14PCS/Ctn, Gross Weight: 14Kg |                |       |                                                                                      |

## 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) | -    | 1440Vac | -    | 60s, Current not exceeding 5mA                      |
| Grounding Resistance                | -    | -       | 0.1Ω | 25℃±10℃ Ambient Temperature, pass 25A Current, 60s. |
| Insulation Resistance               | 10MΩ | -       | -    | Input-Output, Input-PE, Output-PE, 500Vdc/60s/25℃   |

## Safety Compliance

| Safety Category | Standards                                 | Approved | Notes |
|-----------------|-------------------------------------------|----------|-------|
| CCC             | GB/T 19510.213, GB/T 19510.1              | √        |       |
| 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<br>ГОСТ IEC 61347-2-13 | √        |       |

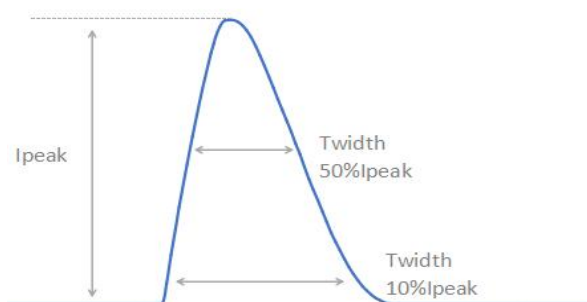
## EMC Compliance

| 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<br>ГОСТ IEC 61547                   | √        |       |
| EAC                  | ГОСТ 30804.3.2 (IEC 61000-3-2)<br>ГОСТ 30804.3.3 (IEC 61000-3-3) | √        |       |

## RoHS

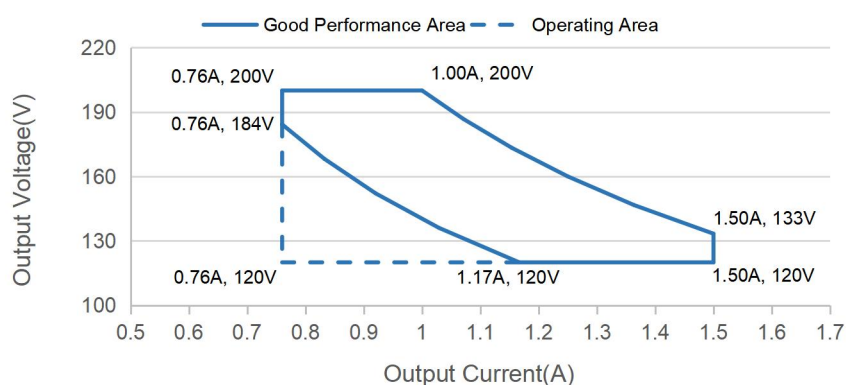
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

## Inrush Current

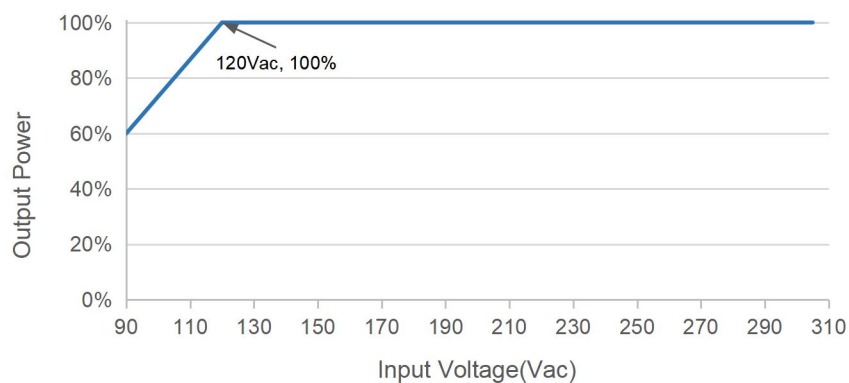


| Vin    | Ipeak | T(@10% of Ipeak) | T(@50% of Ipeak) |
|--------|-------|------------------|------------------|
| 220Vac | 61A   | 616μs            | 380μs            |

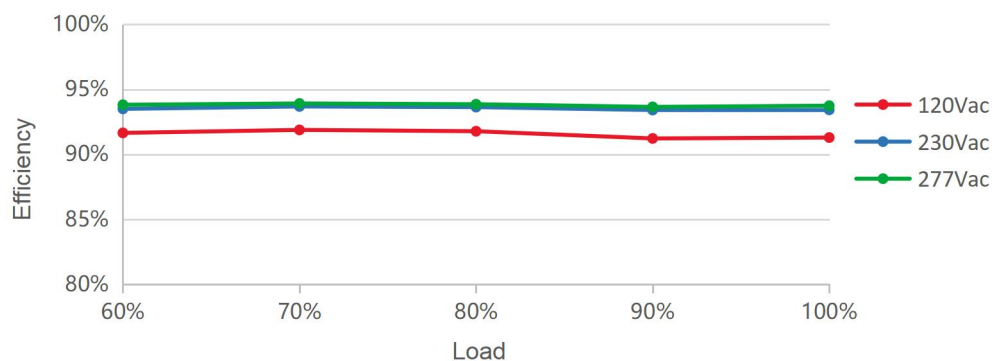
## Output Voltage vs. Output Current

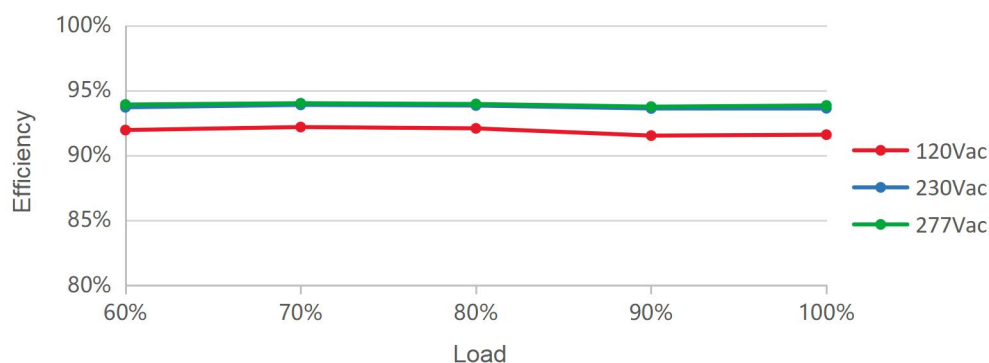
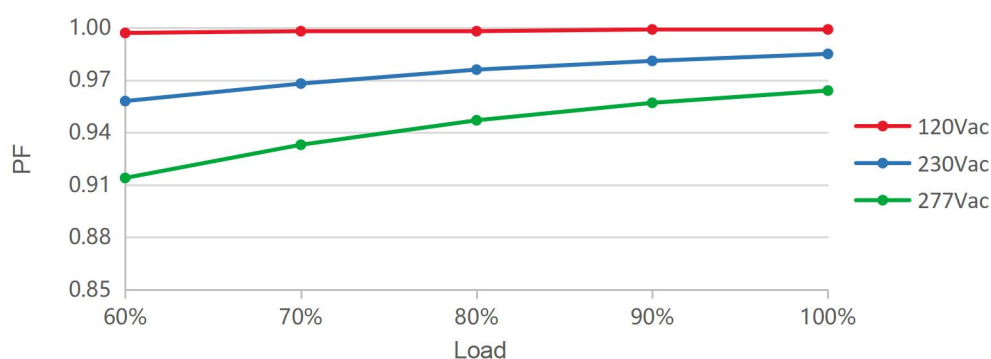
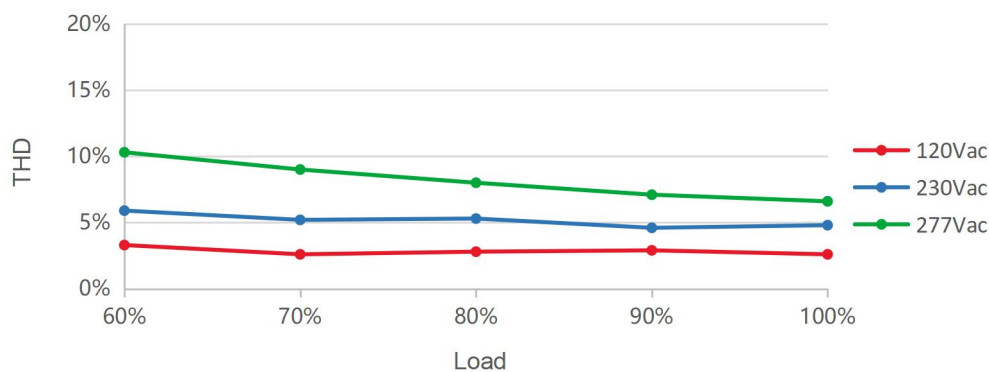
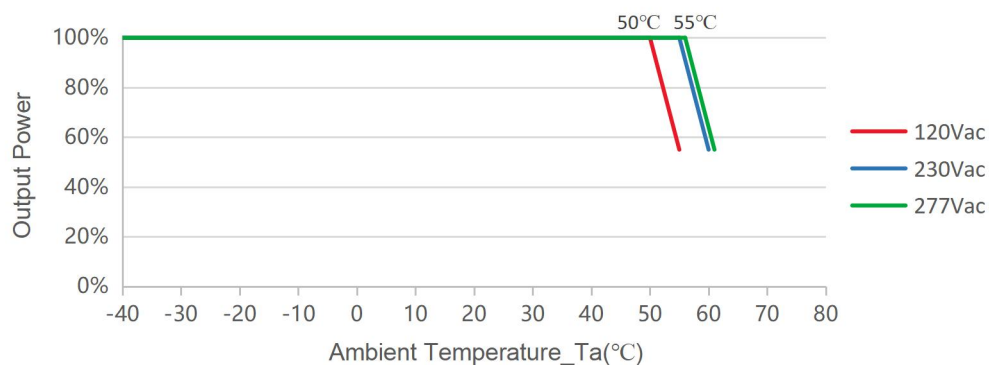


## Output Power vs. Input Voltage

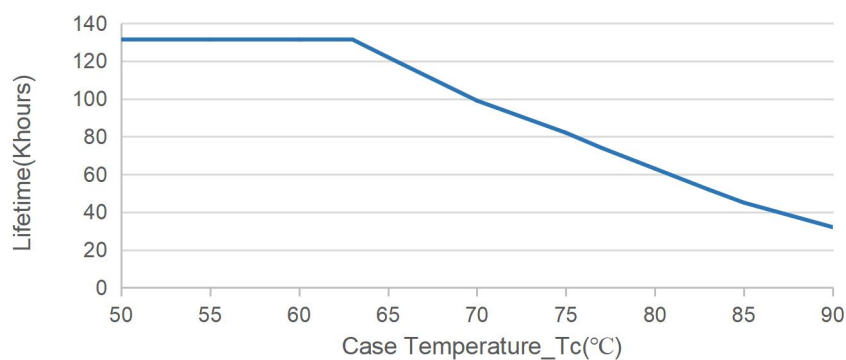


## Efficient vs. Load (Io=1.5A)

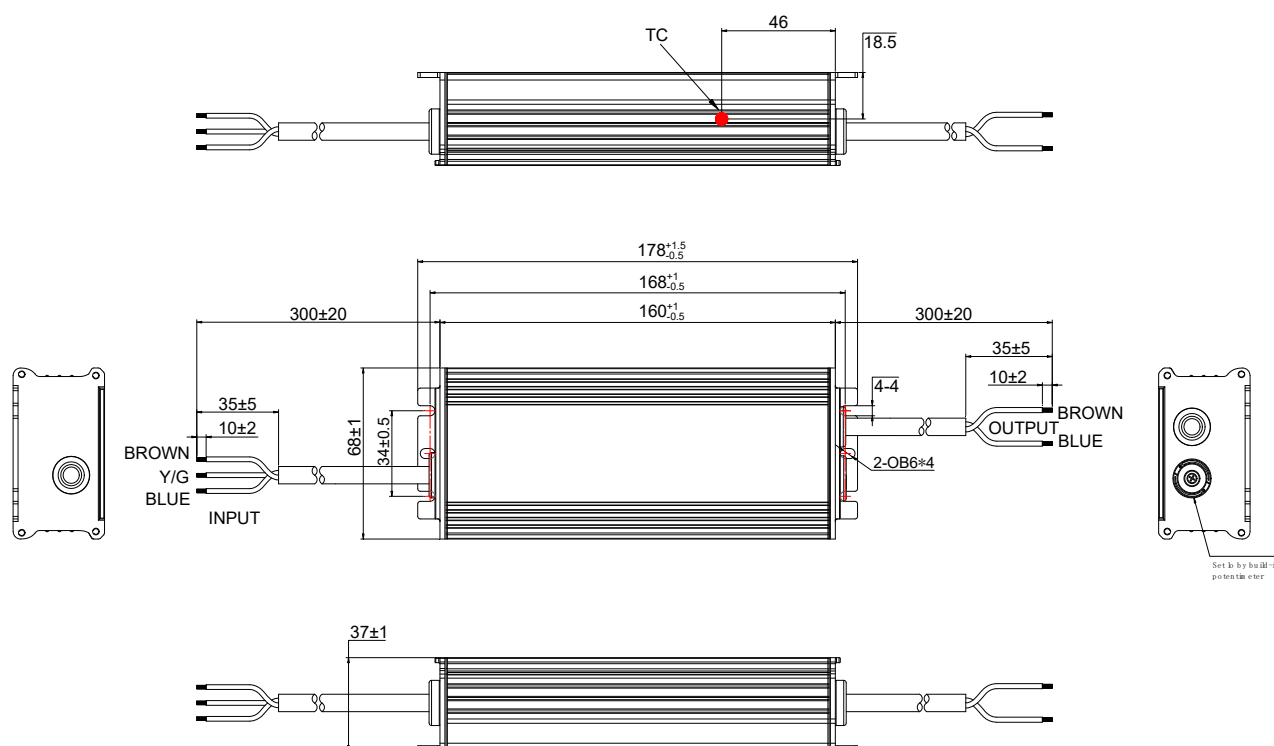


**Efficient vs. Load ( $I_o=1.0A$ )**

**PF vs. Load**

**THD vs. Load**

**Output Power vs. Ambient Temperature**


## Lifetime vs. Case Temperature



## Mechanical Outline



## Specification

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

## AC wire labels

For AC wire label:

The labels stick location as below:

## Label

| INPUT       |             | <b>MOSO</b> <sup>®</sup> X6E-200V200-G 恒流型, 内置防雷管<br>LED DRIVER Constant current type<br>LED 控制装置 Integrated SPD |  |                                                          |                                                                                                                                                          | OUTPUT               |                  |
|-------------|-------------|------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------|
| L (BROWN 棕) | INPUT (输入)  | 100-277V~ 50/60Hz, 240W Max. 2.8A Max.                                                                           |  | 中国制造<br>仅适用LED模块<br>MADE IN CHINA<br>For LED module only | 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<br>SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD<br>No.1061, Songbai Road, Xili Town, Nanshan District,<br>Shenzhen, CHINA | (BROWN 棕)            | V <sub>o</sub> + |
| G (Y/G 黄/绿) | OUTPUT (输出) | 120-200V~, 0.76-1.5A Max. 200W                                                                                   |  |                                                          |                                                                                                                                                          | (BLUE 蓝)             | V <sub>o</sub> - |
| N (BLUE 蓝)  | tc: 90°C    | ta: 50°C Input: 100-200V~<br>ta: 55°C Input: 200-277V~                                                           |  |                                                          |                                                                                                                                                          | I <sub>o</sub> ADJ ⊕ | GMA-519763       |



Version

|     |               |            |
|-----|---------------|------------|
| A.3 | First release | 2024-12-30 |
| B.2 | ECL202502022  | 2025-02-24 |
|     |               |            |
|     |               |            |
|     |               |            |
|     |               |            |

## Specification for Approval

Product Name: 200W LED Driver

Product Model: X6E-200V200-G

Rev: B.2

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

Tel: 0755-27657000

FAX: 0755-27657908

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: 200W LED Driver

Product Model: X6E-200V200-G

Rev: B.2

| 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: 0755-27657908

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

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

| Prepared By | Checked By | Approved By |
|-------------|------------|-------------|
|             |            |             |