

## Description

The N7-( II ) series is specifically designed for industrial lighting applications, non-isolated design, operating in constant current with high power factor and a universal input voltage range of 90~305Vac. This series provides 0-10V/PWM/Resistor dimming controls. The compact housing and high efficiency allow the drivers to operate with high reliability, while featuring input surge, output over voltage, short circuit and over temperature protection.



## Product Features

- Universal input voltage:90~305Vac;
- Non-isolated constant current design, Efficiency up to 96%;
- 3 in 1 dimmable: 0-10Vdc/PWM/Resistor;
- 3 Timers dimming: Traditional, Virtual Midnight; Self-Adaptive;
- Off-line programmable;
- DIP switch power and photocontrol related settings are programmable;
- Output and dimming signal isolating;
- Standby Power Consumption:<0.5W;
- 12V/0.2Aauxiliary power supply;
- Surge protection: DM: 6KV, CM: 10KV;
- Protection: SCP/OVP/OTP/UVP;
- Ingress protection rating: IP66/67;
- Warranty: 5years.

## Application

Industrial lighting  
 Road lighting  
 Landscape lighting

## Models

| Model                | Input Voltage (Vac) | Max Output Power (W) | Output Voltage (Vdc) | Output Current Adjustable Range (A) | Default Current(A) | Eff.(Typ.) | PF(Typ.) | THD(Typ.) |
|----------------------|---------------------|----------------------|----------------------|-------------------------------------|--------------------|------------|----------|-----------|
| N7-080M300A12 ( II ) | 90~305              | 80                   | 180~300              | 0.1~0.37                            | 0.32               | 96%        | 0.97     | 8%        |

Notes:

[1].All specifications are measured at 25°C 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  | -       | 305Vac  |                                                        |
| Rated Input Voltage       | 100Vac | -       | 277Vac  | Refer to Output Power vs. Input Voltage Curve          |
| Input Frequency AC        | 47Hz   | 50/60Hz | 63Hz    |                                                        |
| Max Input Current         | -      | -       | 1A      | 120Vac&100%load                                        |
| Max Input Power           | -      | -       | 100W    | 120Vac&100%load                                        |
| Leakage Current           | -      | -       | 0.70mA  | IEC 60598-1;240Vac/50Hz                                |
| Leakage Current           |        |         | 0.75mIU | UL 8750; 277Vac/60Hz                                   |
| Inrush Current            | -      | -       | 75A     | 230Vac,cold start                                      |
| Standby Power Consumption | -      | -       | 0.5W    | 230Vac, dimming off, no load on auxiliary power supply |
| Power Factor              | 0.95   | 0.97    | -       | 230Vac,50/60Hz, 100% load                              |
|                           | 0.90   | -       | -       | 120-277Vac,50/60Hz,80%-100% load                       |
| THD                       | -      | 8%      | 10%     | 230Vac, 50/60Hz, 100% load                             |
|                           | -      | 10%     | 20%     | 120-277Vac, 50/60Hz, 80%-100% load                     |
| MCB(B16)                  | -      | 28      | -       | 230Vac, 100% load                                      |

## Output Specifications

| Parameter                             | Min.   | Typ. | Max.   | Notes                                                                                      |
|---------------------------------------|--------|------|--------|--------------------------------------------------------------------------------------------|
| Output Voltage Range                  | 180Vdc | -    | 300Vdc |                                                                                            |
| Open Circuit Voltage                  | -      | -    | 350Vdc |                                                                                            |
| Output Current Adjustable Range       | 0.1A   | -    | 0.37A  | The output current can be adjusted using a programmer.                                     |
| Full Power Current Range              | 0.27A  | -    | 0.37A  | 216-300Vdc                                                                                 |
| Default Photocontrol Turn-off Voltage | 0V     | 1V   | 2V     | Adjust via PC software                                                                     |
| Default Photocontrol Turn-on Voltage  | 3V     | 4V   | 5V     |                                                                                            |
| Current Accuracy                      | -8%    | -    | +8%    |                                                                                            |
| Total Output Current Ripple (pk- pk)  | -      | 10%  | 15%    | 20MHz BW full load & LED load the LED load ripple is slightly different for different LEDs |
| Startup Overshoot Current             | -      | -    | 10%    | 120-277Vac full load condition, LED load                                                   |
| Auxiliary Source output voltage       | 10.8V  | 12V  | 13.8V  |                                                                                            |
| Auxiliary Source output current       | -      | -    | 200mA  |                                                                                            |
| Line Regulation                       | -5%    | -    | +5%    | 25°C±10°C ambient temperature, input voltage changes from 120Vac to 277Vac                 |
| Load Regulation                       | -5%    | -    | +5%    | 25°C±10°C ambient temperature, 230Vac input, load changes from 80% to 100%                 |
| Turn-on Delay Time                    | -      | -    | 1.0s   | 120-277Vac, 100%load                                                                       |

## General Specification

| Parameter                                    | Min.                              | Typ.      | Max.  | Notes                                                                              |
|----------------------------------------------|-----------------------------------|-----------|-------|------------------------------------------------------------------------------------|
| Efficiency@120Vac                            | 92%                               | 94%       | -     | 0.27A, 300Vdc; 25°C ambient temperature, no load of auxiliary source               |
| Efficiency@230Vac                            | 93%                               | 95%       | -     | 0.27A, 300Vdc; 25°C ambient temperature, no load of auxiliary source               |
| Efficiency@277Vac                            | 94%                               | 96%       | -     | 0.27A, 300Vdc; 25°C ambient temperature, no load of auxiliary source               |
| MTBF                                         | -                                 | 200Khours | -     | 25°C±10ambient temperature,230Vac,80% load (MIL-HDBK-217/SR-332)                   |
| Lifetime                                     | -                                 | 50Khours  | -     | 230Vac& 100% load, Tc 85°C, refer to lifetime vs. case temperature curve           |
| Operating Temperature Ta                     | -40°C                             | -         | +60°C | 120-200VAC Ta:50°C<br>200-277VAC Ta:60°C                                           |
| Operating Case Temperature for Safety Tc_s   | -40°C                             | -         | +90°C |                                                                                    |
| Operating Case Temperature for Warranty Tc_w | -40°C                             | -         | +85°C | 5 years warranty shell temperature<br>Humidity: 10%-90% RH                         |
| Storage TemperatureTa                        | -40°C                             | -         | +85°C | Humidity:5%-95% RH                                                                 |
| Altitude                                     | -60m                              | -         | 4000m |                                                                                    |
| Over Temperature ProtectionTc                | 90°C                              | 95°C      | 100°C | Decreases output current, returning to normal after over temperature is removed    |
| Short Circuit                                |                                   |           |       | Hiccupmode. The output shall return to normal when the fault condition is removed. |
| Dimensions (L*W*H)mm                         | 134.7*55*33mm                     |           |       |                                                                                    |
| Net Weight                                   | 500±50g/PCS                       |           |       |                                                                                    |
| Package (L*W*H)                              | 460*390*165mm; *12PCS/Ctn, GW:8Kg |           |       |                                                                                    |

## Dimming

| Parameter                     | Min.                  | Typ.  | Max.                  | Notes                                                   |
|-------------------------------|-----------------------|-------|-----------------------|---------------------------------------------------------|
| Absolute Maximum Voltage      | -                     | 10V   | 15V                   | On the Vdim (+) Pin                                     |
| Source Current on Vdim (+)Pin | -                     | 100uA | 200uA                 |                                                         |
| Dimming Range                 | 10% I <sub>omax</sub> | -     | 100% I <sub>set</sub> | I <sub>set</sub> =0.27-0.37A (Full Power Current Range) |
| Suggest Dimming Input 0-10V   | 0V                    | -     | 10V                   |                                                         |
| Turn-on voltage               | 0.9V                  | -     | 1.2V                  |                                                         |
| Turn-off voltage              | 0.6V                  | -     | 0.9V                  |                                                         |
| PWM in High Level             | 9.7V                  | -     | 10.3V                 |                                                         |
| PWM in Low Level              | 0V                    | -     | 0.3V                  |                                                         |
| PWM in Frequency Range        | 1KHz                  | -     | 2KHz                  |                                                         |
| PWM in Duty Cycle             | 1%                    | -     | 99%                   |                                                         |
| Turn-on duty cycle            | 9%                    | -     | 12%                   |                                                         |
| Turn-off duty cycle           | 6%                    | -     | 9%                    |                                                         |
| Resistor Range                | 0                     | -     | 100KΩ                 |                                                         |
| Time control dimming          | -                     | -     | -                     | Three time control options are available.               |
| Output lumen compensation     | -                     | -     | -                     | Output lumen compensation                               |

## Safety Specifications

| Parameter                          | UL               | CE/CCC  | Note                                                                                                                       |
|------------------------------------|------------------|---------|----------------------------------------------------------------------------------------------------------------------------|
| Dielectric Strength (Input-Ground) | 1600Vac          | 1500Vac | 60s, Current not exceeding 5mA input L/N short-circuit                                                                     |
| Grounding Resistance               | $\leq 0.1\Omega$ |         | 25°C±10°C Ambient Temperature, pass 30A Current, 120s. (UL)<br>25°C±10°C Ambient Temperature, pass 25A Current, 60s (CE) . |
| Insulation Resistance              | $\geq 10M\Omega$ |         | Input-PE, 500Vdc/60s/25°C                                                                                                  |

Notes: 1.The voltage resistance requirement of aluminum substrate is greater than 2KVac.

2. During the withstand voltage test, please short-circuit the L/N, positive and negative output lines, positive and negative dimming lines, and auxiliary power supply.

## Safety Compliance

| Safety Category | Safety normative standards                | Certification | Notes |
|-----------------|-------------------------------------------|---------------|-------|
| CCC             | GB/T19510.1, GB/T 19510.213               | √             |       |
| 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/NZS IEC 61347.2.13<br>AS/NZS 61347.1   |               |       |
| EAC             | ГОСТ Р МЭК 61347-1<br>ГОСТ IEC 61347-2-13 |               |       |

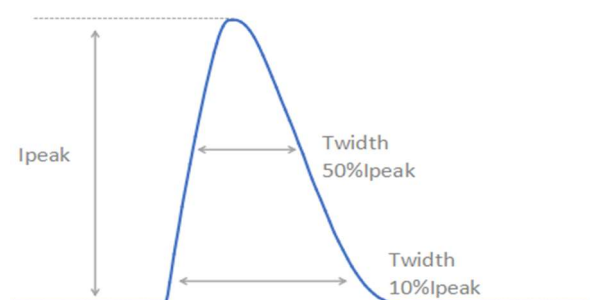
## EMC Compliance

| 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                                                      | √        | Class B |
| Surge Shock Immunity | ANSI/C82.77-5-2017                                               |          |         |
|                      | IEC/EN 61000-4-5                                                 | √        |         |
| Ringing Wave         | IEC/EN 61000-4-12                                                |          |         |
|                      | ANSI/IEEE C62.41.2                                               |          |         |
| 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

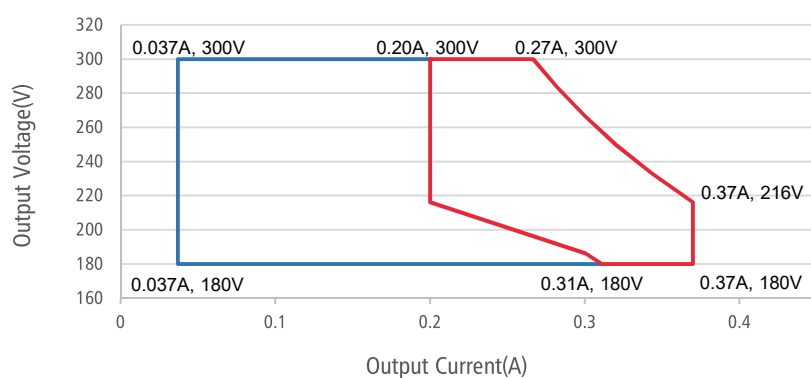
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

## Inrush Current Waveform

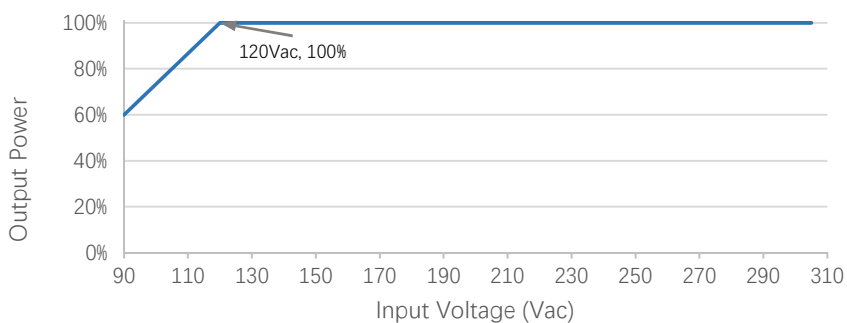


| $V_{in}$ | $I_{peak}$ | $T_{(10\% \text{ of } I_{peak})}$ | $T_{(50\% \text{ of } I_{peak})}$ |
|----------|------------|-----------------------------------|-----------------------------------|
| 120Vac   | 48.2A      | 173 $\mu$ s                       | 76 $\mu$ s                        |
| 230Vac   | 69.5A      | 133.6 $\mu$ s                     | 75.2 $\mu$ s                      |
| 277 Vac  | 85A        | 170 $\mu$ s                       | 78.4 $\mu$ s                      |

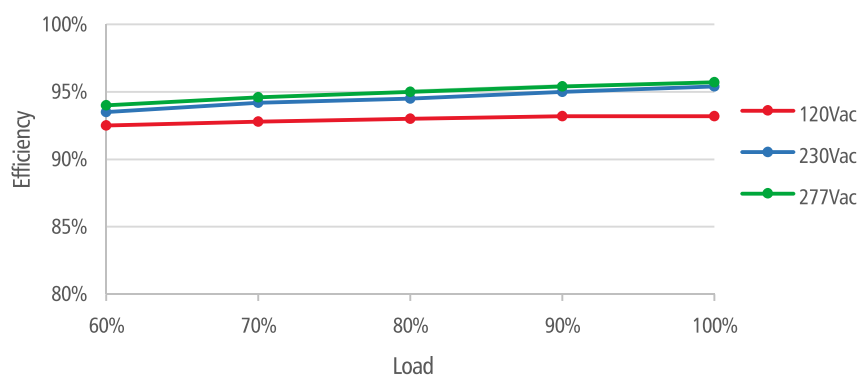
## Output Voltage vs. Output Current



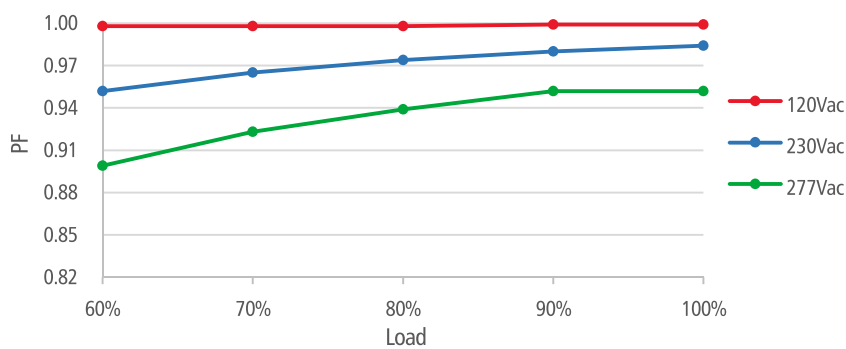
## Output Power vs. Input Voltage



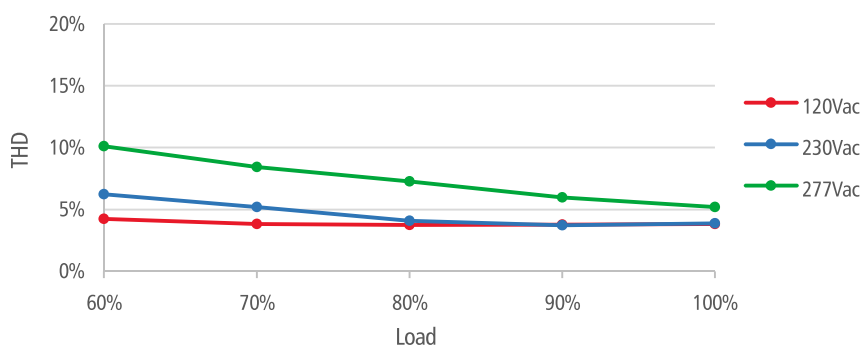
## Efficiency vs. Load



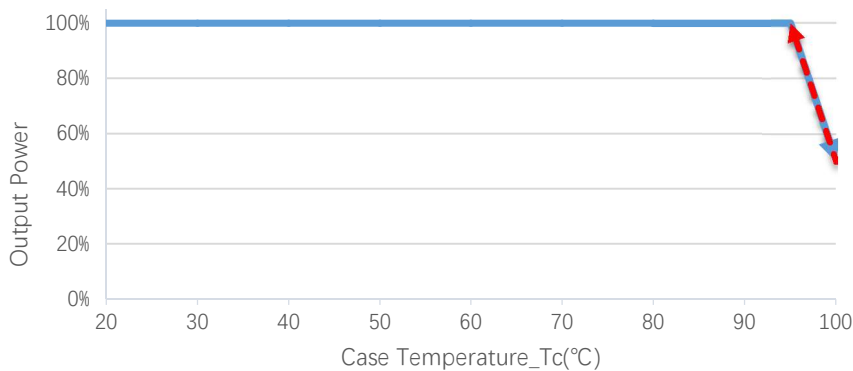
## PF vs. Load



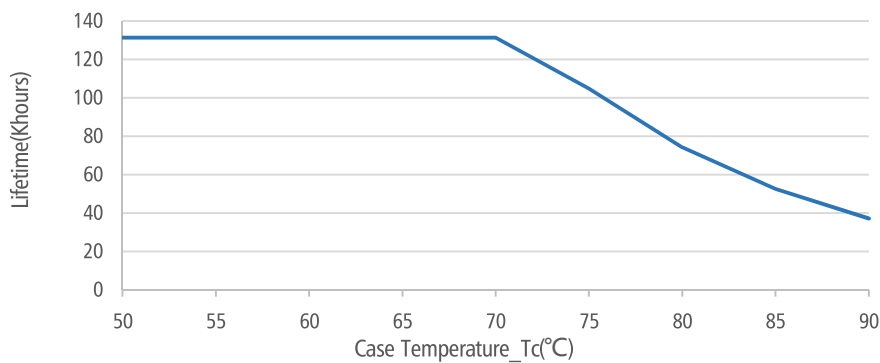
## THD vs. Load



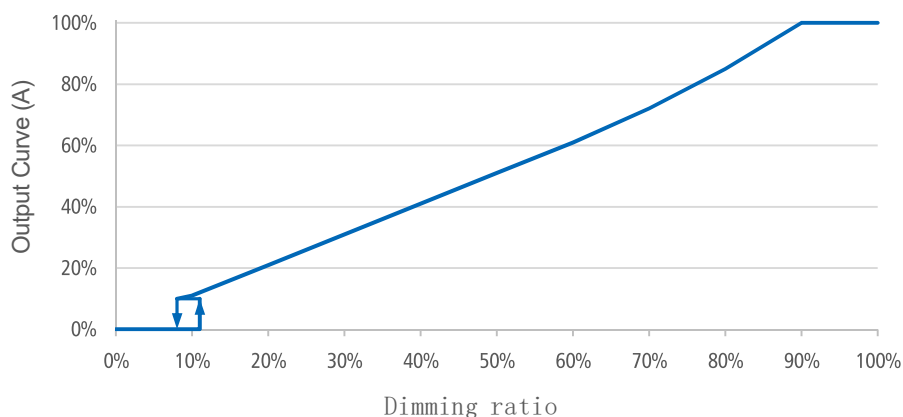
## Output Power vs. Case Temperature



## Lifetime vs. Case Temperature

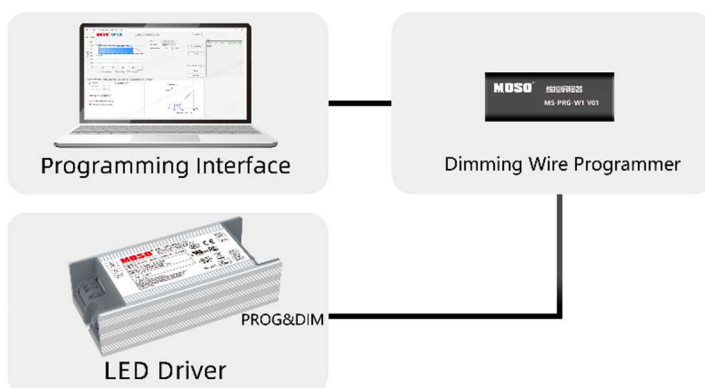


## 0-10V/PWM/Resistor Dimming



## Off-line Programming

User-friendly connection of programming without necessary to power on device (suitable for N7-II, N7-II Series).



### Visual Intelligent Programming

1. Set the output parameters through the control signal line 0-3.3V/0-5V/0-9V/0-10V optional.
2. Timer dimming. Set the timer control function, support up to 7 segments;
3. Set DIP switch power range and photocontrol range;
4. Set output CLO;
5. Read the recorded system parameters; Record the working time working temperature,.
6. Configure the driving parameters. After setting is completed, then click the configured parameters to complete programming.

Programming mode 2:



Instructions of one touch programmer:

1. Open the software interface and download the program to the offline programmer .
2. Connect the dimming wire with the programmer, press the programmer button, the programmer will give you a subtle reminder “( Beep) ” to tell you the installation completed.

[illegible]

|         |                                                                                      |        |
|---------|--------------------------------------------------------------------------------------|--------|
| Input   | H05RN-F 3*1.0mm² L=300±20mm φ=7.2mm L: Brown, N: Blue, G: Yellow and Green           | CCC+CE |
| Output  | H05RN-F 2*1.0mm² L=300±20mm φ=6.8mm LED+: Brown, LED-: Blue                          | CCC+CE |
| Dimming | UL21996 3*22AWG L=220±20mm φ=5mm DIM+: Purple, DIM-/12V-: Pink, 12V+:Black and White | UL     |

Technical drawing of a MOSO LED driver. The drawing includes a top view with dimensions 107.70 mm and 28.00 mm. The front view shows the MOSO logo, model number N7-080M300A12 (II), and various input/output specifications. The input is L (BROWN) and N (BLUE), and the output is G (Y/G黄/绿). The drawing also includes safety symbols (CCC, CE, RoHS, IP66/67) and a warning symbol (Integrated SPD).

107.70 mm

28.00 mm

**INPUT** **MOSO**® N7-080M300A12 (II)  
LED控制装置 (恒流模式)  
Constant current type LED DRIVER

**OUTPUT**

L (BROWN 棕) INPUT (输入) 100-277V~50/60Hz, 1.0A Max. PF:0.9C-0.95. 100W

N (BLUE 蓝) OUTPUT (输出) 180-300V~, 0.10-0.37A  
Uout (最大电压) = 350V~  
Max. Power (最大功率): 80W

G (Y/G黄/绿) tc: 90°C  
ta: 50°C Input: 100-200V~  
ta: 60°C Input: 200-277V~

IP66/67  
RoHS

Brown (棕色) LED "+"  
Blue (蓝色) LED "-"  
Purple (紫色) DIM "+"  
Pink (粉色) 12V / DIM "-"  
Black/White 黑色/白色 12V "+"  
(12V 200mA)

Integrated SPD (内置防雷管)

深圳茂硕电子科技有限公司  
SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD

MADE IN CHINA

**Version**

|     |               |            |
|-----|---------------|------------|
| A.0 | First release | 2026-01-12 |
|     |               |            |
|     |               |            |
|     |               |            |
|     |               |            |
|     |               |            |
|     |               |            |

## Specification for Approval

Product Name: 80W Linear Non-isolated Driver

Product Model: N7-080M300A12(II)

Rev. A.0

Address: XiLiSongbai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R.China

Post Code: 518108

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: 80W Linear Non-isolated Driver

Product Model: N7-080M300A12(II)

Rev. A.0

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

Address:XiLi Songbai Road 1061, NanshanDistrict, Shenzhen City, GuangdongProvince, P.R.ChinaPost

Code:518108

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