Description

The N7L-(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. 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%;
- Surge protection: DM: 6KV, CM: 6KV;
- Protection: SCP/OVP/OTP/UVP;
- 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.)
N7L-080V300 （II）	90~305	80	180~300	0.2~0.37	0.32	96%	0.97	8%

Notes:
[1].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	-	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, 100% load
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)	-	12	-	230Vac; 100% load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Range	180Vdc	-	300Vdc	
Open Circuit Voltage	-	-	350Vdc	
Output Current Adjustable Range	0.2A	-	0.37A	
Current Accuracy	-5%	-	+5%	
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
Line Regulation	-5%	-	+5%	25℃±10℃ ambient temperature, input voltage changes from 120Vac to 277Vac
Load Regulation	-8%	-	+8%	25℃±10℃ambient temperature, 230Vacinput, load changes from 80% to100%
Turn-on Delay Time	-	-	1.0s	120-277Vac, 100%load

General Specification

Parameter	Min.	Typ.	Max.	Notes
Efficiency@120Vac	92%	94%	-	0.33A, 300Vdc; 25℃ ambient temperature, no load of auxiliary source
Efficiency@230Vac	93%	95%	-	0.33A, 300Vdc; 25℃ ambient temperature, no load of auxiliary source
Efficiency@277Vac	94%	96%	-	0.33A, 300Vdc; 25℃ ambient temperature, no load of auxiliary source
MTBF	-	200Khours	-	25℃±10ambient temperature,230Vac,80% load (MIL-HDBK-217/SR-332)
Lifetime	-	50Khours	-	230Vac＆100% load, Tc 80℃, refer to lifetime vs. case temperature curve
Operating Temperature Ta	-40℃	-	+60℃	120-200VAC Ta:50℃ 200-277VAC Ta:60℃
Operating Case Temperature for Safety Tc_s	-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w	-40℃	-	+80℃	5 years warranty shell temperature Humidity: 10%-90% RH
Storage TemperatureTa	-40℃	-	+85℃	Humidity:5%-95% RH
Altitude	-60m	-	4000m	
Over Temperature ProtectionTc	90℃	95℃	100℃	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.
Input Under voltage Protection				Under-voltage will automatically reduce the output voltage.
Dimensions (L*W*H)mm	106*56*33			
Net Weight	220±50g/PCS			
Package (L*W*H)	460*300*215mm; 27PCS/Ctn., GW:7Kg			

Safety Specifications

Parameter	UL	CE/CCC	Note
Dielectric Strength（Input-Ground）	1600	1500Vac	60s, Current not exceeding 5mA input L/N short-circuit
Grounding Resistance	≤0.1Ω		25℃±10℃ Ambient Temperature, pass 30A Current, 120s.（UL） 25℃±10℃ Ambient Temperature, pass 25A Current, 60s（CE）.
Insulation Resistance	≥10MΩ		Input-PE, 500Vdc/60s/25℃

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	GB19510.1,GB19510.14	√	
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	√	
SAA	AS/NZS 61347.1	√	

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 ЕН 55015 ГОСТ IEC 61547	√	
EAC	ГОСТ 30804.3.3 (IEC 61000-3-3)	√	

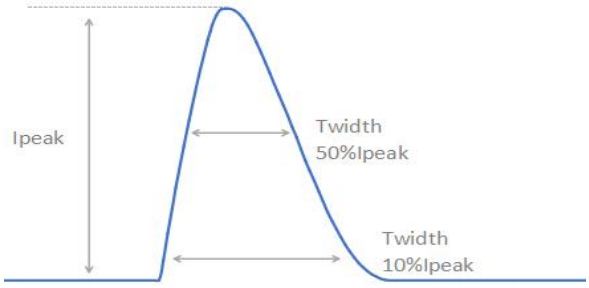
Notes:

1. The power supply complies with relevant EMC standards. As a part of the terminal equipment system, the power supply needs to be reconfirmed for EMC in conjunction wit h the entire system.

RoHS

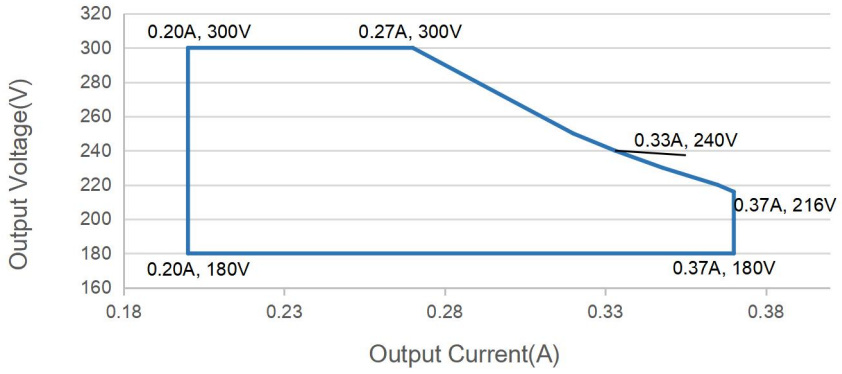
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current Waveform

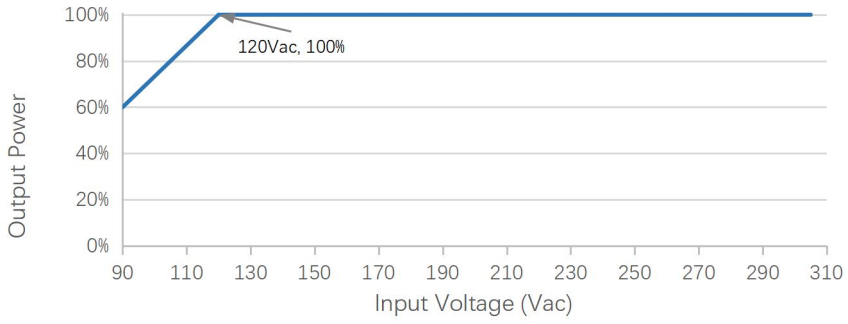


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	48.2A	173μs	76μs
230Vac	69.5A	133.6μs	75.2μs
277 Vac	85A	170μs	78.4μs

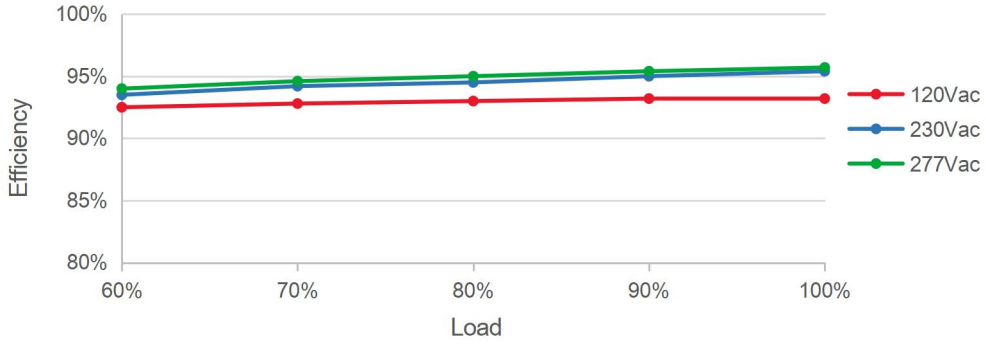
Output Voltage vs. Output Current



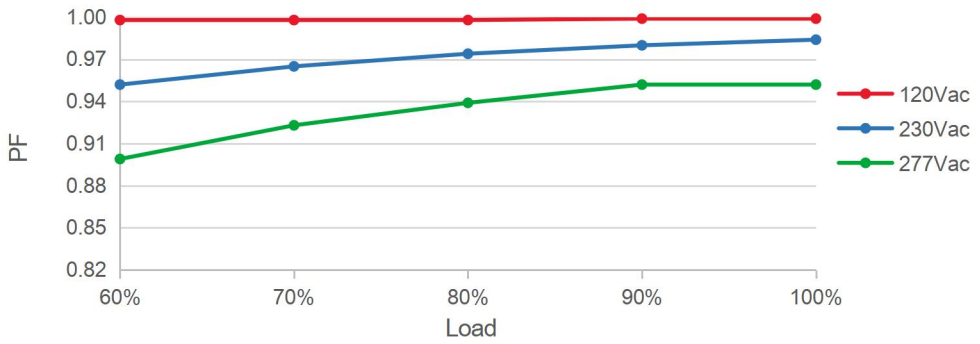
Output Power vs. Input Voltage



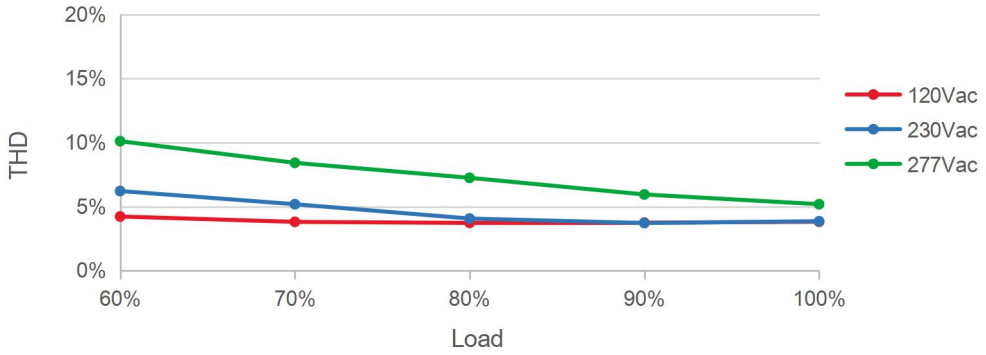
Efficiency vs. Load



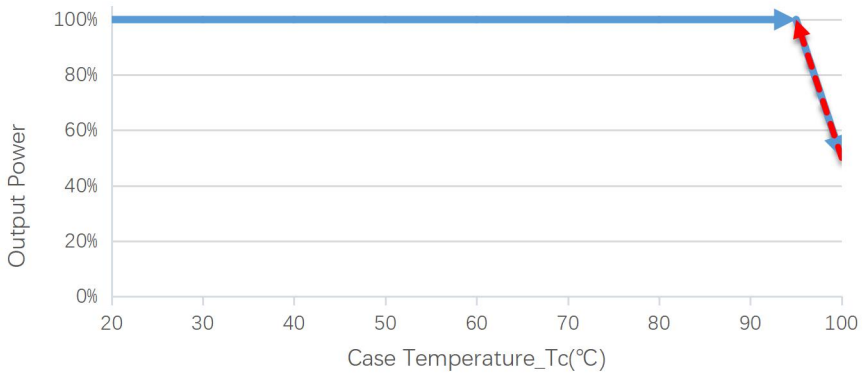
PF vs. Load



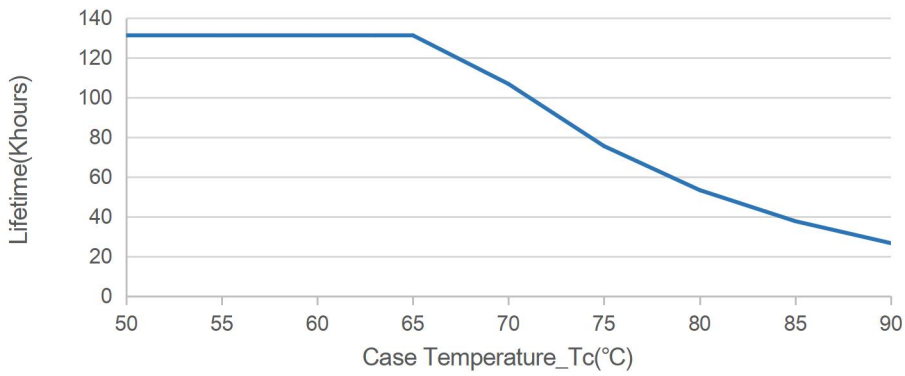
THD vs. Load



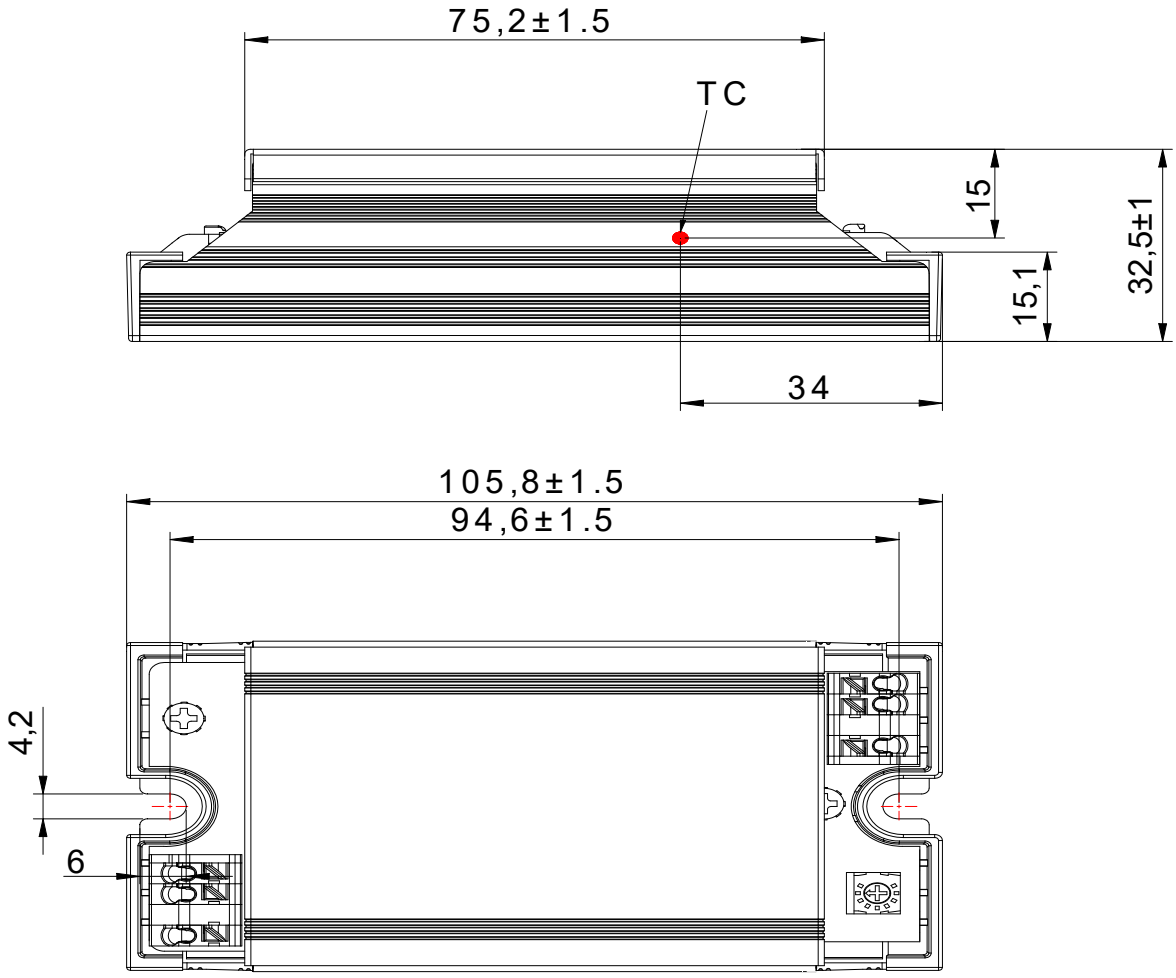
Output Power vs. Case Temperature



Lifetime vs. Case Temperature



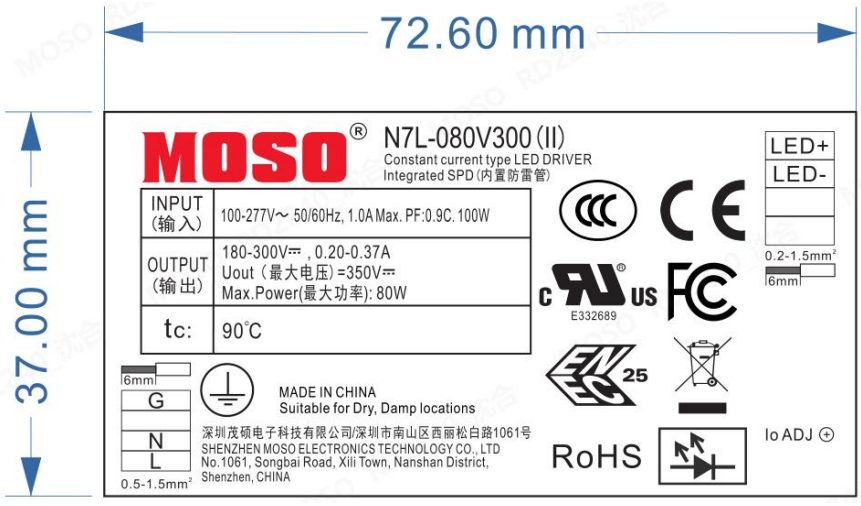
Mechanical Outline



Notes:

1.In order to meet the requirements of the "derating curve" and "maximum ambient temperature of 50 ℃", it is necessary to add auxiliary heat dissipation devices with a recommend ed heat dissipation area of 380cm ² and the volume is 115cm ³; It is also necessary to add thermal conductive silicone grease between the heat sink and LED driver to ensure a tight fit with the auxiliary heat sink.

Label



Version

A.1	First release	2026-01-12

Specification for Approval

Product Name: 80W Linear Non-isolated Driver

Product Model: N7L-080V300 (II)

Rev. A.1

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Prepared By	Checked By	Approved By

Specification for Approval

Product Name: 80W Linear Non-isolated Driver

Product Model: N7L-080V300 (II)

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		

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