

Description

The N5 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 180~265Vac. 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: 180~265Vac ;
- Rated Input voltage: 200~240Vac;
- Constant current design, Efficiency up to 91.5%;
- High surge protection: 4KV line-line, 6KV line-earth;
- Protections: input OVP 400Vac for 1 hour, SCP / OVP / OTP;
- IP67 design for indoor and outdoor applications;
- 7 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)	Adjustable Current Range (A)	Default Current(A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.)
N5-010V220	180~265	10	180~220	0.045	0.045	91.5%	0.95	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	180Vac	-	265Vac	
Rated Input voltage	200Vac	-	240Vac	Refer to Output Power vs. Input Voltage curve
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	0.07A	180Vac & 100% load
Max Input Power	-	-	12W	180Vac & 100% load
Leakage Current	-	-	0.70mA	IEC 60598-1; 240Vac/50Hz
Inrush Current	-	-	50A	230Vac, 100% load
Power Factor (PF)	0.90	0.95	0.99	200-240Vac , 50/60Hz , 100% load
Total Harmonic Distortion (THD)	-	5%	10%	200-240Vac , 50/60Hz , 85%-100% load
MCB(B16)	-	17	-	230Vac; 100%load

Output Specifications

Parameter	Min	Typ.	Max	Notes
Output Voltage Range	180Vdc	-	220Vdc	
Open Circuit Voltage	-	-	300Vdc	
Output Current Range		-	0.045A	
Full Power Current Range		-	0.045A	
Current Accuracy	-5%	-	+5%	
Total Output Current Ripple (pk-pk)	-	10%	20%	20MHz BW full load & LED load the LED load ripple is slightly different for different LEDs
Startup Overshoot Current	-		10%	180-220Vac full load condition, LED load
Line Regulation	-5%	-	+5%	25°C±10°C ambient temperature, input changes from 180Vac to 265Vac
Load Regulation	-5%	-	+5%	Load varies from 70% to 100% with 230Vac Input at 25°C±10°C ambient temperature
Turn-on Delay Time	-	-	1.0s	180-265Vac, 100% load

General Specifications

Parameter	Min	Typ.	Max	Notes
Efficiency@230Vac	90%	91.5%	-	100% load
Mean Time Between Failure	-	200Khours	-	25°C±10°C ambient temperature , 230Vac , 80% load condition (MIL-HDBK-217/SR-332)
Lifetime	-	50Khours	-	230Vac & 100% load , Tc 75°C , refer to lifetime vs. case temperature curve
Operating Temperature Ta	-40°C	-	+50°C	
Operating Tc for Safety Tc_s	-40°C	-	+90°C	
Operating Tc for Warranty Tc_w	-40°C	-	+75°C	7-year warranty shell temperature, humidity: 10% to 95% RH
Storage Temperature Ta	-40°C	-	+75°C	Humidity: 5% to 100% RH
Altitude	-60m	-	4000m	
Over Temperature Protection Tc	65°C	70°C	75°C	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	-	-	5W	Hiccup mode and auto recovery. The output shall return to normal when the fault condition is removed.
Dimensions (L*W*H)	125*47*26mm			
Net Weight	285g			
Package (L*W*H)	L366xW306xH142mm; 16PCS/Ctn, Gross Weight: 6.5Kg			

Safety Specification

Parameter	Min	Typ.	Max	Notes
Dielectric Strength (Input-Ground)	-	1600Vac	-	60s , Current not exceeding 5mA
Grounding Resistance	-	-	0.1Ω	25°C±10°C Ambient Temperature, pass 25A Current, 60s.
Insulation Resistance	10MΩ	-	-	Input-PE, 500Vdc/60s/25°C

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/NZS IEC 61347.2.13		
SAA	AS/NZS 61347.1		

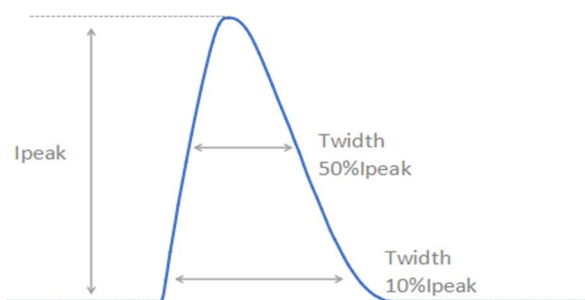
EMC Compliance

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		
Surge Shock Immunity	ANSI/C82.77-5-2017		
Ringling Wave			

RoHS

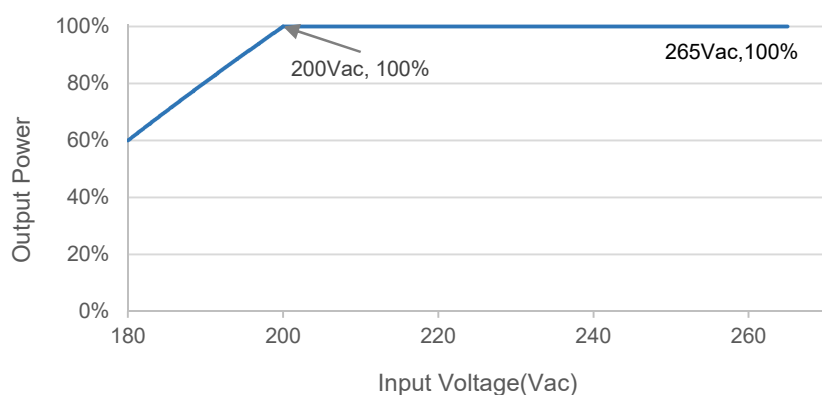
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current

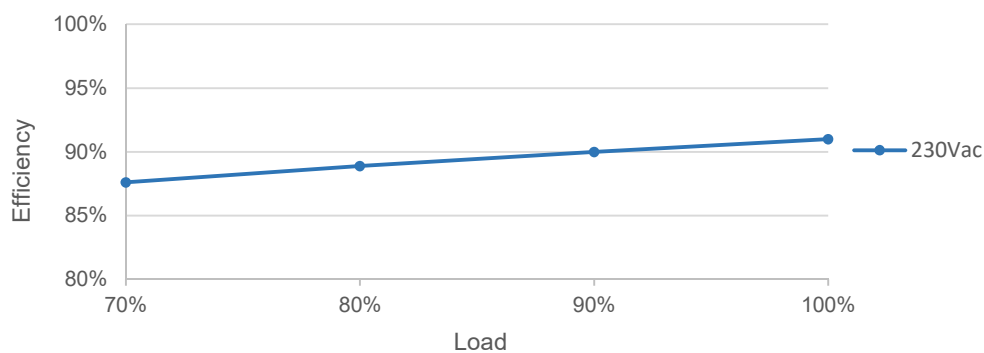


V_{in}	I_{peak}	$T(@10\% \text{ of } I_{peak})$	$T(@50\% \text{ of } I_{peak})$
230Vac	43A	140 μ s	80 μ s

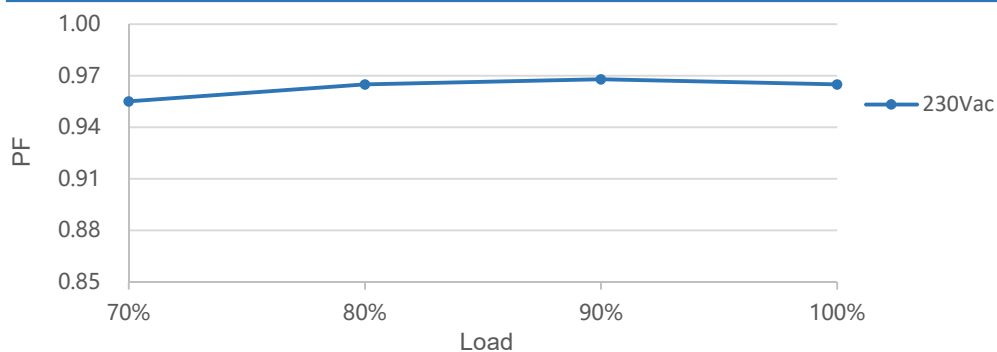
Output Power vs. Input Voltage

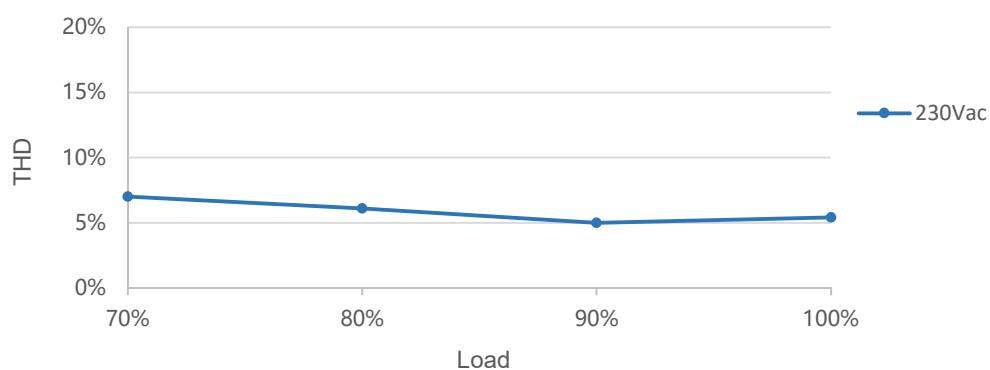
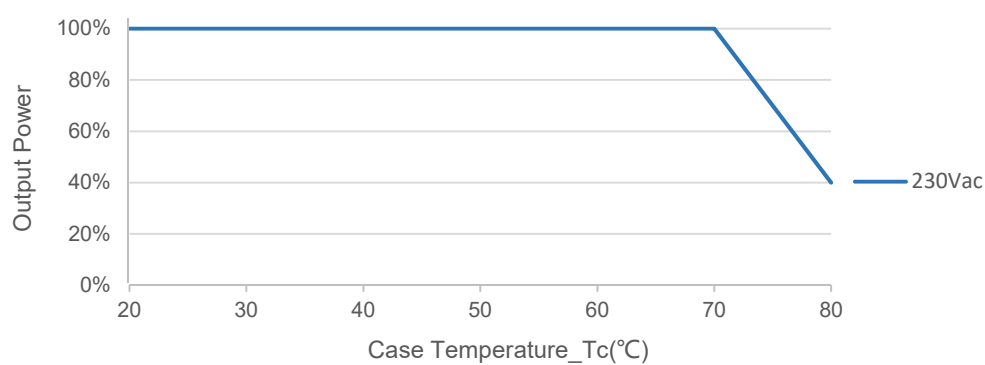
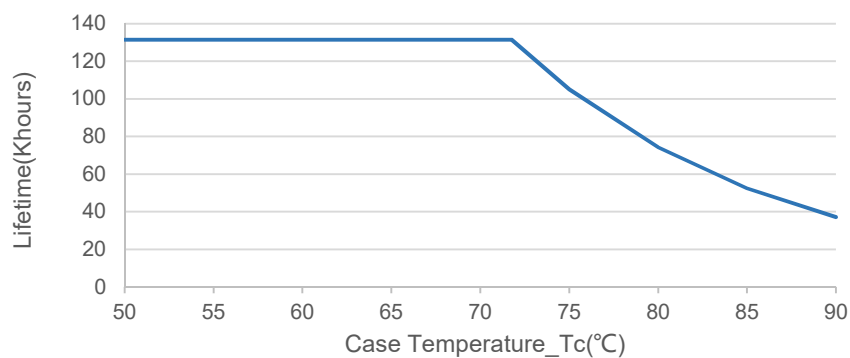


Efficiency vs. Load

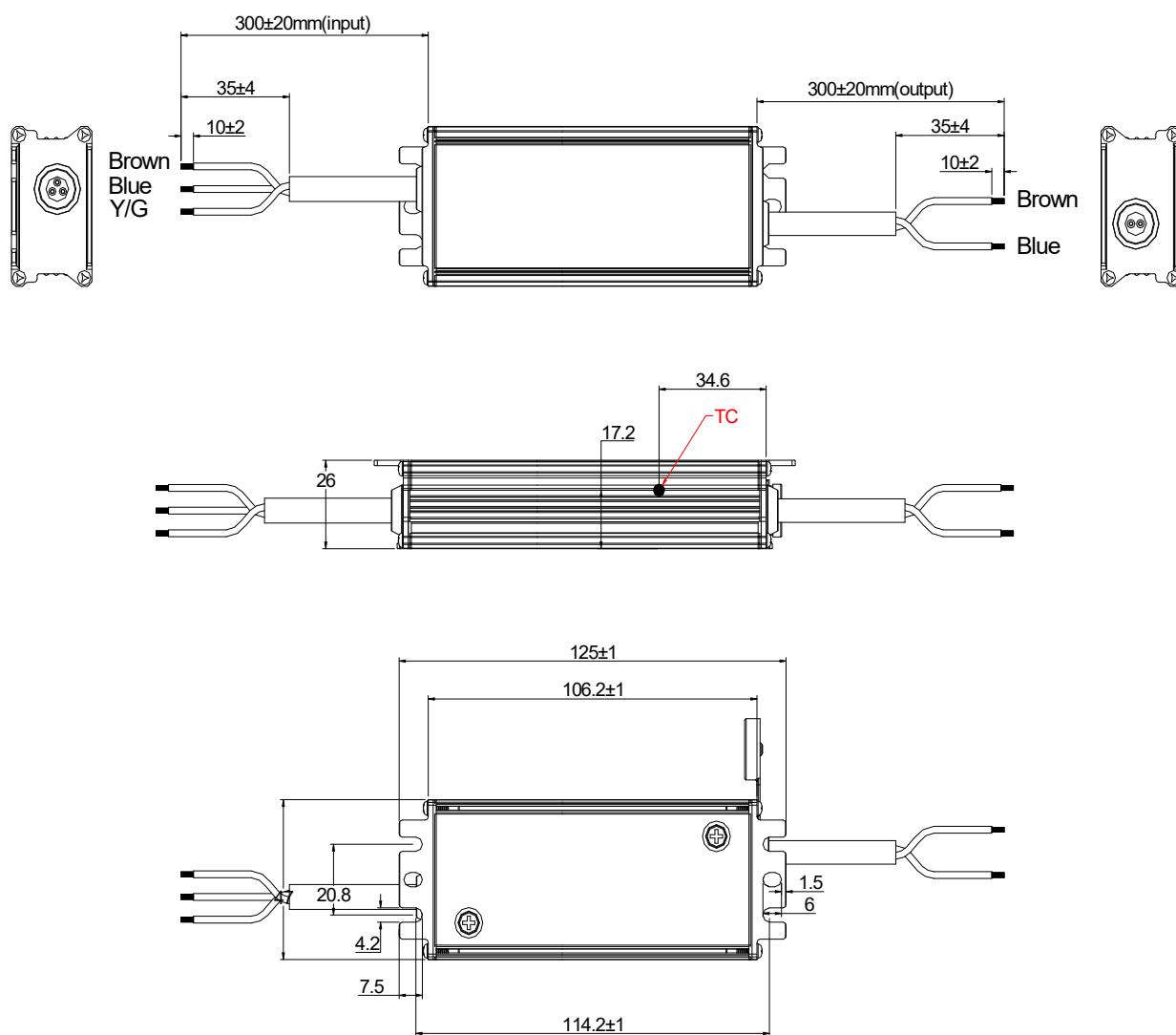


PF vs. Load



THD vs. Load**Output Power vs. Case Temperature****Lifetime vs. Case Temperature**

Mechanical Outline



Specification

Input	CCC+VDE 3x1.0mm ² L=300±20mm	CCC/CE
Output	CCC+VDE 2x1.0mm ² L=300±20mm	CCC/CE

Label



Version

A.3	First release	2026/03/20

Specification for Approval

Product Name: 10W LED Driver

Product Model: N5-010V220

Rev: A.3

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

Tel: 0755-27657000

FAX: 0755-27657908

E-mail: info@mosopower.com

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

Prepared By	Checked By	Approved By

Specification for Approval

Product Name: 10W LED Driver

Product Model: N5-010V220

Rev: A.3

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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