Specification for Approval

Product Name: 150W LED Driver

Product Model: N6H-150M260A12H

Rev: A.1

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

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

Prepared By	Checked By	Approved By

Specification for Approval

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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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Description

The N6H series is 150W constant current LED drive power supply with an input voltage range of 200 ~ 480Vac, high power factor and low THD, with a maximum output current of 0.70A. Lightning protection, output over voltage protection and short circuit protection ensure high product reliability. The compact metal case and high efficiency enables the driver to operate with high reliability. Professional application linear lamps class industrial lighting and plant lighting products.

c UL us LISTED E332689

FC Class P

Product Features

- Universal input voltage: 198~528Vac ;
- Full power work range: 220~480Vac;
- Constant current design，Efficiency up to 93%;
- adjustable output current with potentiometer;
- 3-in-1 dimmable: 0~10Vdc / PWM/ Resistors, Dim-to-off no afterglow;
- Auxiliary power supply: 12V/200mA;
- Protections: SCP / OVP / OTP;
- High surge protection: CM:6KV, DM:6KV;
- IP65 design;
- 5 years warranty;

Application

Industrial lighting

Horticulture lighting

Road lighting

Models

Model Number	Input Voltage Range (Vac)	MAX Output Power (W)	Output Voltage Range (Vdc)	Output Current Range (A)	Full Power Output Current Range (A	Default Current(A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.)
N6H-150M260A12H	198~528	150	180~260	0.42~0.70	0.58~0.70	0.70	93%	0.98	10%

Notes:

[1]. All specifications are measured at 25℃ ambient temperature, input voltage 220Vac, and the typical value tested at full load, if no specific note.

Input Specifications

Parameter	Min	Typ.	Max	Notes
Input Voltage Range	198Vac	200~480Vac	528Vac	Refer to Output Power vs. Input Voltage curve
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	1.1A	200~480Vac & 100% load
Max Input Power	-	-	180W	200~480Vac & 100% load
Leakage Current	-	-	0.75MIU	UL 8750; 480Vac/60Hz
Inrush Current	-	-	75A	220Vac, 100% load, Ta=25℃
Power Factor (PF)	0.91	0.98	-	220Vac，50-60Hz，80%-100% load
Power Factor (PF)	0.90	0.92	-	480Vac，50Hz，80%-100% load
Total Harmonic Distortion (THD)	-	10%	20%	220-480Vac，50-60Hz，80%-100% load
MCB(B16)	-	15	-	480Vac; 100%load

Output Specifications

Parameter	Min	Typ.	Max	Notes
Output Voltage Range	180Vdc	-	260Vdc	
Open Circuit Voltage	-	-	310Vdc	
Output Current Range	0.42A	-	0.7A	Adjustable output current with potentiometer
Full Power Current Range	0.58A	-	0.70A	P=Uo*Io=150W, 100% load
Current Accuracy	-5%	-	+5%	
Total Output Current Ripple (pk-pk)	-	15%	20%	20MHz BW full load & LED load the LED load ripple is slightly different for different leds
Startup Overshoot Current	-	-	10%	220-480Vacfull load condition, LED load
Auxiliary Source Output Voltage	10.8V	12.0V	13.8V	480Vac & Auxiliary source with full load.
Auxiliary Source Output Current	-	-	200mA	
Line Regulation	-5%	-	+5%	25℃±10℃Cambient temperature, input changes from 220Vac to 480Vac
Load Regulation	-5%	-	+5%	Load varies from 80% to 100% with 480Vac Input at 25℃±10℃ ambient temperature
Turn-on Delay Time	-	-	1.0s	220~480Vac,100% load

General Specifications

Parameter	Min	Typ.	Max	Notes
Efficiency@220Vac	92%	93.5%	-	100% load, 25℃ ambient temperature,12V no load
Efficiency@480Vac	92%	93.5%	-	100% load, 25℃ ambient temperature,12V no load
Mean Time Between Failure	-	200Khours	-	25℃±10℃ambient temperature，480Vac，80% load condition (MIL-HDBK-217/SR-332)
Lifetime	-	50Khours	-	480Vac & 100% load, Tc 85℃，refer to lifetime vs. case temperature curve
Operating Temperature Ta	-40℃	-	+50℃	Output Power vs. Ambient Temperature curve
Operating Tc for Safety Tc_s	-40℃	-	+90℃	
Operating Tc for Warranty Tc_w	-40℃	-	+85℃	5-year warranty shell temperature,humidity:10% to 95% RH
Storage Temperature Ta	-40℃	-	+85℃	Humidity:5% to 100% RH
Altitude	-60m	-	4000m	
Over Temperature Protection Tc	90℃	95℃	100℃	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)	177*68*39mm			
Net Weight	820±50g/PCS			
Package (L*W*H)	500*310*160mm; 15PCS/Ctn., Gross Weight: 13.9Kg			

Dimming

Parameter	Min	Typ.	Max	Notes
Absolute Maximum Voltage	-	10V	18V	On the Vdim (+) Pin
Source Current on Vdim (+)Pin	-	1mA	2mA	
Dimming Range	10% I_{max}	-	100% I_{set}	I_{set}=0.42~0.7A
Suggest Dimming Input 0-10V	0V	-	10V	
Turn-on Voltage	0.9V	-	1.3V	
Turn-off Voltage	0.7V	-	0.9V	
PWM in High Level	9.7V	-	10.3V	
PWM in Low Level	0.7V	-	1.1V	
PWM in Frequency Range	1KHz	-	2KHz	
PWM in Duty Cycle	1%	-	99%	
Turn-on Duty Cycle	9%	-	13%	
Turn-Off Duty Cycle	7%	-	9%	

Safety Specification

Parameter	Min	Typ.	Max	Notes
Dielectric Strength (Input-Ground)	-	1960Vac	-	60s，Current not exceeding 5mA
Dielectric Strength (Input-Dimming)	-	1960Vac	-	60s，Current not exceeding 5mA
Grounding Resistance	-	-	0.1Ω	25℃±10℃ Ambient Temperature, pass 25A Current, 60s.
Insulation Resistance	10MΩ	-	-	Output-PE, 500Vdc/60s/25℃

Safety Compliance

Safety Category	Standards	Approved	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		

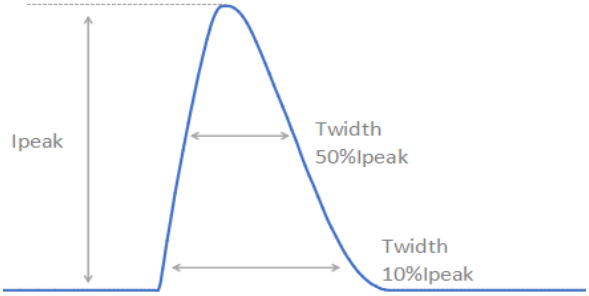
EMC Compliance

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 A	√	
Surge Shock Immunity	ANSI/C82.77-5-2017	√	
Ringing Wave			

RoHS

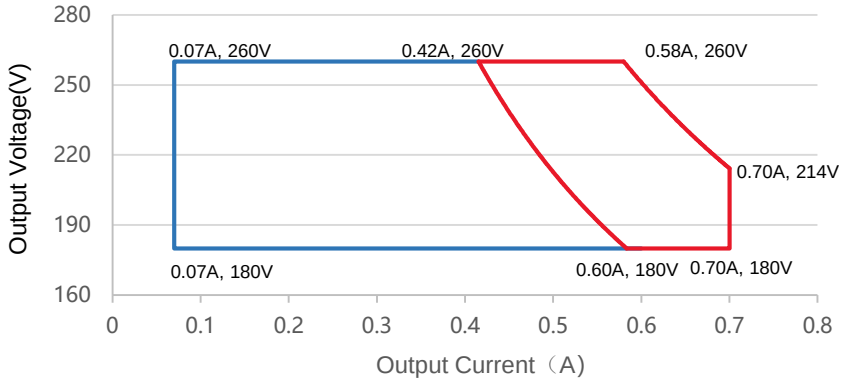
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current



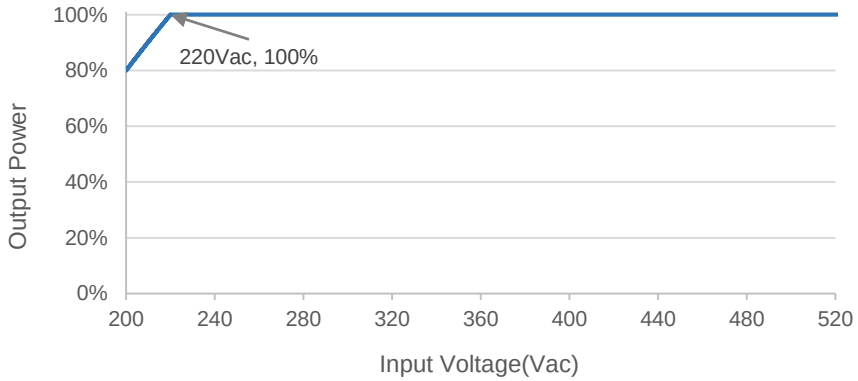
Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
220Vac	40.4A	426μs	152.8μs

Output Voltage vs. Output Current

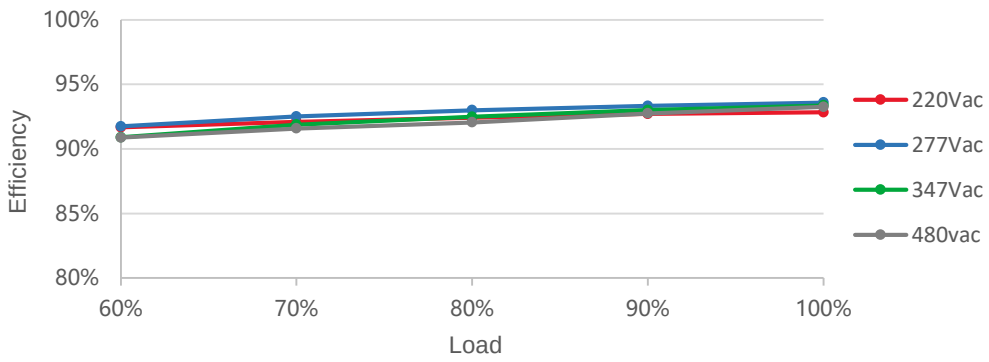


Red curve: good performance area

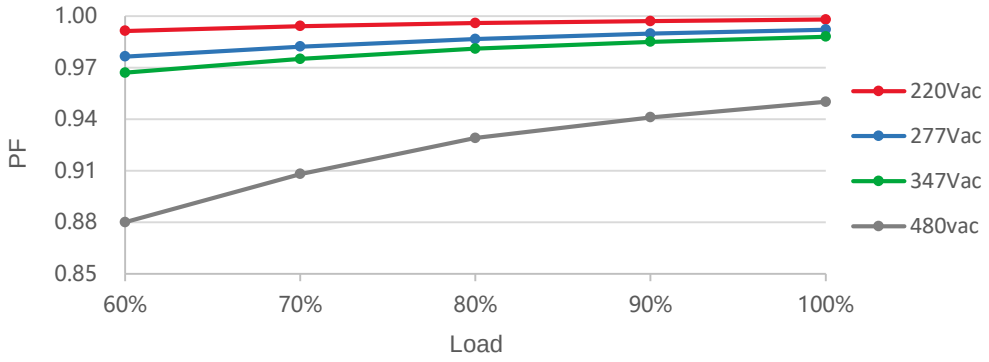
Output Power vs. Input Voltage



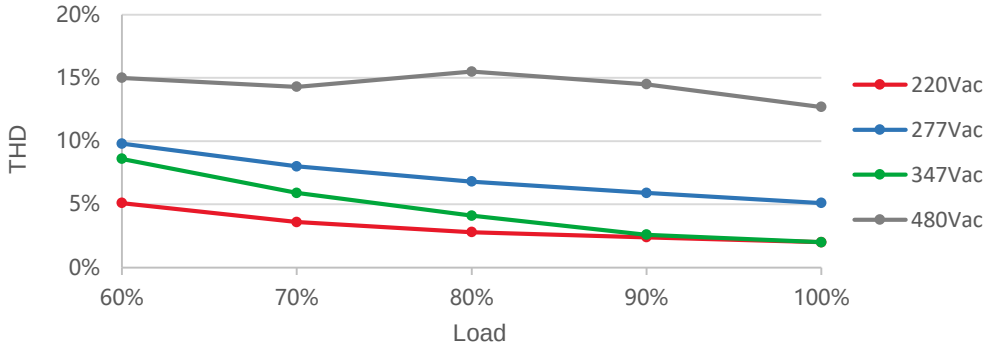
Efficiency vs. Load



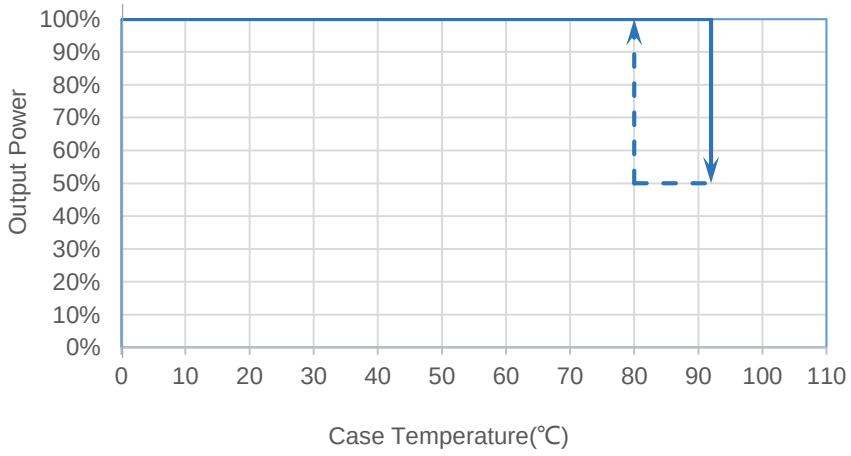
PF vs. Load



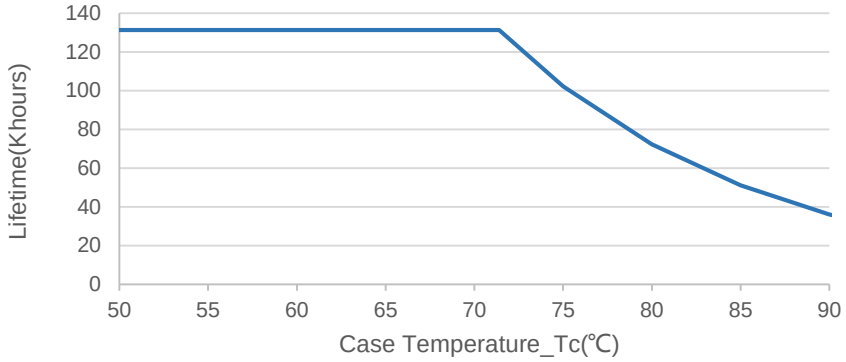
THD vs. Load



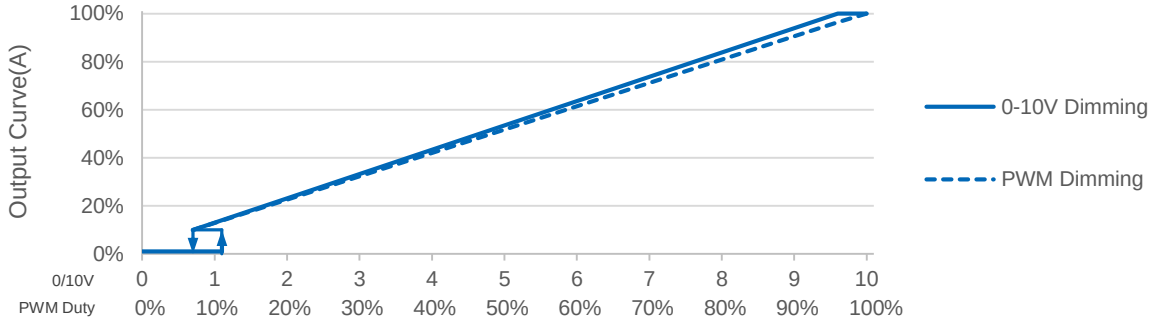
Output Power vs. Case Temperature



Lifetime vs. Case Temperature

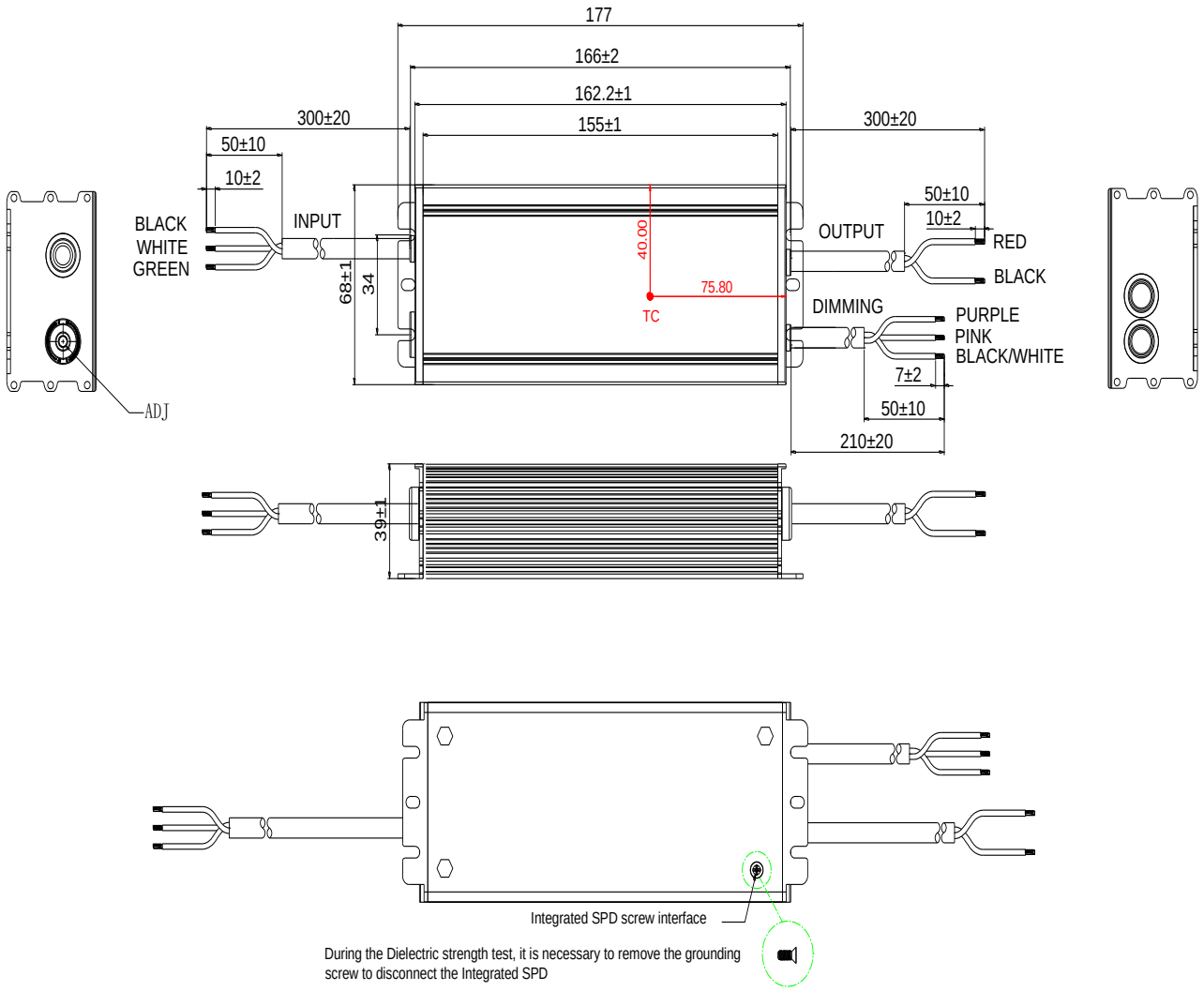


0-10V/PWM Dimming



Notes: Afterglow may appear after switching off dimming due to the difference of lamp panel. Thus, lighting fixture grounding test is suggested.

Mechanical Outline

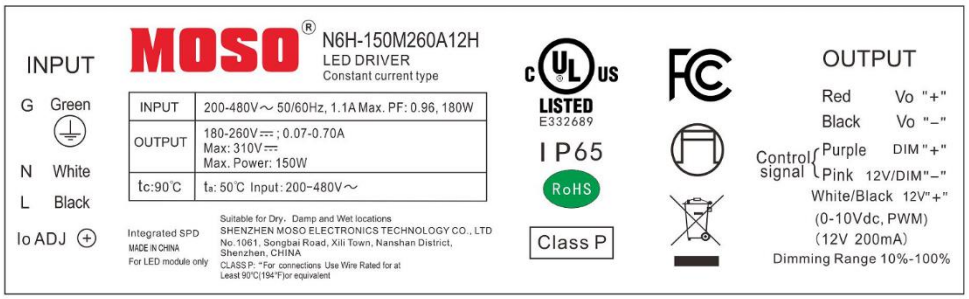


Notes：During the Dielectric strength test, it is necessary to remove the grounding screw to disconnect the Integrated SPD

Specification

Input	UL STW 18AWG*3C L=300±20mm	UL
Output	UL SJTW 18AWG*2C L=300±20mm	UL
Dimming	UL 21996 22AWG*3C L=210±20mm	UL

Label



Version

A.1	First release	2023-09-21