



SPECIFICATIONS

SS-1000NP-MXX

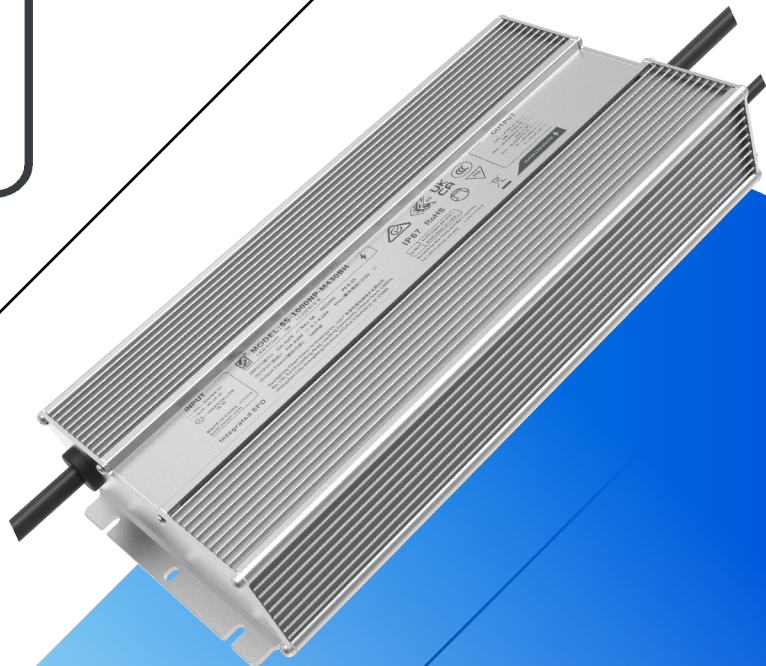
CC DRIVER

Model: SS-1000NP-MXX

Power: 1000W

Rev.: V02

Release date: 2026-01-04



SS-1000NP-MXX LED DRIVER

Features

- Efficiency up to 97.5%
- Dimming: 0-10V,PWM,Resistor,Timing
- Surge protection: CM: 6kV, DM: 6kV
- AUX Power: 12V/0.2A
- IP67
- Communication with PC
- Protections: SCP/OTP
- Warranty: 5 years



Description

SS-1000NP-MXX is 1000W non-isolated constant current LED Driver with 180-528Vac input and wide O/P voltage range and adjustable O/P current by program. LED luminaire manufactures can easily design luminaires and reduce cost.

Applications:
Horticulture lighting, High pole lighting, Stadium lighting, Fish lighting

Model List

Model	AC Input Range	Max. Pout	Vout Range	Full Power Voltage	Iout	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-1000NP-M430XX	180-528Vac	1000W	210-430V	240V-430V	0.7-4.16A	8%	0.95	97%	90°C

Note:

1.Default Tested: at 347Vac, full load, Ta 25°C;

2. The performance of the LED Driver can be guaranteed within the full power Vo range.

The voltage lower than full power Vo range, it is need to test the performance with the LED module ;

SS-1000NP-MXX LED DRIVER

“*” Means Additional Function

“*”	DALI (suffix:D)	AUX 12V (suffix:H)	NTC (suffix:N)	Timing	0-10V/PWM Dim /Resistor (suffix:B)	Output- Ground	Remark
BH		✓		✓	✓		
BHC		✓		✓	✓		
BHN		✓	✓	✓	✓		
BHCN		✓	✓	✓	✓		
DH							
DHC							
DHN							
DHCN							
BH-G		✓		✓	✓	✓	
BHC-G		✓		✓	✓	✓	
BHN-G		✓	✓	✓	✓	✓	
BHCN-G		✓	✓	✓	✓	✓	
DH-G							
DHC-G							
DHN-G							
DHCN-G							

SS-1000NP-MXX LED DRIVER

Input Characteristics

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	200Vac		277Vac	<Ta:50°C
	277Vac		480Vac	<Ta:55°C
AC Input Range	180Vac		528Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			6.0A	200Vac ,Full load
Max Input Power			1200W	200Vac, Full load
Max Inrush Current(220Vac)			15A	Cold start
Max Inrush Current(347Vac)			20A	Cold start
Max Inrush Current(480Vac)			25A	Cold start
Standby Power			2W	347Vac/60Hz, Dim-off
			0.5W	230Vac/50Hz, Dim-off, BH Model
Power Factor	0.95	0.97		347Vac/60Hz, Full load
	0.90			200-480Vac, 70-100% load
THD		6%	10%	347Vac/60Hz, Full load
			20%	200-480Vac, 70-100% load

SS-1000NP-MXX LED DRIVER

Output Characteristics

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	210V		430V	Power derated @210-240V
Rated O/P Voltage	240V		430V	$P_o = V_o \cdot I_o = 1000W$, Full load
Rated O/P Current	2.32A		4.16A	4.16A for 240V, 2.32A for 430V
Adj. O/P Current (AOC) Range	0.7A		4.16A	Adjustable by program
No Load Voltage			450V	
Efficiency @220Vac	93.0%	95.0%		O/P 430V/2.32A
Efficiency @277Vac	94.0%	96.0%		O/P 430V/2.32A
Efficiency @347Vac	95.0%	96.5%		O/P 430V/2.32A
Efficiency @480Vac	95.0%	96.5%		O/P 430V/2.32A
O/P Current Tolerance	-5%		+5%	
O/P Current Ripple(PK-AV)		5%	10%	Full load
Start-up Current Overshoot			10%	Full load
Start-up Time			0.5S	230Vac, Full load
Line Regulation	-3%		+3%	Full load
Load Regulation	-3%		+3%	
Temperature Coefficient	-0.03%/°C		+0.03%/°C	$T_c: 0^{\circ}C \sim 90^{\circ}C$
OTP	90°C	95°C	100°C	Drop current when OTP, and it can be automatically restored after the abnormality is removed.
Short Circuit Protection				Driver will not be damaged, Constant current mode

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Other Characteristics

Parameter		Min.	Typ.	Max.	Remark
AUX Power	O/P Voltage	10.8V	12V	13.8V	
	O/P Current			300mA	
0-10V Dimming (Optional)	Dim Vmax	0V		12V	
	Dim Range	10%loset		100%loset	DIM+ source current 110uA .
	Rec.Dim Range	0V		10V	Dimming prohibits reverse connection.
PWM Dimming (Optional)	PWM High	9.8V		10.2V	
	PWM Low	0V		0.3V	DIM+ source current 110uA .
	Frequency	1KHz		2KHz	Dimming prohibits reverse connection.
	PWM Duty	0%		100%	
Resistor Dimming (Optional)	Resistance	0Kohm		100Kohm	
	Dim Range	10%loset		100%loset	DIM+ source current 110uA .
Dim to Off	Dim-off	7%	8%	9%	By DC voltage, PWM,dimming ratio Auxiliary source no-load test
	Dim-on	9%	10%	12%	By DC voltage, PWM,dimming ratio Auxiliary source no-load test
NTC Founction(Optional)		By programming			External resistance value 10K Ω , B value 3950 or 3435 NTC thermistor, set parameters through corresponding programs
Timing Curve(Optional)		By programming			Set by program
Constant Lumen(Optional)		By programming			Set by program
Life Warning(Optional)		By programming			Set by program
Life Time(Tc $\leq$ 75°C)		$\geq$ 100,000 hours			80% Load 347Vac
MTBF		200,000 hours			347Vac,Full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP67			
Tc		90°C			
Warranty		5 years			Tc 75°C
Net Weight		2800g			
Dimension		282mm*125mm*44.5mmm			L x W x H

Note: 1.All the parameters above are tested Ta 25°C and LED load, unless specified.

2. When using resistor dimming (parallel connection of dimming wires), if the number of parallels is: N, the dimming resistor should be realized 0-100% dimming range, resistance value: 101K Ω /N.

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SS-1000NP-MXX LED DRIVER

Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Tcase)	-40℃	25℃	+90℃	
Storage Temperature	-40℃	25℃	+90℃	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4000m	

Safety and EMI/EMS Standards

Certification	Standard	Status	Remark
UL/cUL	UL8750	✓	
ENEC	EN 61347-1 EN 61347-2-13 EN 61347-2-13	✓	
RCM	AS/NZS61347.2.13		
CCC	GB 19510.14	✓	
CE	EN 61347-2-13 EN61347-1	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	EN IEC 55015	Class B
Radiation Emission	EN IEC 55015	Class B
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5	DM: 6kV,CM: 6kV,Criterion B
Ring Wave	IEC/EN 61000-4-12;ANSI/C82.77-5	DM: 6kV,CM: 6kV,Criterion B

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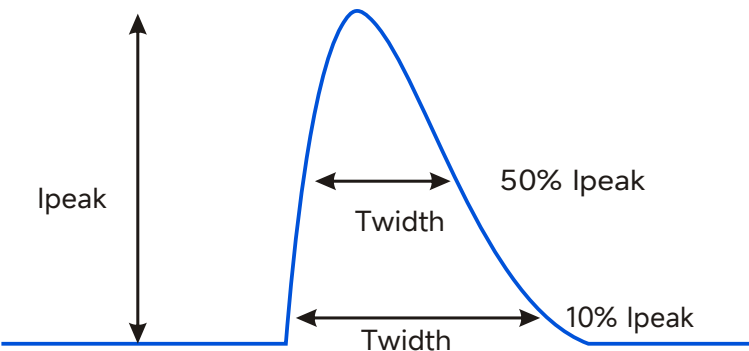
Safety Test Items

Safety Test Items	Technical Indicators			Remark
Insulation Requirements	UL Insulation Requirements	ENEC Insulation Requirements	CCC Insulation Requirements	
Input-Case	2U+1000Vac	2U+1000Vac	2U+1000Vac	Basic insulation
Input-Dim	2U+1000Vac	4U+2000Vac	4U+2000Vac	Reinforced insulation
Dim-Case	500Vac	500Vac	500Vac	Basic insulation
Insulation Resistance	$\geq 10\text{M}\Omega$			Input-DIM, Test voltage: 500Vdc
Ground Resistance	$\leq 0.1\Omega$			25A/1min
Leakage Current	$\leq 0.75\text{mA}$			480Vac

- Note:
1. SOSEN warrants the LED Driver itself complies with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.
 2. During the withstand voltage test, the input and output wires are shorted together to withstand voltage to ground.

Performance Curves

Input Inrush Current

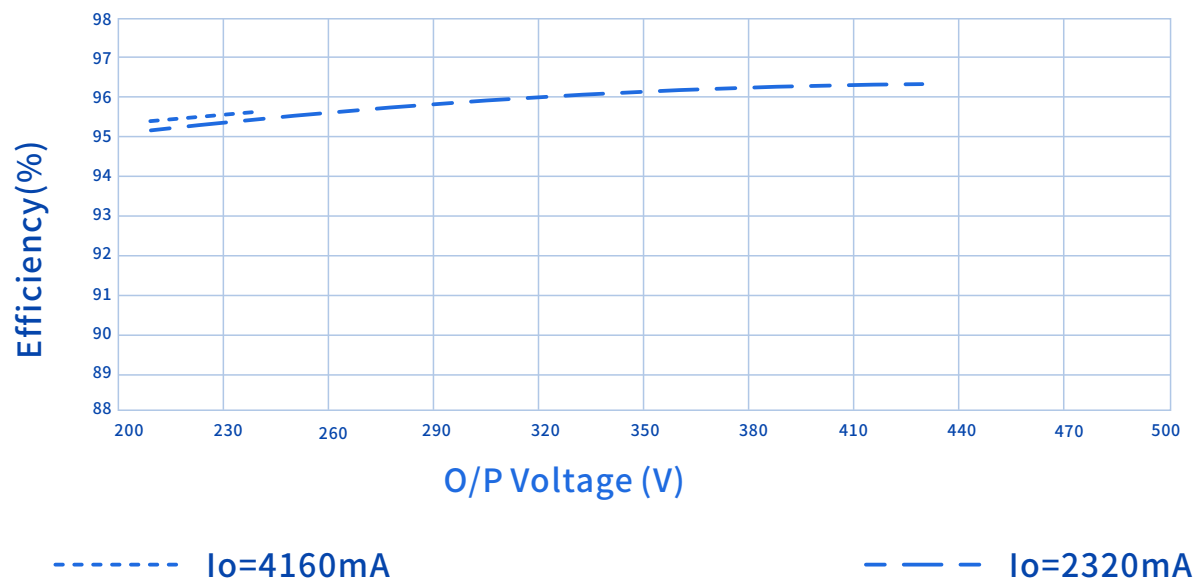


V_{in}	I_{peak}	$T(@10\% \text{ of } I_{peak})$	$T(@50\% \text{ of } I_{peak})$
220Vac	15A	10mS	5mS
347Vac	20A	6mS	3mS
480Vac	25A	6mS	3mS

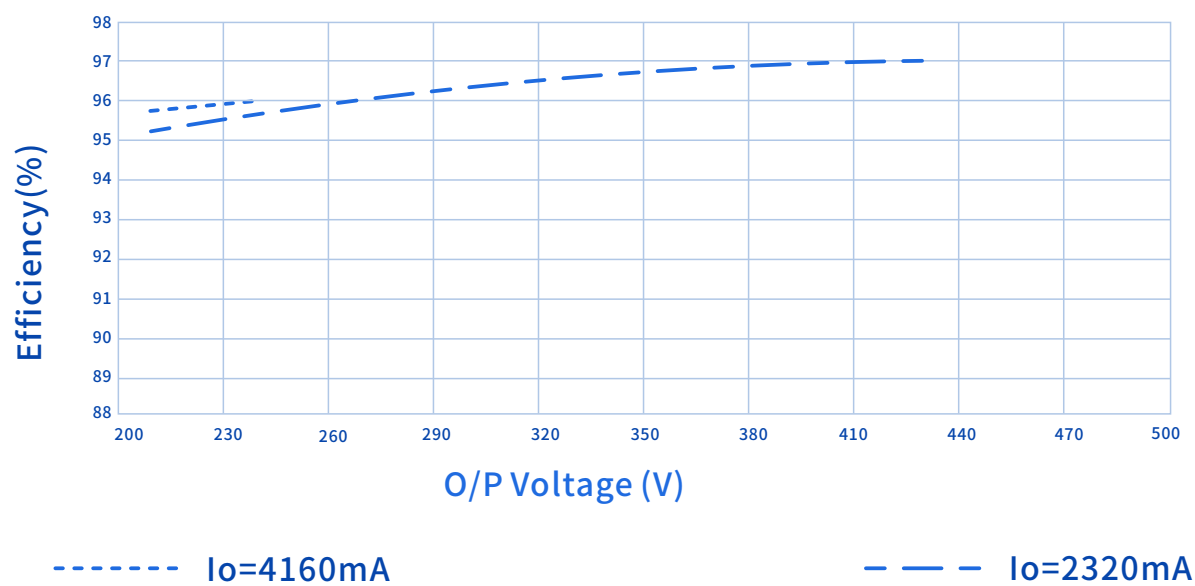
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Performance Curves

Efficiency Vs. Output Voltage (Vin=277Vac)



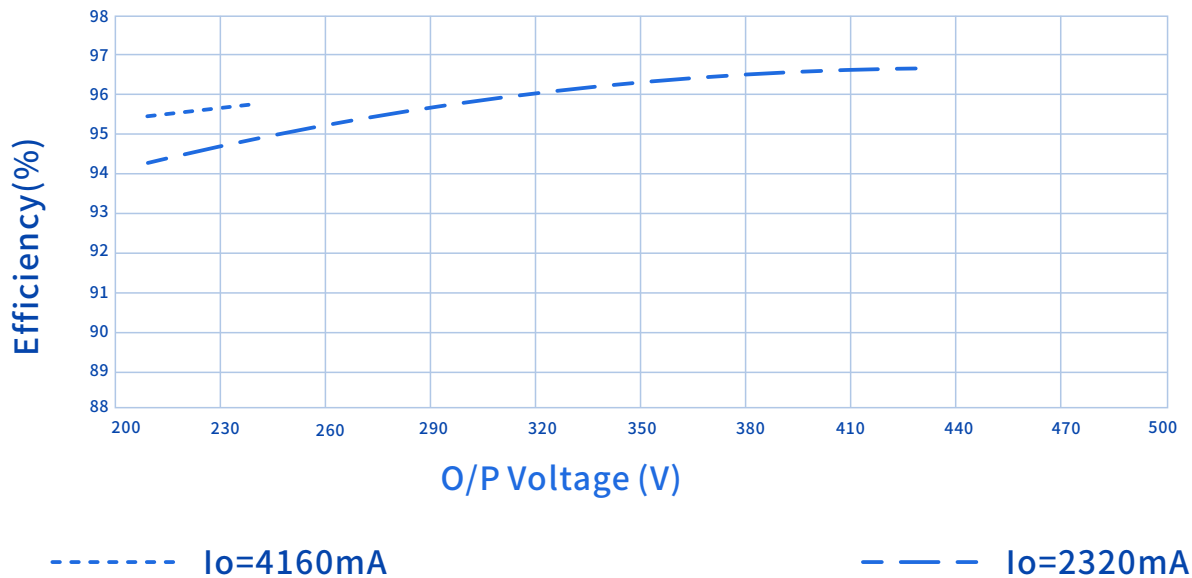
Efficiency Vs. Output Voltage(Vin=347Vac)



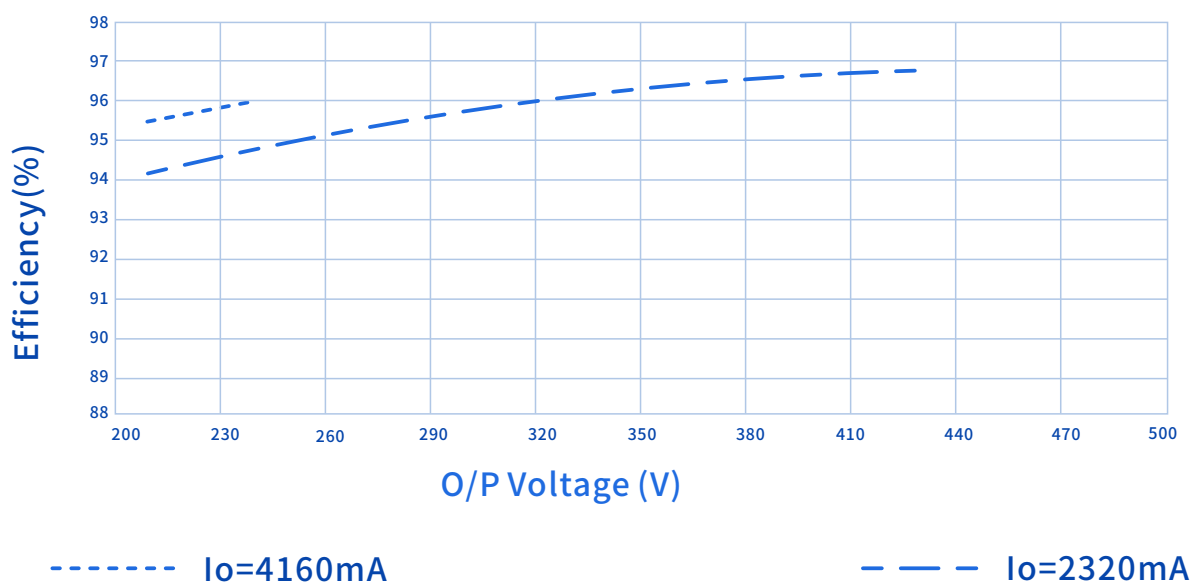
SS-1000NP-MXX LED DRIVER

Performance Curves

Efficiency Vs. Output Voltage (Vin=400Vac)



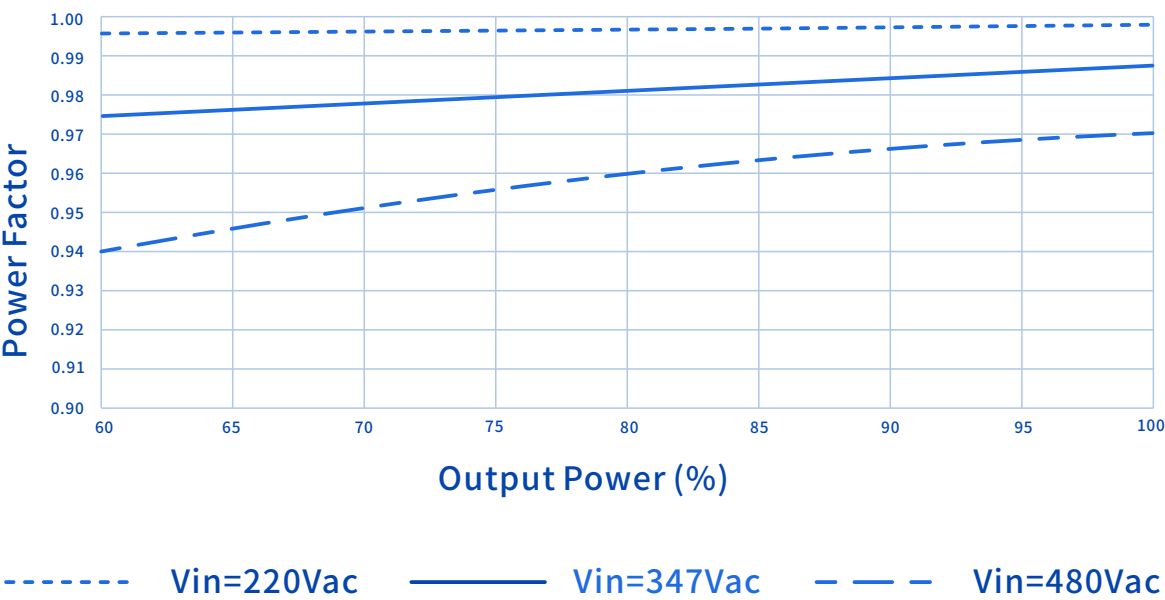
Efficiency Vs. Output Voltage(Vin=480Vac)



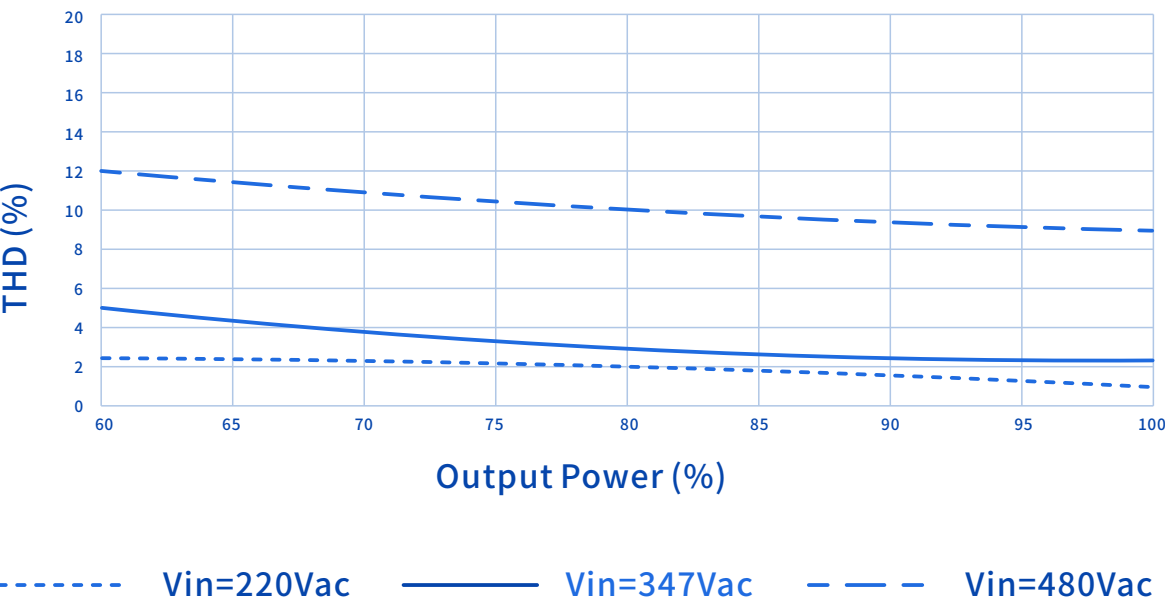
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Performance Curves

Power Factor Vs. Output Power



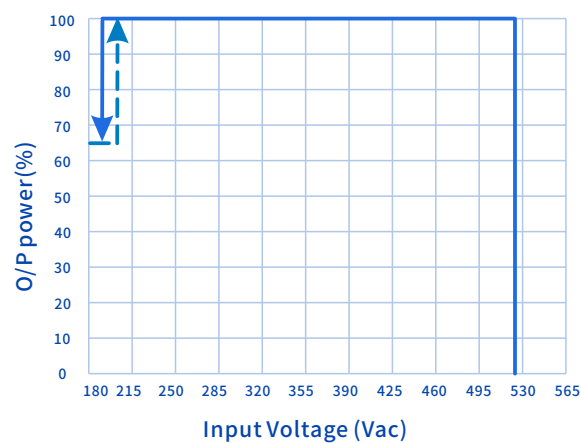
THD Vs. Output Power



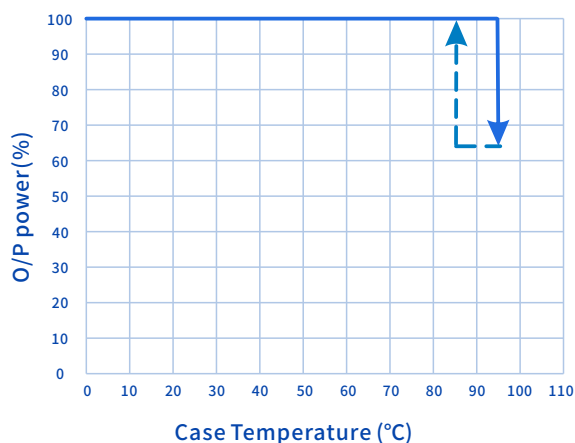
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Performance Curves

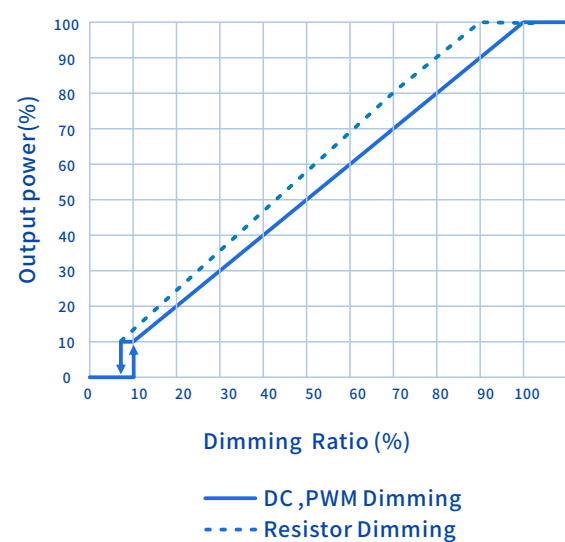
Output Power Vs. Input Voltage



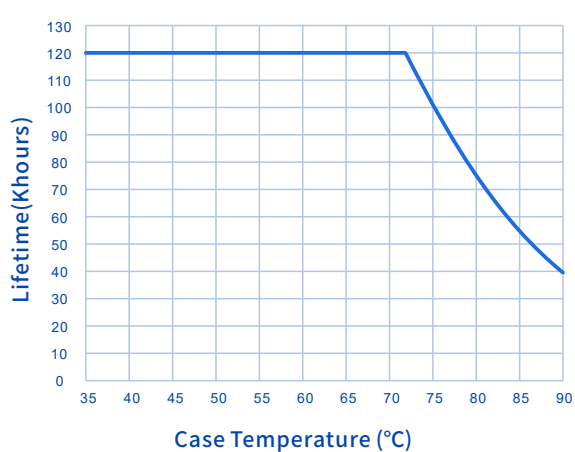
Output Power Vs. Case Temperature



Output Power Vs. Dimming



Lifetime Vs. Case Temperature



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Constant Lumen Output

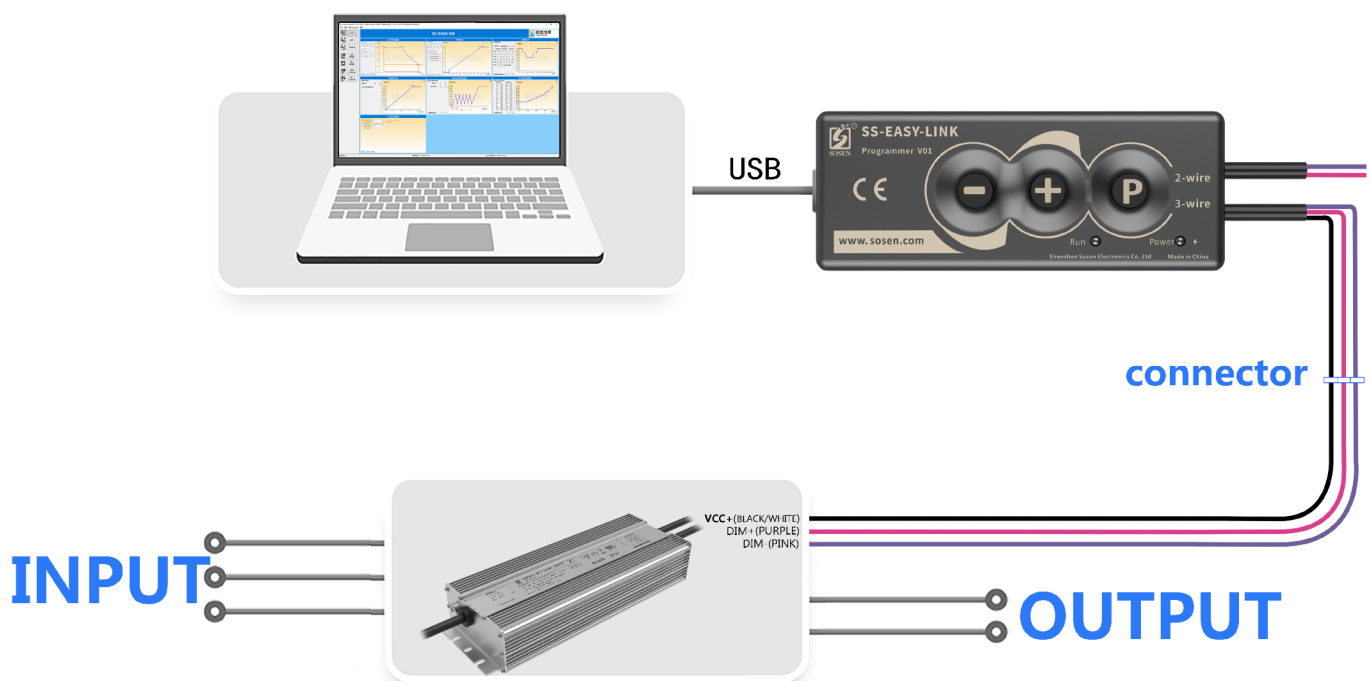
Constant Lumen Output are design to maintain fixture's stable output lumen by increasing driver's output current within driver's life span to counteract LED lumen degradation.

Programming connection diagram:

Legacy Timer: Driver's O/P follows the pre-programmed timing curve after turn-on.

Auto-Adjust by Percentage: Driver's O/P will be adjusted by automatically changed dimming curve by the period percentage based on the latest 5 dimming curve.

Auto-Adjust by Mid-point: Driver's O/P will be adjusted by automatically changed dimming curve by mid-point based on the latest 5 dimming curve.

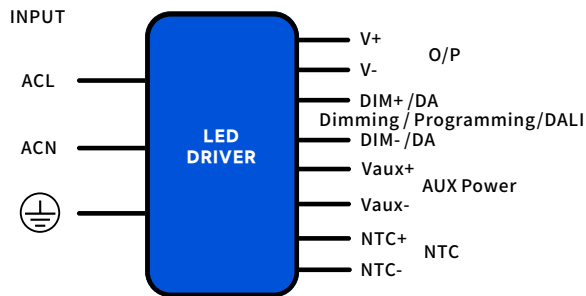


Note:

Programming could be completed by off-line mode either without turn on the driver or without PC, other than the traditional on-line mode.

SS-1000NP-MXX LED DRIVER

Mechanical Characteristics



AC Input Cable(Exposed Length 450±10mm):

Global model: SOOW,3*17AWG,O.D: 9.8mm,Brown:L,Blue:N, Yellow/Green:⊕

DC O/P Cable(Exposed Length 250±10mm):

Global model: SOOW,2*17AWG,O.D: 9.3mm,Brown:V+, Blue:V-, Yellow/Green:GND (suffix -G)

BH/DH Model:

DIM/AUX Power/Programming Cable (Exposed Length 220±10mm):

UL model: 21996, 4*22AWG, O.D: 5.6mm, Purple: DIM+, Pink: DIM-, Black/White: Vaux+, Blue/White: Vaux-

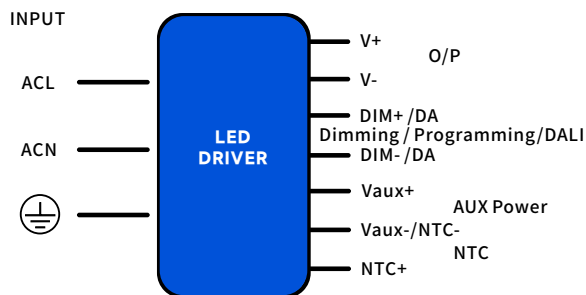
DHN Model:

DIM/AUX Power/Programming Cable (Exposed Length 220±10mm):

UL model: 21996, 4*22AWG, O.D: 5.6mm, Purple: DIM+, Pink: DIM-, Black/White: Vaux+, Blue/White: Vaux-

NTC Cable(Exposed Length 220±10mm):

Global model: SJOW,2*17AWG,O.D: 7.7mm,Brown:NTC+, Blue:NTC-



AC Input Cable(Exposed Length 450±10mm):

Global model: SOOW,3*17AWG,O.D: 9.8mm,Brown:L,Blue:N, Yellow/Green:⊕

DC O/P Cable(Exposed Length 250±10mm):

Global model: SOOW,2*17AWG,O.D: 9.3mm,Brown:V+, Blue:V-,

BHN Model:

DIM/AUX Power/Programming/NTC Cable (Exposed Length 220±10mm):

UL model: 21996, 5*22AWG, O.D: 6.0mm, Purple: DIM+, Pink: DIM-, Black/White: Vaux+, Blue/White: Vaux-/NTC-, Red/White: NTC+

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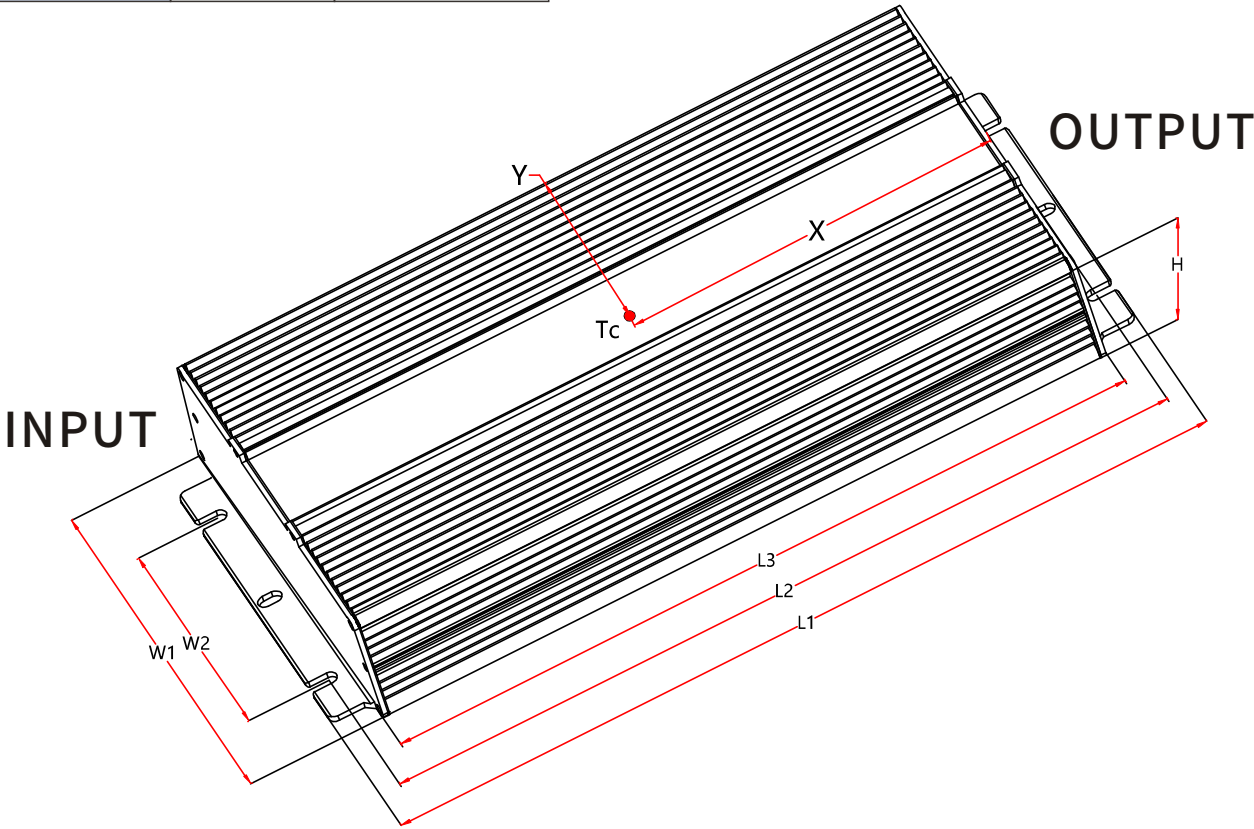
Mechanical Characteristic

Name Description	Standard Code	mm(In.)
Case Length	L3	260(10.24)
Case Width	W1	125(4.92)
Case Height	H	44.5(1.75)
Overall Length	L1	282(11.1)
Mounting Hole Length	L2	271(10.67)
Mounting Hole Width	W2	78(3.07)
TC Point Position	X	150(5.91)
TC Point Position	Y	45(1.77)

Note

1,Please follow the "LED Driver User Manual" obtained from SOSEN's official website for assembly.

2,AC Input Cable,DC O/P Cable,DIM/AUX Power/Programming Cable:
Peeled length of cable:50±5mm, Tinned length of wire:8±2mm



SS-1000NP-MXX LED DRIVER



Assembly Tips

1. Dimming or AUX Power tinned connectors should be capped if not used to avoid dimming or AUX Power parts damage from external signals.
2. The trace routing on aluminum substrates is designed in compliance with creepage distance requirements specified by relevant certification regulations.
3. The creepage distance between LED+ and LED- on the aluminum substrate is designed in compliance with the relevant certification regulations.
4. Minimize the copper area on the aluminum PCB to reduce parasitic capacitance and leakage current.
5. It is recommended to design LED beads in parallel first and then in series.
6. The insulation level of LED light panels should meet the reliability design requirements.
7. It's recommended to add resistors or capacitors in parallel with the LED on PCB to reduce the risk of surge when a non isolated LED driver is used for the luminaire.
8. For other precautions, please refer to the "LED Driver User Manual".

Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 6PCS/Carton;
- Net weight/Piece: 2.8kg;Gross weight/Carton: 18.3kg;
- Please refer to the product name, model number, manufacturer identification, QC PASS, manufacturing date on the package.

Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be avoided direct sunlight and rain, loaded/unloaded with caution.

Storage

The product storage meets the standard of the GB 3873—83.

Products should be rechecked if stored for over 1 year before assembly.

RoHS

Products comply with RoHS Directive (2011/65/EU) and amendment 2015/863/EU.

Revision History

Version	Description of Update	Updated Date	Remark
V00	Original Release	2023/06/06	
V01	Version Upgrade	2025/04/14	
V02	Add warning statements	2026/01/04	