SOSEN

SPECIFICATIONS

SS-120PA-H
CC DRIVER

Model: SS-120PA-H172B

Power: 120W

Rev.: V01

Release date: 2026-11-13



SS-120PA-HXXB series LED DRIVER

Features

- Efficiency up to 94%
- Isolated dimming:three-in-one,Timming
- NFC programmable
- SSA,CLO,ELA,Virtual Midnight
- Surge protection: CM: 10kV(For ClassI), DM: 6kV
- Protections: SCP/OTP/UVP
- Suitable for Class I/II luminaires
- IP20
- Installation dimensions conform to Zhaga standards
- Warranty: 5 years

Description

The SS-120PA-H172B series is a 120W outdoor constant current LED Driver. It has built-in surge protection, NFC programmable function, ultra high efficiency, compact shell,good heat dissipation, isolation dimming, OTP and so on.All-round protection greatly improves the safety and reliability of the series of products.
Applications:
Street lighting, Tunnel lighting, High-bay lighting

Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vo Range	Iout	Default Output Current	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-120PA-H172B	220-240Vac	120W	57-172V	114-172V	0.2-1.05A	0.7A	8%	0.98	94%	90°C

Note:
1.Default Tested: at 230Vac, 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;
3.If it is applied to plant lamps, please do the matching test first or consult Songsheng;

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	220Vac		240Vac	
Performance Input Voltage Range	198Vac		264Vac	Linear power derating below 190Vac
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			0.75A	200Vac, Full load
Max Inrush Current(240Vac)			70A	Cold start
Power Factor	0.97	0.98		240Vac/50Hz, Full load
	0.95			220-240Vac/50Hz, 70-100% load
THD		5%	8%	220Vac/50Hz, Full load
			15%	220-240Vac/50Hz, 70-100% load

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

O/P Characteristics:

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	57V		172V	
Rated O/P Voltage	114V		172V	Po=Vo*Io=120W, Full load
Rated O/P Current	0.7A		1.05A	1.05A for 114V,0.7A for 172V
Current Adjustable Range(AOC)	0.2A		1.05A	NFC Programmable adjustable current
No Load Voltage			200V	
Efficiency @230Vac	91.0%	93.0%		Full load
O/P Current Tolerance	-5%		+5%	
O/P Current Ripple(PK-AV)		8%	10%	Full load
Start-up Current Overshoot			10%	Full load
Start-up Time			0.5S	230Vac, Full load
PST			1.0	
SVM			0.4	
Line Regulation	-2%		+2%	Full load
Load Regulation	-5%		+5%	
Temperature Coefficient	-0.1%/°C		+0.1%/°C	Tc:0°C~90°C
OTP	90°C		100°C	>Tc Typ., Current derating <Tc Min., Current recovery
Short Circuit Protection				Driver will not be damaged, Hiccup mode

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
1-10V Dimming (Optional)	Dim Vmax	0V		12V	DIM+ source current 300-400uA.
	Dim Range	10%loset		100%loset	Dimming prohibits reverse connection
	Rec.Dim Range	1V		10V	
PWM Dimming (Optional)	PWM High	9.8V		10.2V	DIM+ source current 300-400uA.
	PWM Low	0V		0.3V	Dimming prohibits reverse connection
	Frequency	1KHz		2KHz	
	PWM Duty	10%		100%	
Resistor Dimming (Optional)	Resistance	0Kohm		30Kohm	
	Dim Range	10%loset		100%loset	DIM+ source current 300-400uA .
Timing Curve(Optional)		By programming			Set by program
Constant Lumen(Optional)		By programming			Set by program
Life Warning(Optional)		By programming			Set by program
Lifetime(Tc≤70°C)		≥100,000 hours			80% load
MTBF		250,000 hours			220Vac,Full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP20			
Tc		90°C			
Warranty		5 years			Tc:70°C
Net Weight		590g			
Dimension		133mm*77mm*37mm			L x W x H

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

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

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	UL8750		
CUL	CAN/CSA C22.2 No.250.13		
ENEC	EN 61347-1 EN 61347-2-13 EN IEC 62384	✓	
RCM	AS/NZS61347.2.13		
CCC	GB/T 19510.1 GB/T 19510.213		
CE/UKCA	EN 61347-1 EN 61347-2-13 EN 62493	✓	
	EN 301 489-1 EN 301 489-3 EN 300 330 EN 62479/EN 50663/EN 50665/EN 50364	✓	For NFC wireless products

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Safety and EMI/EMS Standards

EMI/EMS	Standard	Status	Remark
Conduction Emission	EN IEC 55015	✓	
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		ClassB
Radiation Emission	EN IEC 55015	✓	
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		ClassB
Harmonic Current Emissions	EN IEC 61000-3-2	✓	ClassC
	GB 17625.1		ClassC
Surge	IEC/EN61000-4-5	✓	DM: 6kV,CM: 8kV,Criterion B
	EN 61547	✓	DM: 6kV,CM: 10kV,Criterion B
Ring Wave	IEC/EN 61000-4-12		DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5		DM: 6kV,CM: 6kV,Criterion B

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Safety Test Items:

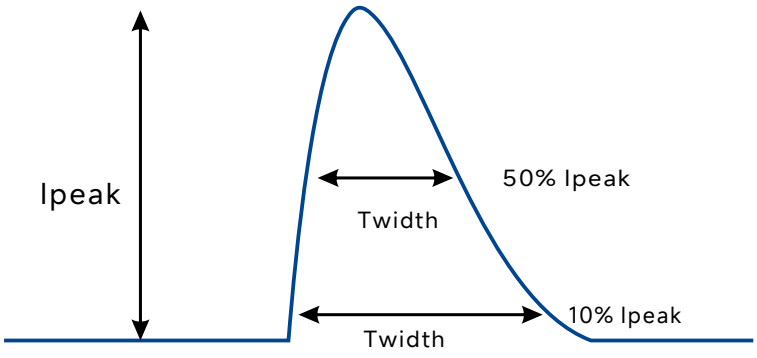
Safety Test Items	Technical Indicators	Remark
Insulation Requirements	ENEC Insulation Requirements	
Input-Output	4U+2000Vac	Reinforced insulation
Input-EQUI	4U+2000Vac	Reinforced insulation
Input-Dim	4U+2000Vac	Reinforced insulation
Output-Dim	4U+2000Vac	Reinforced insulation
Output-EQUI	4U+2000Vac	Reinforced insulation
Dim-EQUI	500Vac	Basic insulation
Insulation Resistance	≥10MΩ	Input-Output,Test voltage:500Vdc
Leakage Current	≤0.7mApk	240Vac

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 of components.
2. Please short (ACL and ACN), (LED+ and LED-), (Dim+ and Dim - and VCC+)when Hi-pot test.

Performance Curves:

Input Inrush Current

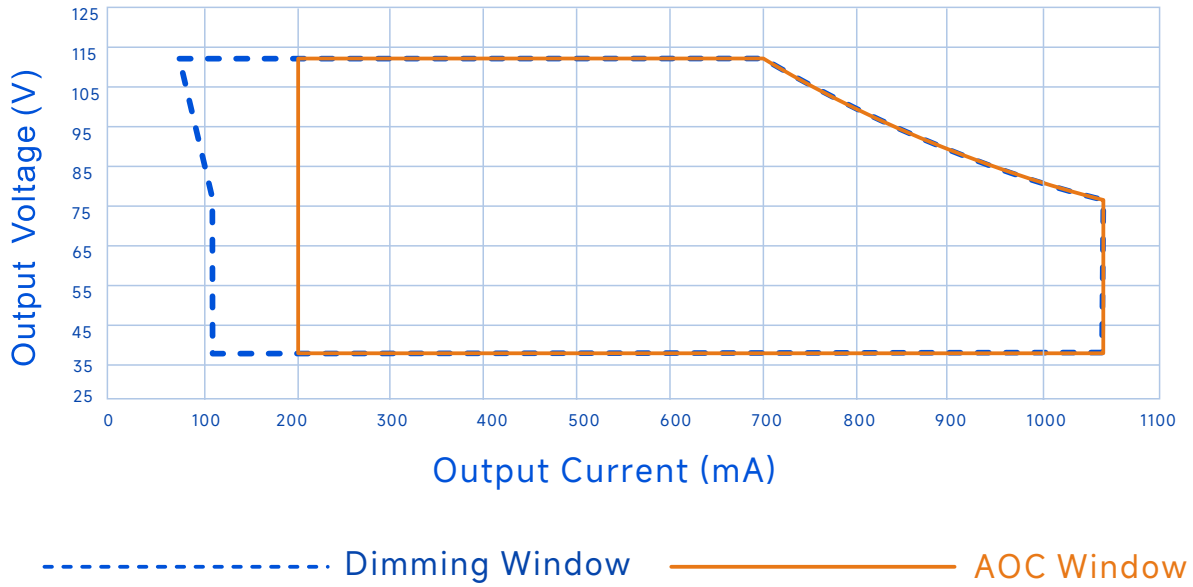


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
240Vac	70A	440uS	230uS

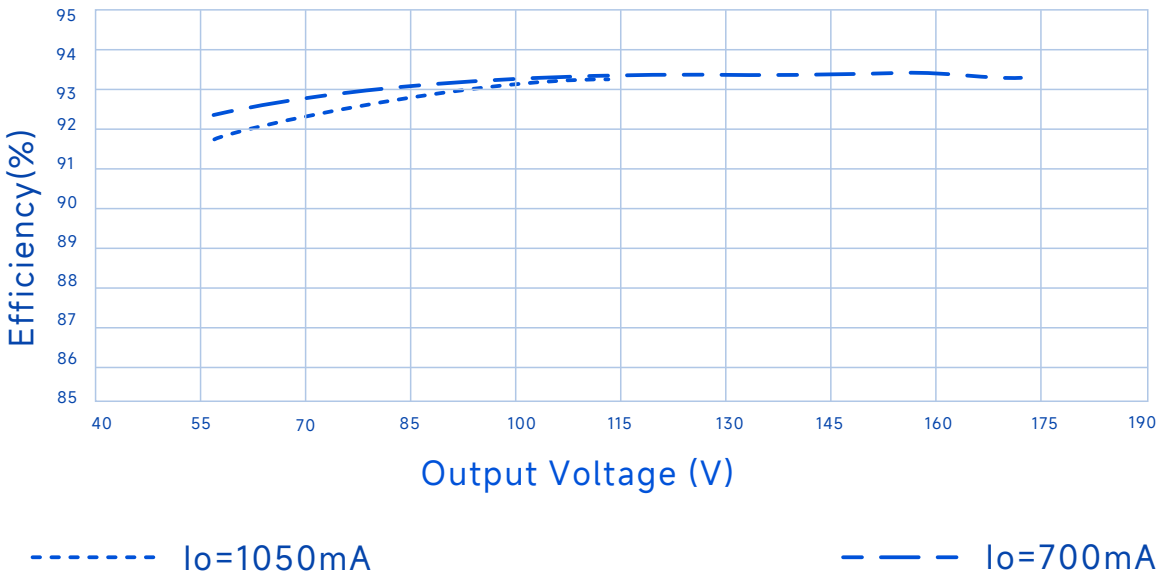
SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Performance Curves:

O/P Voltage Vs. O/P Current(Dim/AOC Window)



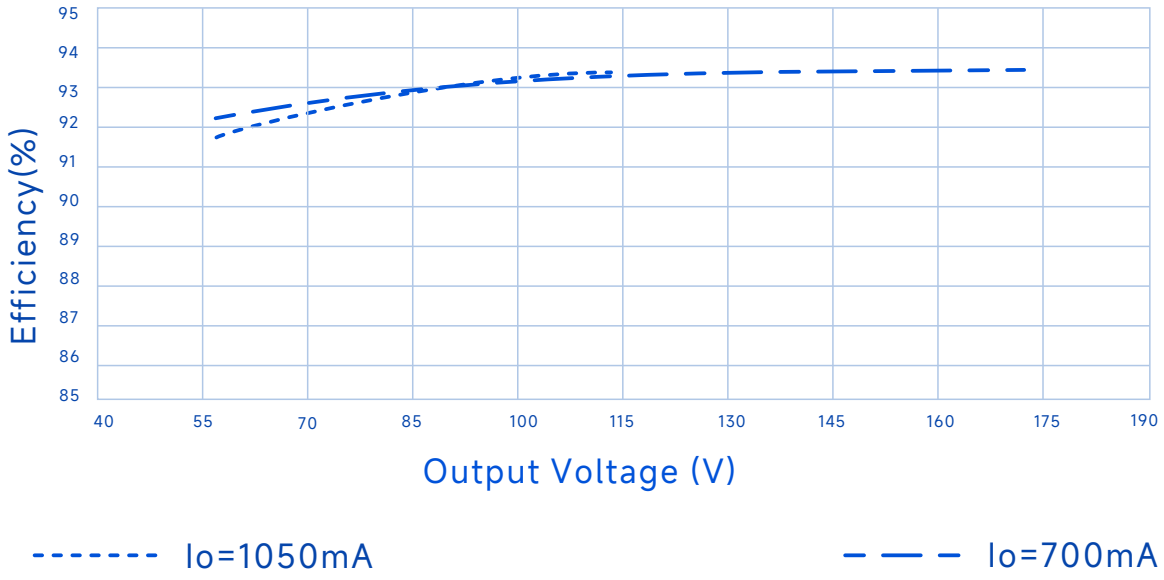
Efficiency Vs. O/P Voltage (Vin=220Vac)



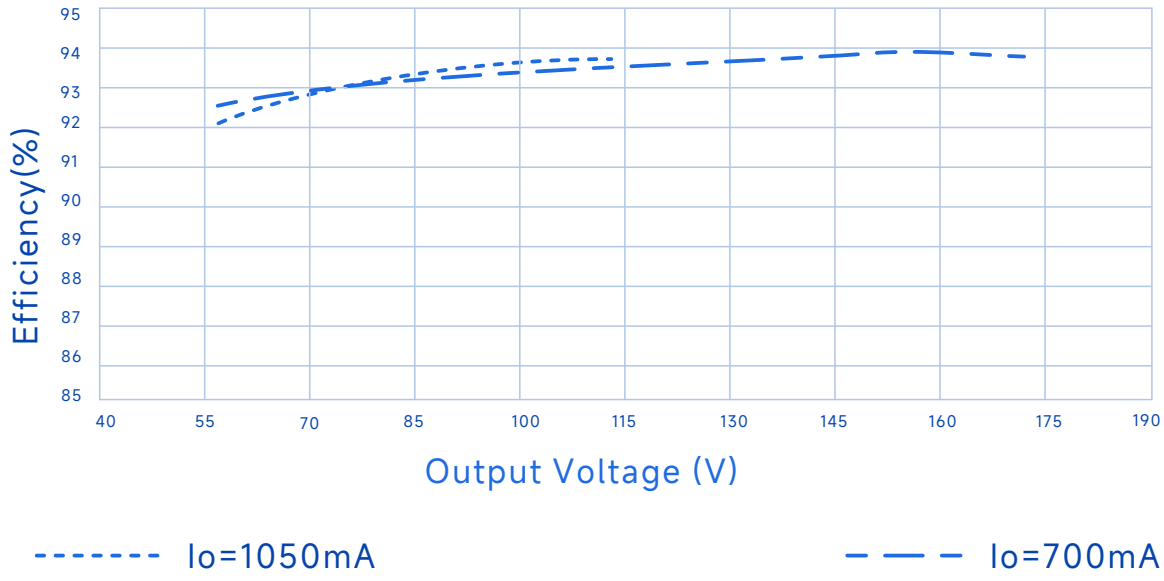
SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233,
Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Performance Curves:

Efficiency Vs. O/P Voltage (Vin=230Vac)



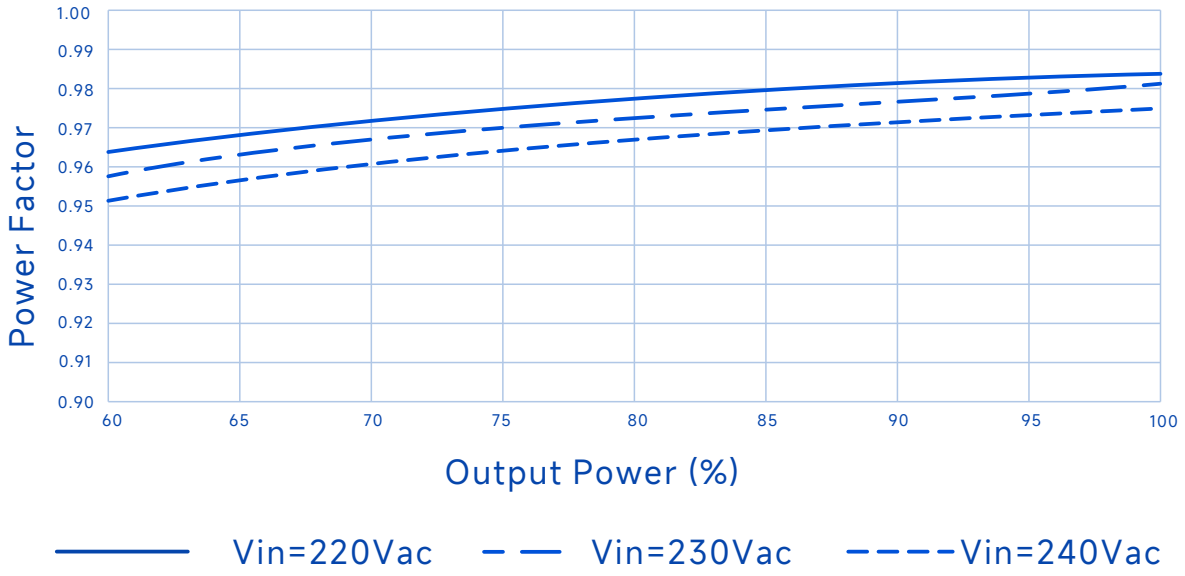
Efficiency Vs. O/P Voltage (Vin=240Vac)



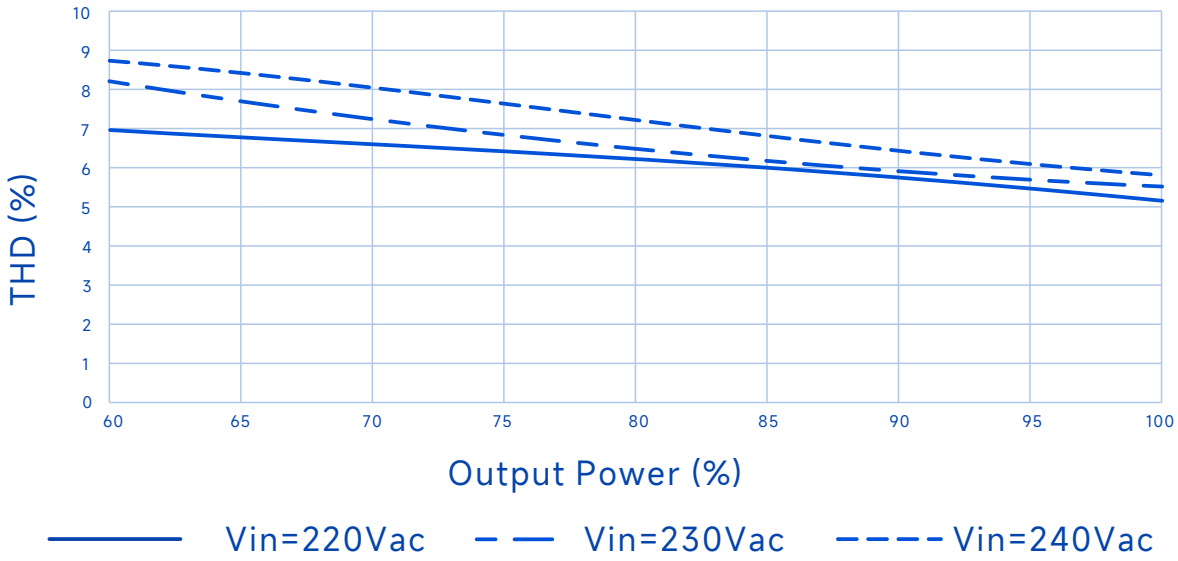
SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Performance Curves:

Power Factor Vs. O/P Power



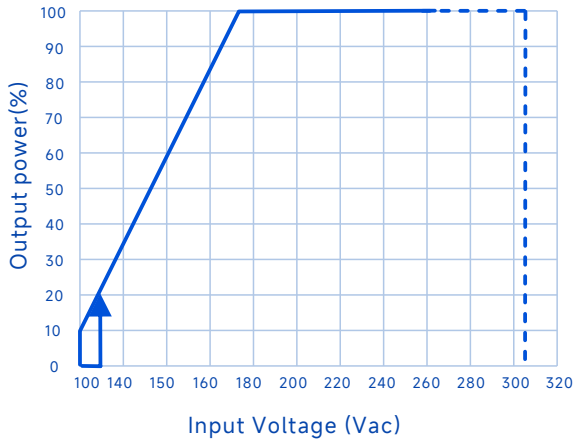
THD Vs. O/P Power



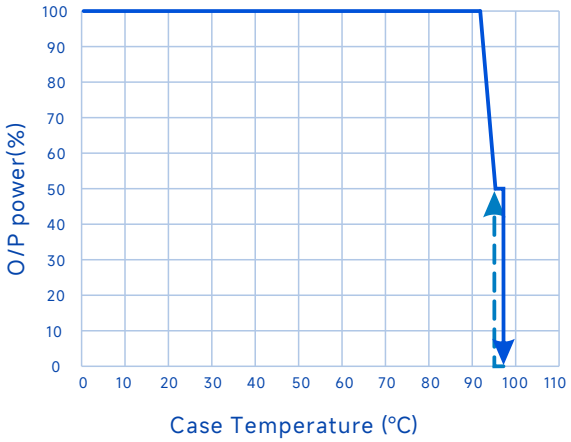
SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233,
Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Performance Curves:

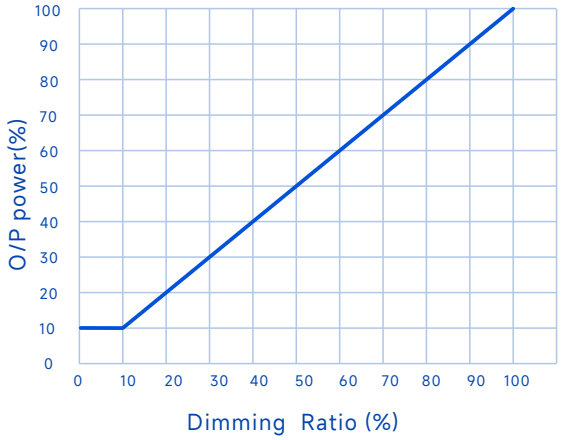
O/P Power Vs. Input Voltage (Ta Max.55°C)



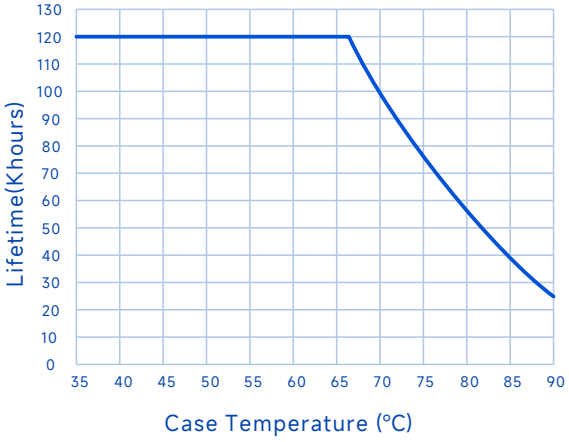
O/P Power Vs. Case Temperature



O/P Power Vs. Dimming



Lifetime Vs. Case Temperature



SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Timer Dimming

Automatic conversion between DST and Standard Time.Traditional Timer Dimming, Self-Adapt-Midnight Timer, Self-Adapt-Percentage Timer. The time dimming percentage can be set by setting 8 curves.
Traditional timer: After power-on, it works according to the set timing curve Increasing fade time allows for slow changes between different dimming levels, preventing sudden changes in brightness and causing dazzle)
Self Adapting-Midnight: Automatically save power-on times and use 2 valid timers to assume that the center point of the dimming curve is local midnight time.
Self Adapting-Percentage: Runs the initially set dimming curve according to an automatically calculated adaptive cycle time.

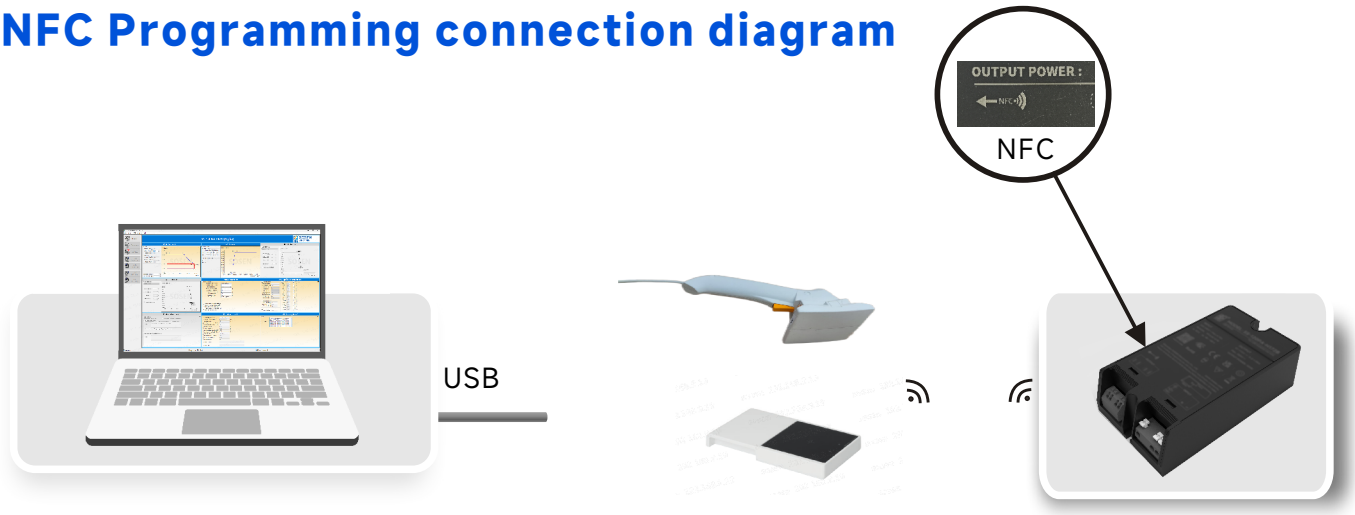
CLO Constant Lumen Output

Light failure compensation function, in the Luminaire life cycle, by gradually increasing the output current, to achieve a constant output of LED luminous flux, the overall luminous effect remains unchanged.

ELA End-of-Life Alert

By presetting a LED driver life time, such as 50KH, after the luminaire has accumulated 50KH of light-up time, every time the luminaire is powered on, it will blink 5 times to remind the user to replace the LED driver.

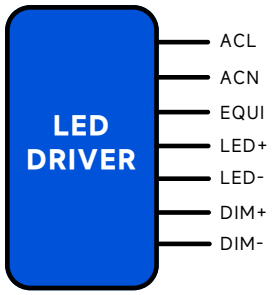
NFC Programming connection diagram



Note:
1.The drive is programmed not to powered on.
2.The NFC programmer needs to be aligned with the area indicated by the arrow.

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com

Mechanical Characteristics



AC Input Cable:

0.2-1.5mm²,16-24AWG,WAGO250(3.5mm),Solid/Stranded Wire
Strip length 8.5-9.5mm

DC Output Cable:

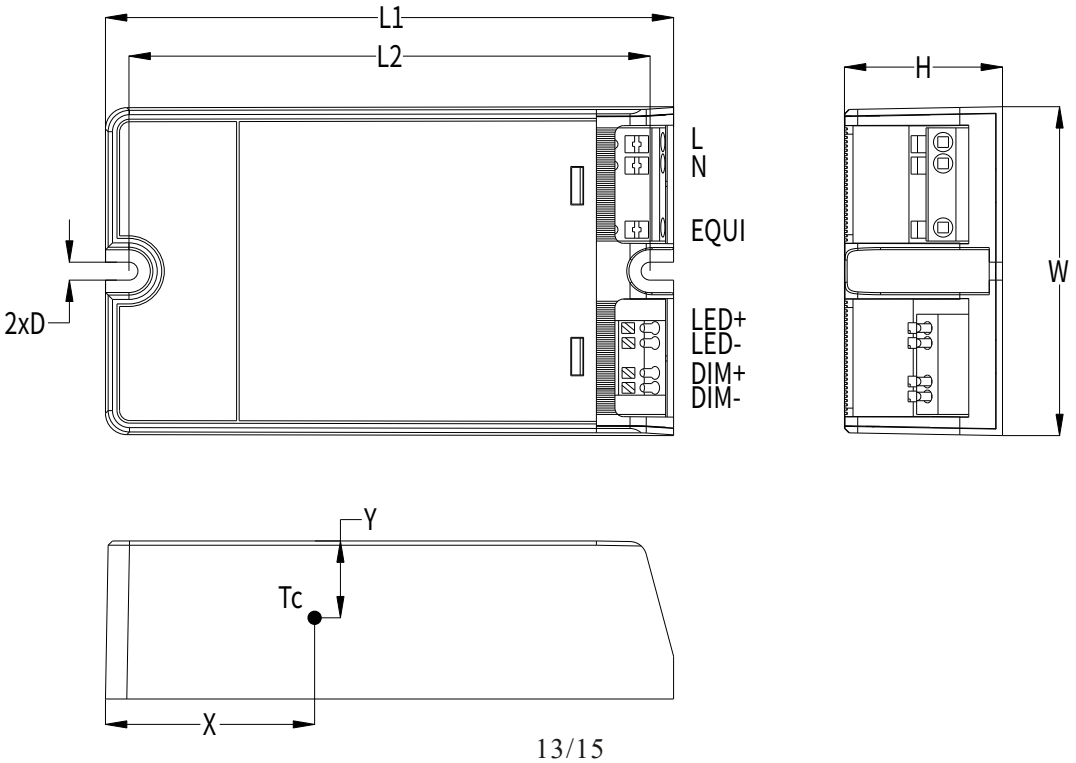
0.2-1.5mm²,16-24AWG,WAGO250(3.5mm),Solid/Stranded Wire
Strip length 8.5-9.5mm

DIM Cable:

0.2-1.5mm²,16-24AWG,WAGO250(3.5mm),Solid/Stranded Wire
Strip length 8.5-9.5mm

Name Description	Standard Code	mm(in.)
Overall Length	L1	135.4(5.33)
Mounting Hole Length	L2	124.2(4.89)
Case Length	W	77(3.03)
Case Height	H	37(1.46)
Mounting aperture	D	4.2(0.16)
TC Point Position	X	49(1.93)
TC Point Position	Y	19(0.75)

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



SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com



Package

- Outside carton dimension: L×W×H =450mm×310mm×160mm;
- 30PCS/Carton;
- Net weight/Piece: 0.590kg;Gross weight/Carton: 18.9kg;
- 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.

SHENZHEN SOSEN ELECTRONICS CO.,LTD.

10F, Pengzhanhui No 1 Building, Zhongxin Road No 233, Xinqiao Street, Baoan District, Shenzhen, China

0755-29358800 www.sosen.com sosen@sosen.com

Revision History

Version	Description of Update	Updated Date	Remark
V00	Original release	2026/08/03	
V01	Update structural dimensions	2026/11/13	

SHENZHEN SOSEN ELECTRONICS CO.,LTD.
10F, Pengzhanhui No 1 Building, Zhongxin Road No 233,
Xinqiao Street, Baoan District, Shenzhen, China
0755-29358800 www.sosen.com sosen@sosen.com