SOSEN

SPECIFICATIONS

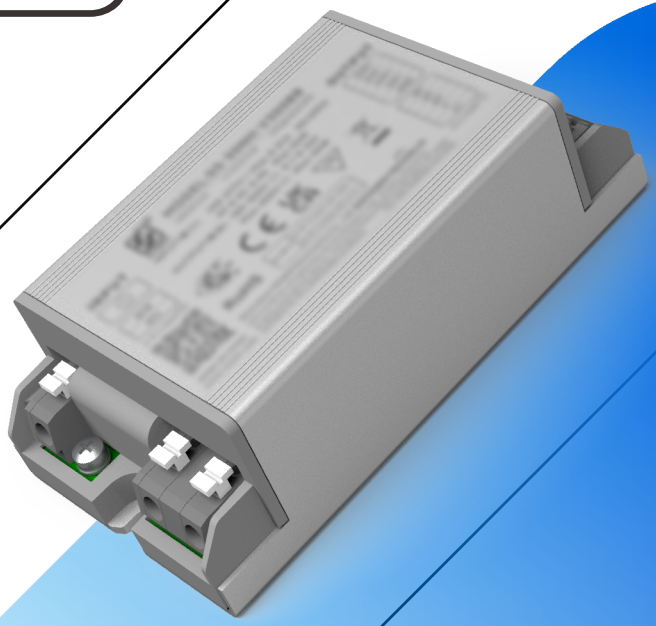
SS-30NH-V300*
CC DRIVER

Model: SS-30NH-V300*

Power: 30W

Rev.: V00

Release date: 2026-09-16



SS-30NH-V300* LED DRIVER

Features

- Efficiency up to 94.0%
- Isolated dimming:1-10V,PWM,Resistor
- Time-controlled programmable
- Protections: SCP/OTP/OVP/UVP
- Wide output voltage range
- Dial Power Range Programmable
- Surge protection: CM: 6kV,DM: 4kV
- Long lifetime
- Warranty: 5 years



Description

SS-30NH-V300* series are 30W non-isolated constant current LED Driver with 90-305VAC. It has DIM to Off, high efficiency, compact housing,high reliability,high cost performance and other advantages.

Applications:

Shoebox Light, Linear high bay light, Flood lighting, Wall lamp

Model List

Model	AC Input Range	Max. Pout	Vout Range	Recommended Volltage	Iout Range	Default Current	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-30NH-V300*	90-305Vac	30W	180-300V	260V-300V	0.05-0.15A	0.15A	10%	0.95	93.0%	90°C

Note:

1.Default Tested: at 220Vac, 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.

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“*” Means Additional Function

"*"	AUX 12V suffix:H)	Dimming off 0-10V/PWM/Resistor	1-10V/PWM Resistor(suffix:B)	adjust power (Single DIP)	Photosensitive control	NTC	Remark
BB			✓	✓			

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	100Vac		200Vac	Ta:50°C,<108Vac, Reference derating curve
	200Vac		277Vac	Ta:60°C
AC Input Range	90Vac		305Vac	Reference derating curve
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			0.5A	100Vac, Full load
Max Input Power			36W	100Vac, Full load
Max Inrush Current(120Vac)			50A	Cold start
Max Inrush Current(220Vac)			80A	Cold start
Max Inrush Current(277Vac)			110A	Cold start
Power Factor	0.95	0.97		220Vac, Full load
	0.90			100-277Vac, 70%-100% load
THD		8%	10%	220Vac, Full load
			10%	277Vac,100% load

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Output Characteristics

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	180V		300V	Power derated @180-200V
Rated O/P Voltage	200V		300V	Po=Vo*Io=30W, Full load
Rated O/P Current	0.10A		0.15A	0.15A for 200V,0.10A for 300V
Adj. O/P Current (AOC) Range	0.05A		0.15A	
No Load Voltage			350V	
Efficiency @120Vac	90%	91%		Output 300V/0.10A
Efficiency @220Vac	91%	93%		Output 300V/0.10A
Efficiency @277Vac	91%	93%		Output 300V/0.10A
O/P Current Tolerance	-5%		+5%	
O/P Current Ripple(PK-AV)		10%	20%	Full load
Start-up Current Overshoot			10%	Full load
Start-up Time			1.0S	120Vac,Full load
			0.75S	220Vac,Full load
Line Regulation	-5%		+5%	Full load
Load Regulation	-10%		+10%	
Temperature Coefficient	-0.06%/°C		+0.06%/°C	Tc:0°C~90°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 or hiccups

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Output Characteristics

Parameter		Min.	Typ.	Max.	Remark
1-10V Dimming (Optional, BB models)	Dim Vmax	0V		12V	DIM+ source current 110uA.
	Dim Range	10%Iomax		100%Ioset	Dimming prohibits reverse connection
	Rec.Dim Range	1V		10V	
PWM Dimming (Optional, BB models)	PWM High	9.8V		10.2V	DIM+ source current 110uA.
	PWM Low	0V		0.3V	Dimming prohibits reverse connection
	Frequency	1KHz		2KHz	
	PWM Duty	10%		100%	
Resistor Dimming (Optional, BB models)	Resistance	10Kohm		100Kohm	DIM+ source current 110uA.
	Dim Range	10%Iomax		100%Ioset	
Dial adjustment	Current range	0.05A		0.2A	Dialing range can be set via PC software
Lifetime(Tc≤75°C)		≥50,000 hours			80% load
MTBF		200,150 hours			220Vac,Full load, Ta=25°C (MIL-HDBK-217F)
Tc		90°C			
Warranty		5 years			Tc: 75°C
Net Weight		280g			
Dimension		105mm*55mm*32mm			L x Wx H

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

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Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Tcase)	-40°C	25°C	+90°C	
Storage Temperature	-40°C	25°C	+90°C	
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	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

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Safety and EMI/EMS Standards

EMI/EMS	Standard	Status	Remark
Conduction Emission	EN IEC 55015	✓	230Vac
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		120Vac:Class B 277Vac:Class A
Radiation Emission	EN IEC 55015	✓	230Vac
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		120Vac:Class B 277Vac:Class A
Harmonic Current Emissions	EN IEC 61000-3-2	✓	ClassC
	GB 17625.1		ClassC
Surge	IEC/EN61000-4-5	✓	DM: 4kV,CM: 6kV,Criterion B
	ANSI/C82.77-5	✓	DM: 4kV,CM: 6kV,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

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Safety Test Items

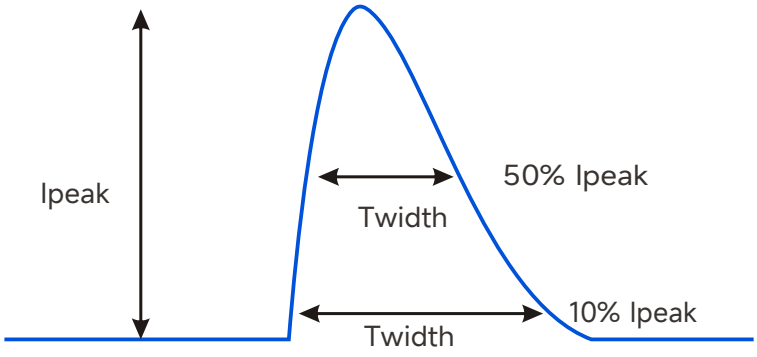
Safety Test Items	Technical Indicators			Remark
Insulation Requirements	UL Insulation Requirements	ENEC Insulation Requirements	CCC Insulation Requirements	
Input-Case	2U+1000Vac	2U+1000Vac	2U+1000Vac	Basic insulation
Input-Dim	2U+1000Vac	4U+2000Vac	4U+2000Vac	UL Basic insulation ENEC,CCC Reinforced insulation
Dim-Case	500Vac	500Vac	500Vac	Basic insulation
Insulation Resistance	≥10MΩ			Input-Dim,Test voltage:500Vdc
Ground Resistance	≤0.1Ω			25A/1min
Leakage Current	≤0.75mA			277Vac

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. For voltage withstand test, short-circuit between L/N, short-circuit between output line positive/negative, short-circuit between dimmer line and VPP or between dimmer line and auxiliary source positive/negative.

Performance Curves

Input Inrush Current

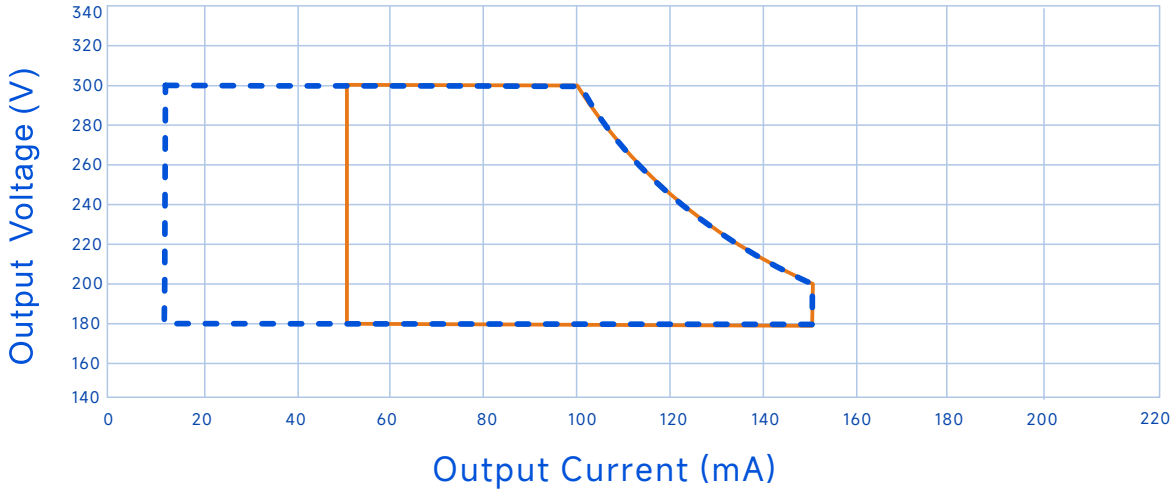


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	50A	300uS	170uS
220Vac	80A	300uS	180uS
277Vac	110A	300uS	190uS

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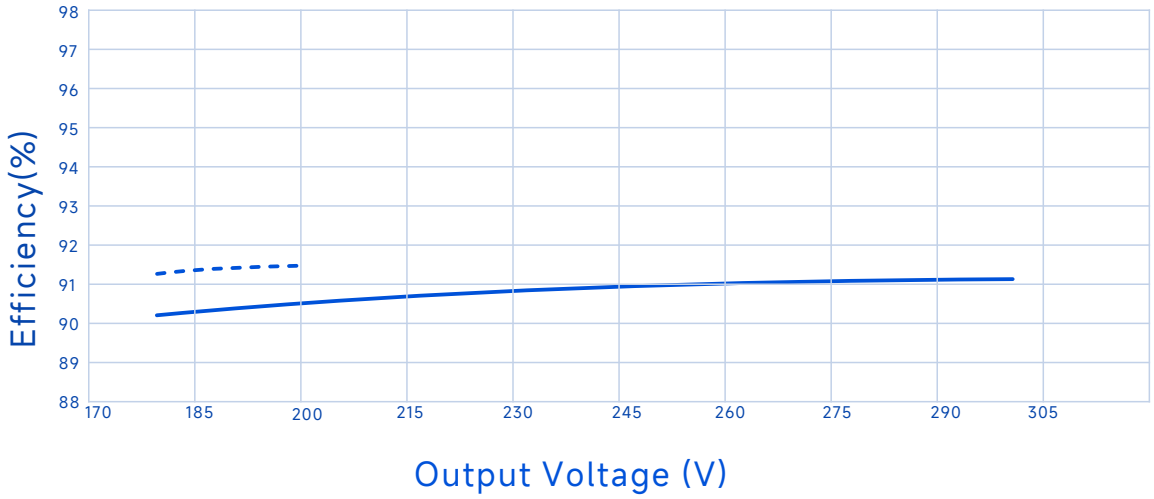
Performance Curves

Output Voltage Vs. Output Current(Dim/AOC Window)



Dimming Window AOC Window

Efficiency Vs. Output Voltage (Vin=120Vac)

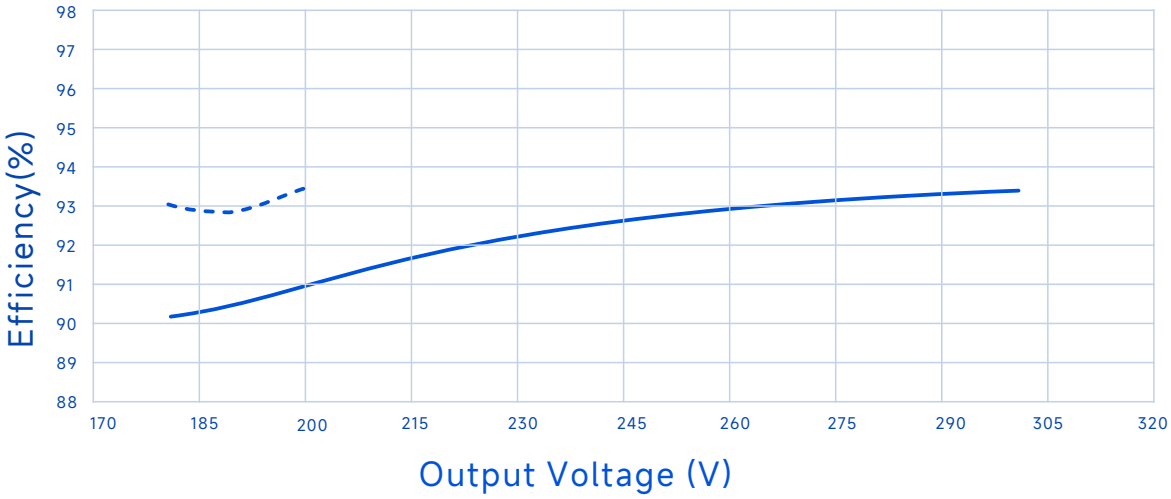


Io=150mA Io=100mA

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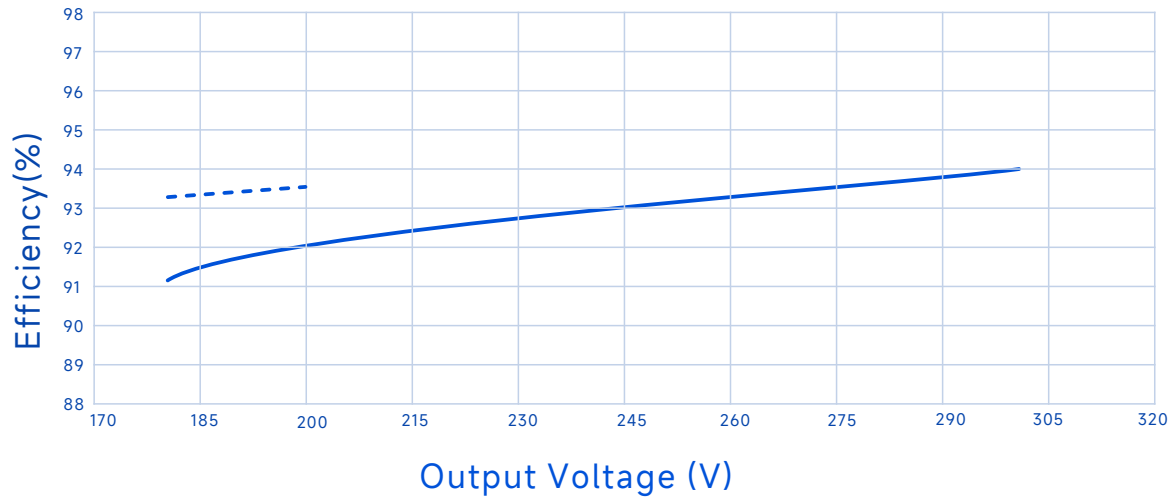
Performance Curves

Efficiency Vs. Output Voltage (Vin=220Vac)



------- Io=150mA ——— Io=100mA

Efficiency Vs. Output Voltage (Vin=277Vac)

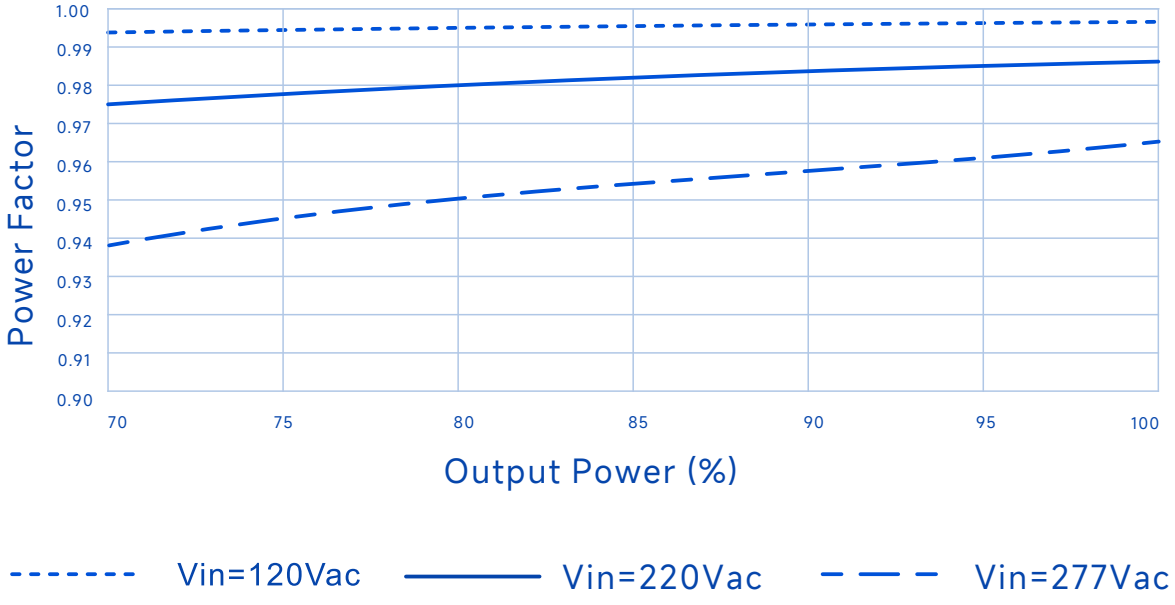


------- Io=150mA ——— Io=100mA

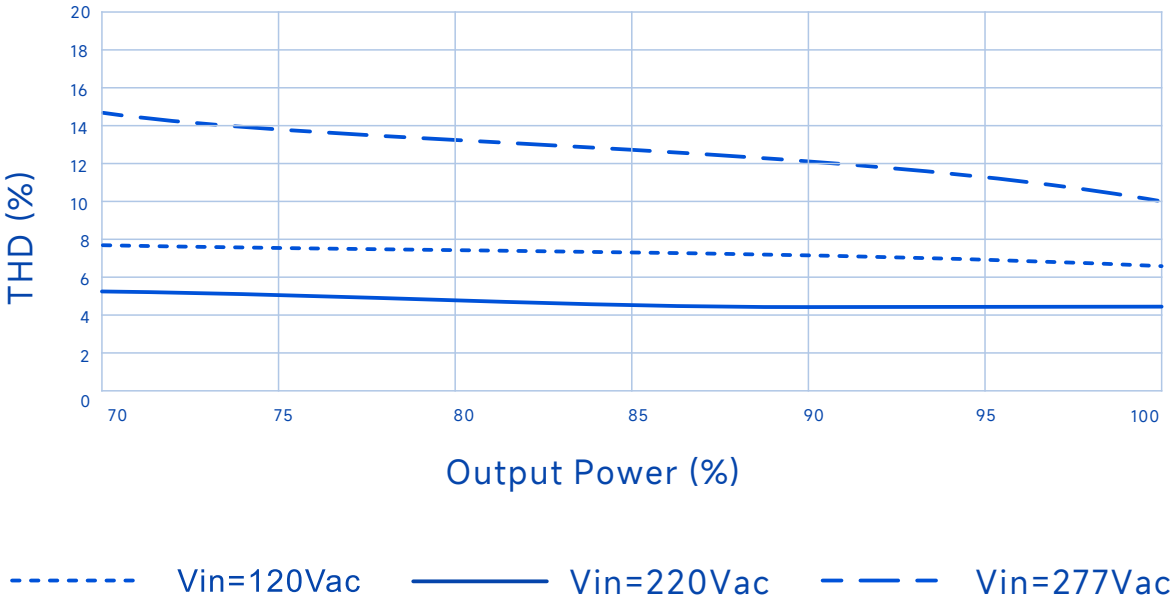
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Performance Curves

Power Factor Vs. Output Power



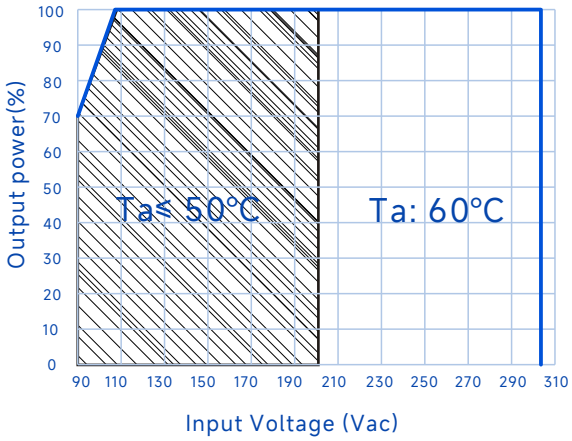
THD Vs. Output Power



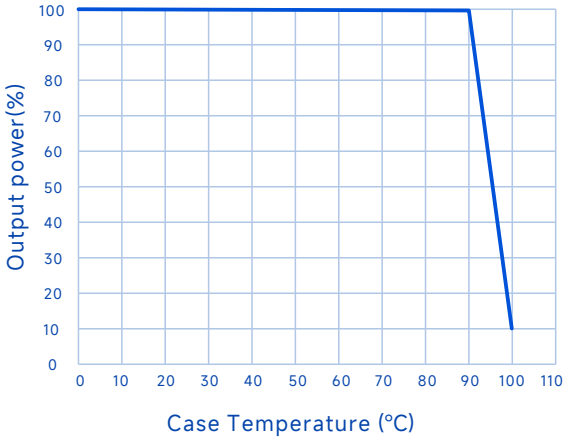
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Performance Curves

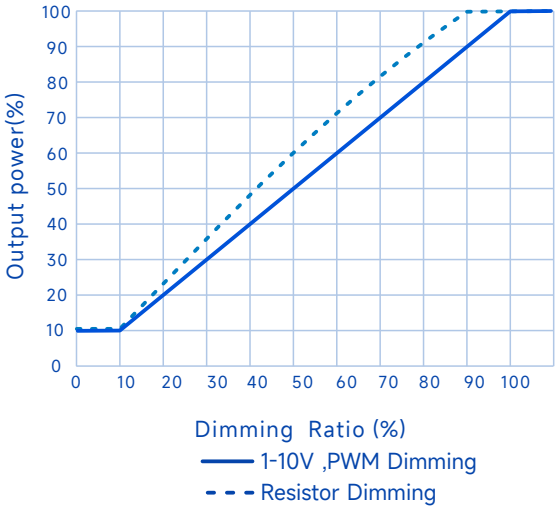
Output Power Vs. Input Voltage



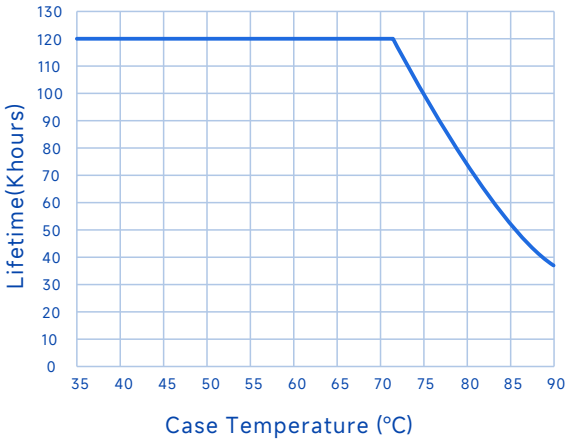
Output Power Vs. Case Temperature



Output Power Vs. Dimming (BB models)



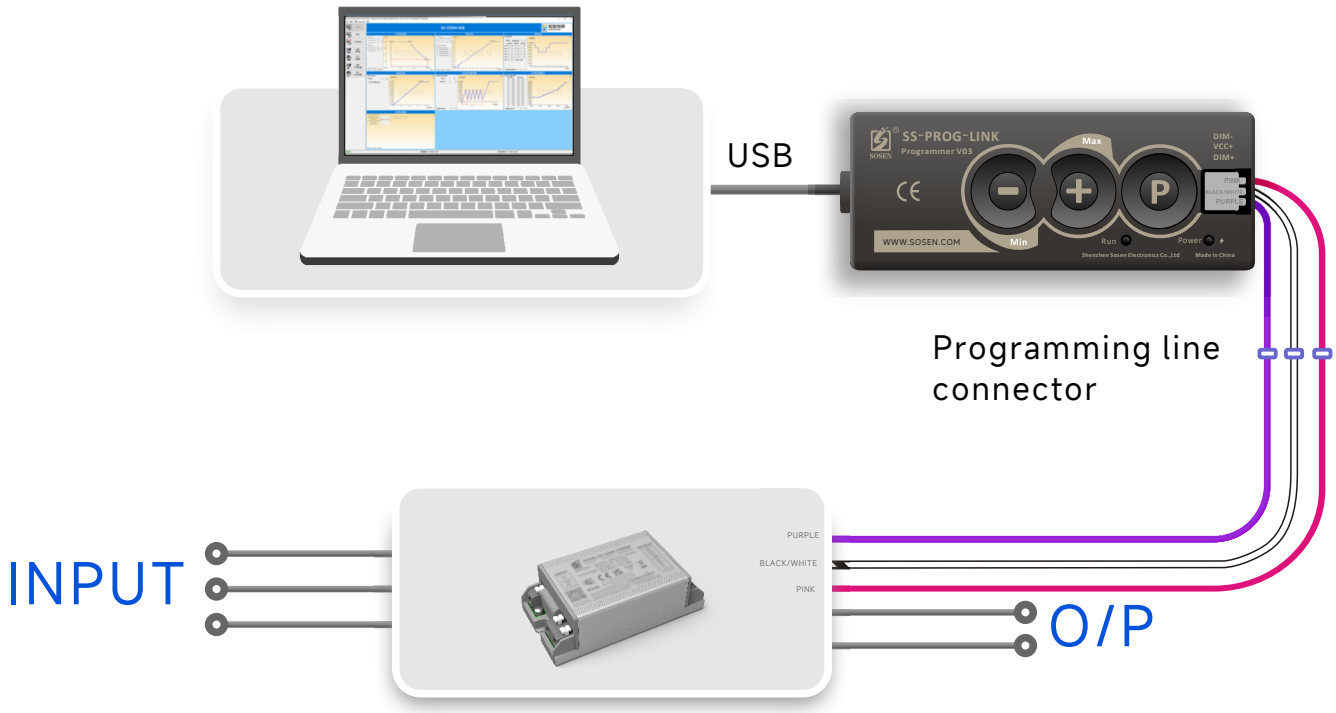
Lifetime Vs. Case Temperature



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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.



1.During programming, the driver does not need to be powered on to achieve all programming functions.
2.For a driver that is powered on and in use, all programming functions can be performed without needing to disconnect the power.
3.It can operate independently of a PC to achieve offline programming

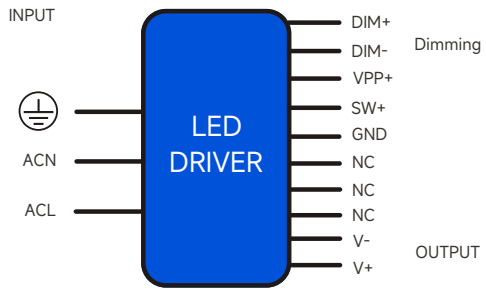
Note:

For details, please refer to the Sosen SS-PROG-LINK Programmer Manual.

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Mechanical Characteristic

BB models



AC Input Terminal

ACL: connect to L wire, ACN: connect to N wire,
⏚ :connect to earth wire

DC Input Terminal

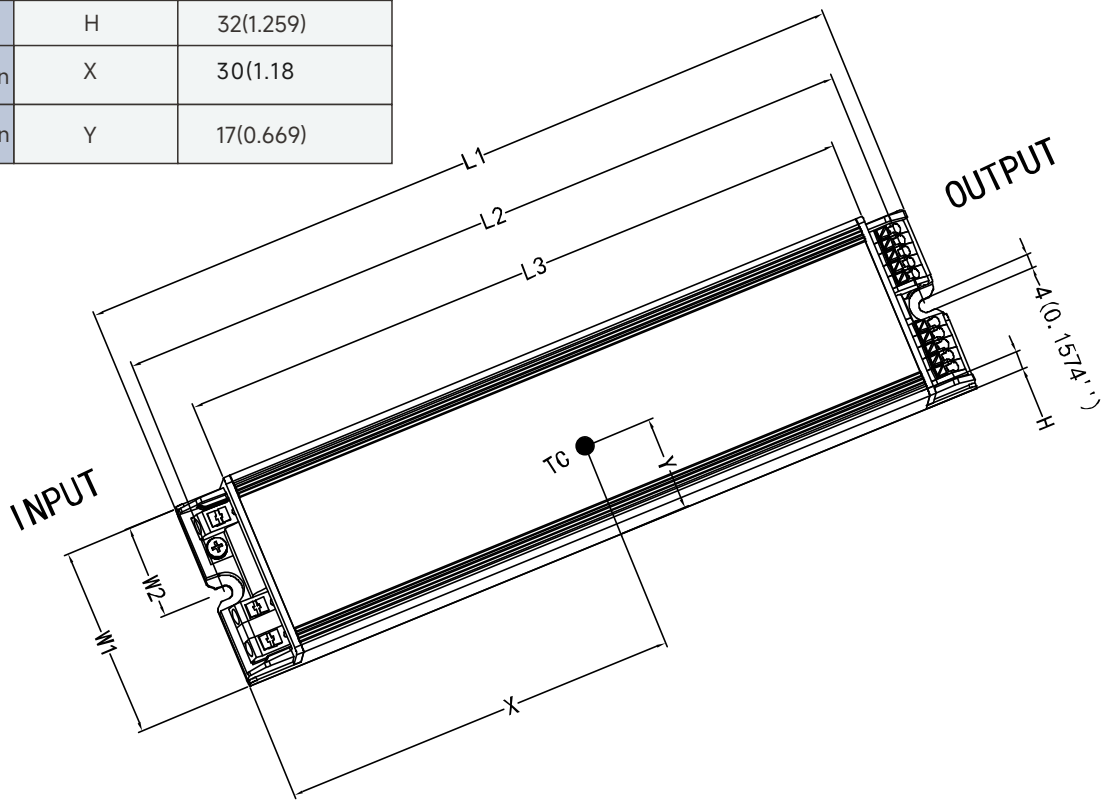
V+: light source board positive, V-: light source board negative

Function Terminal

DIM+:Dimming Positive, DIM-:Dimming Negative, SW+: power dialing, GND: negative, VPP+: offline burning power supply
The VPP+ terminal is exclusively dedicated to power supply programming and must never be connected to any electrical load equipment.

Name Description	Standard Code	mm(In.)
Case Width	W1	55(2.165)
Mounting Hole Width	W2	27.5(1.083)
Overall Length	L1	105(4.133)
Mounting Hole Length	L2	97(3.82)
Case Length	L3	78(3.07)
Case Height	H	32(1.259)
TC Point Position	X	30(1.18
TC Point Position	Y	17(0.669)

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



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Assembly Tips

1. Please take isolation and waterproof measures if the dimming cable is not in use.
2. The withstand voltage between the LED chips and the aluminum substrate >3kV.
3. Safety space between aluminum base and LED coppers >5mm.
4. Safety space/coppers between LED+ and LED- >1.8mm.
5. Minimize the copper area on the aluminum PCB to reduce parasitic capacitance and leakage current.
6. It is recommended to design LED beads in parllel first and then in series.
7. When using non-isolated power supplies, it is recommended to incorporateresistors or capacitors connected in parallel with the LED chips in the lamp boarddesign to mitigate the risk of surge impacts.

Warning

Insufficient or compromised insulation voltage resistance in LED light panels may cause breakdown and short circuits to earth, resulting in damage to the luminaire and LED driver, and posing significant safety hazards. It is recommended to install a residual current device (RCD) during application.

Package

- Outside carton dimension: L×W×H =325mm×315mm×165mm;
- 42PCS/Carton;
- Net weight/Piece: 0.28kg;Gross weight/Carton: 12.26kg;
- 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.

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Revision History

Version	Description of Update	Updated Date	Remark
V00	Original Release	2026/09/16	

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