



SPECIFICATIONS

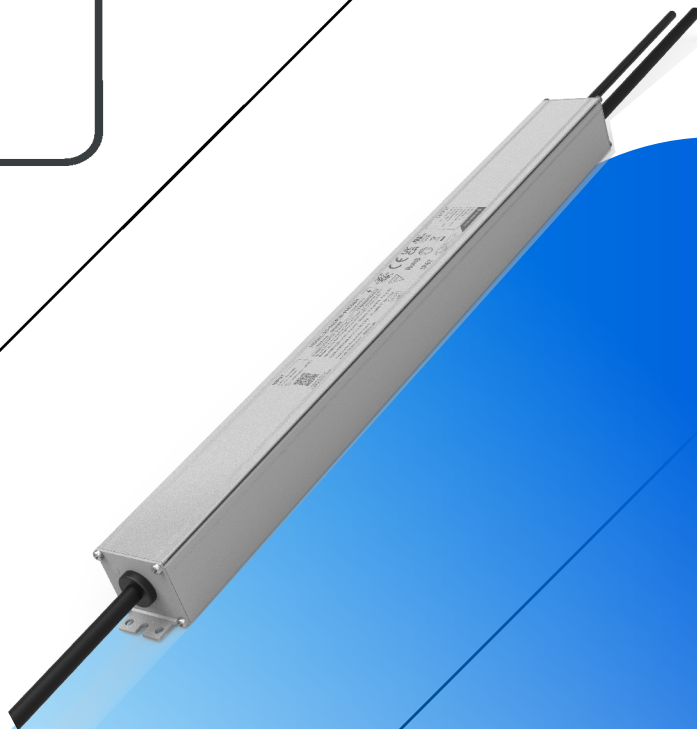
SS-800RUN-M400BH* CC DRIVER

Model: SS-800RUN-400BH*

Power: 800W

Rev.: V01

Release date: 2026-06-24



SS-800RUN-M400BH* LED DRIVER

Features

- Efficiency up to 97%
- Dimming: 0-10V,PWM,Resistor,Timing
- Surge protection: CM: 6kV, DM: 6kV
- AUX Power: 12V/0.2A
- Dual-live-wire input off without afterglow
- Communication with PC
- Protections: OTP/OVP
- IP67
- Warranty: 5 years





Description

SS-800RUN-M400BH is 800W non isolated waterproof LED constant current driver, suitable for 180-528Vac range input voltage, with wide range output characteristics, output current can be adjusted through software programming, and having isolation dimming and auxiliary power supply is beneficial for the design of LED lights and reduces the cost of LED lighting fixtures. Having all sides bit protection, including OTP and OVP.

Applications:
Horticulture lighting, High pole lighting, Fish lighting

Model List

Model	AC Input Range	Max. Pout	Vout Range	Recommended Voltage	Iout	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-800RUN-M400BH*	180-528Vac	800W	200-400V	230V-400V	0.35-3.47A	8%	0.97	96.0%	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-800RUN-M400BH* LED DRIVER

“*” Means Additional Function

“*”	AUX 12V (suffix:H)	NTC (suffix:N)	Timing	0-10V/PWM Dim /Resistor (suffix:B)	Output- Ground	Dual-live-wire input off	Remark
BH	✓		✓	✓		✓	3C DIM Cable
BHN	✓	✓	✓	✓		✓	5C DIM Cable
BH-G	✓		✓	✓	✓	✓	4C DIM Cable
BHN-G	✓	✓	✓	✓	✓	✓	5C DIM Cable
BH3	✓		✓	✓		✓	3C DIM Cable
BH-G3	✓		✓	✓	✓	✓	3C DIM Cable

Input Characteristics

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	200Vac		480Vac	Ref. derating curve
AC Input Range	180Vac		528Vac	Ref. derating curve
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			4.8A	200Vac,Full load
Max Input Power			960W	200Vac,Full load
Max Inrush Current(220Vac)			30A	Cold start
Max Inrush Current(347Vac)			40A	Cold start
Max Inrush Current(480Vac)			50A	Cold start
Power Factor	0.95	0.97		220Vac/50Hz,Full load
	0.90			200-480Vac,70%-100% load
Standby Power			0.5W	230Vac/50Hz,Dim to Off
THD			10%	220Vac/50Hz,70%-100% load
			20%	200-480Vac,70%-100% load

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Output Characteristics

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	200V		400V	Power derated @200-230V
Rated O/P Voltage	230V		400V	$P_o = V_o \cdot I_o = 800W$, Full load
Rated O/P Current	2.0A		3.47A	3.47A for 230V, 2.0A for 400V
Adj. O/P Current (AOC) Range	0.35A		3.47A	Adjustable by program
No Load Voltage			440V	O/P V+ to V-
Output the maximum voltage to the ground			600V	
Efficiency @220Vac	93.0%	94.5%		O/P 400V/2.0A
Efficiency @347Vac	95.0%	96.5%		O/P 400V/2.0A
Efficiency @480Vac	95.0%	97.0%		O/P 400V/2.0A
O/P Current Tolerance	-5%		+5%	
O/P Current Ripple(PK-AV)		5%	10%	Full load
Start-up Current Overshoot			10%	Full load(The Current value in the current stable state)
Start-up Time			0.5S	220Vac, Full load
			0.5S	480Vac, Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient	-0.03%/°C		+0.03%/°C	T _c : 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 Reference over-temperature protection curve
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			200mA	
0-10V Dimming (Optional)	Dim Vmax	0V		12V	Negative dimming by programming
	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	Negative dimming by programming
	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
	Dim-on	9%	10%	12%	By DC voltage, PWM,dimming ratio
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≤75°C)		50,000 hours			220Vac,80% Load
MTBF		198,970 hours			347Vac,Full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP67			
Tc		90°C			
Warranty		5 years			Tc:75°C
Net Weight		1.72Kg			
Dimension		508mm*43.5mm*38mm			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: 91KΩ/N.

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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	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		

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Safety and EMI/EMS Standards

EMI/EMS	Standard	Status	Remark
Conduction Emission	EN IEC 55015	✓	
	FCC Part 15 Subpart B;ANSI C63.4	✓	ClassA
Radiation Emission	EN IEC 55015	✓	
	FCC Part 15 Subpart B;ANSI C63.4	✓	ClassA
Harmonic Current Emissions	EN IEC 61000-3-2	✓	ClassC
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	✓	DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5	✓	DM: 6kV,CM: 6kV,Criterion B

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Safety Test Items

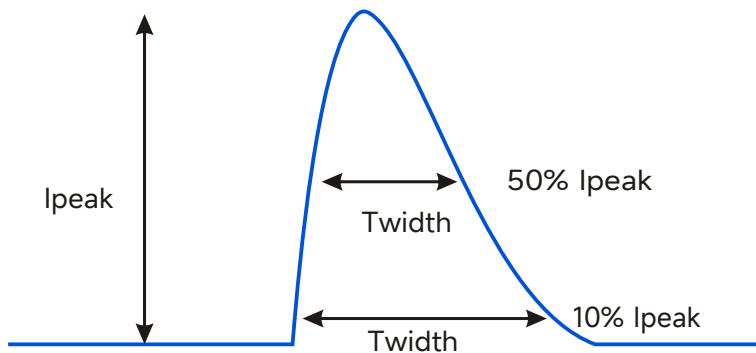
Safety Test Items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	ENEC Insulation Requirements	
Input-Case	2U+1000	2U+1000	Basic insulation
Input-Dim	2U+1000	4U+2000	UL Basic insulation ENEC Reinforced insulation
Dim-Case	500Vac	500Vac	Basic insulation
Insulation Resistance	$\geq 10\text{M}\Omega$		Primary-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. Please short (ACL and ACN and V+ and V-), (Dim+ and Dim - and Vaux+)when Hi-pot test.

Performance Curves

Input Inrush Current

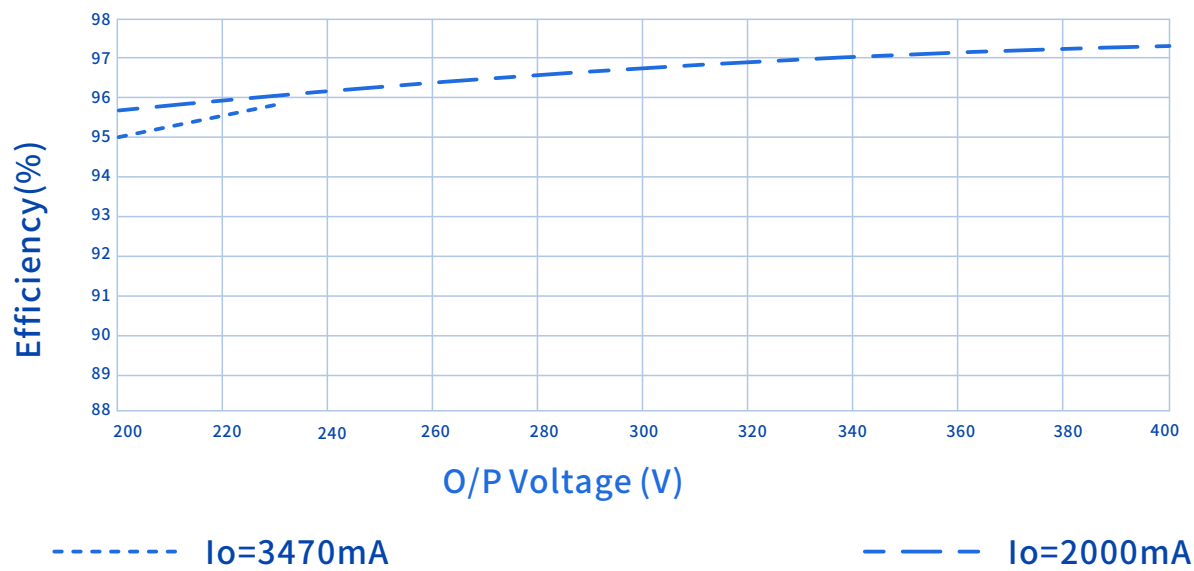


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
220Vac	30A	5.28mS	2.12mS
347Vac	40A	5.0mS	1.92mS
480Vac	50A	5.28mS	1.92mS

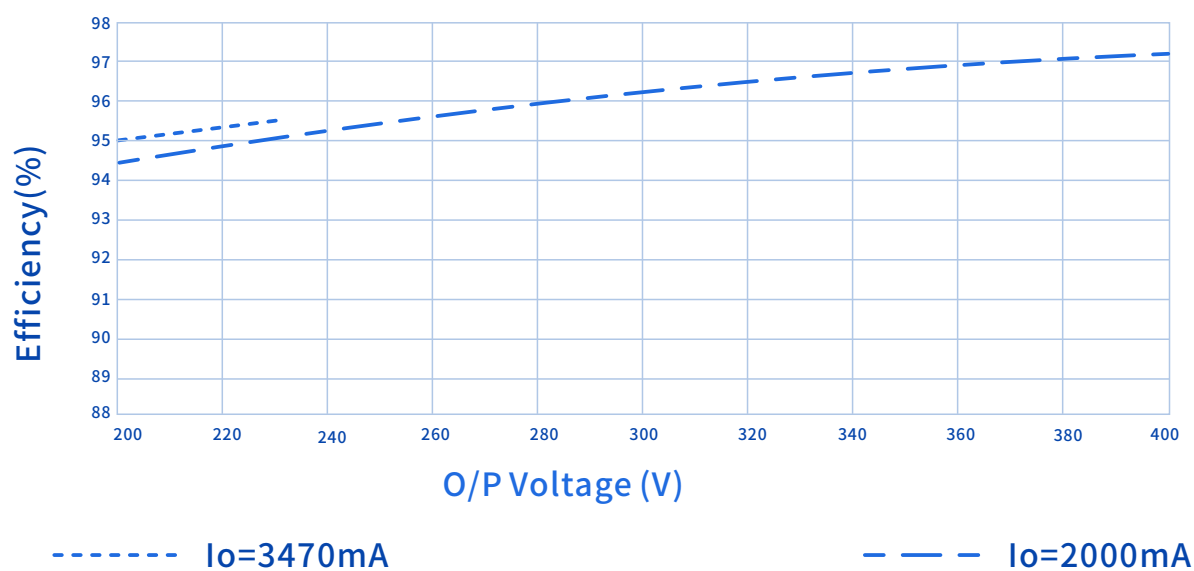
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Performance Curves

Efficiency Vs. Output Voltage (Vin=347Vac)



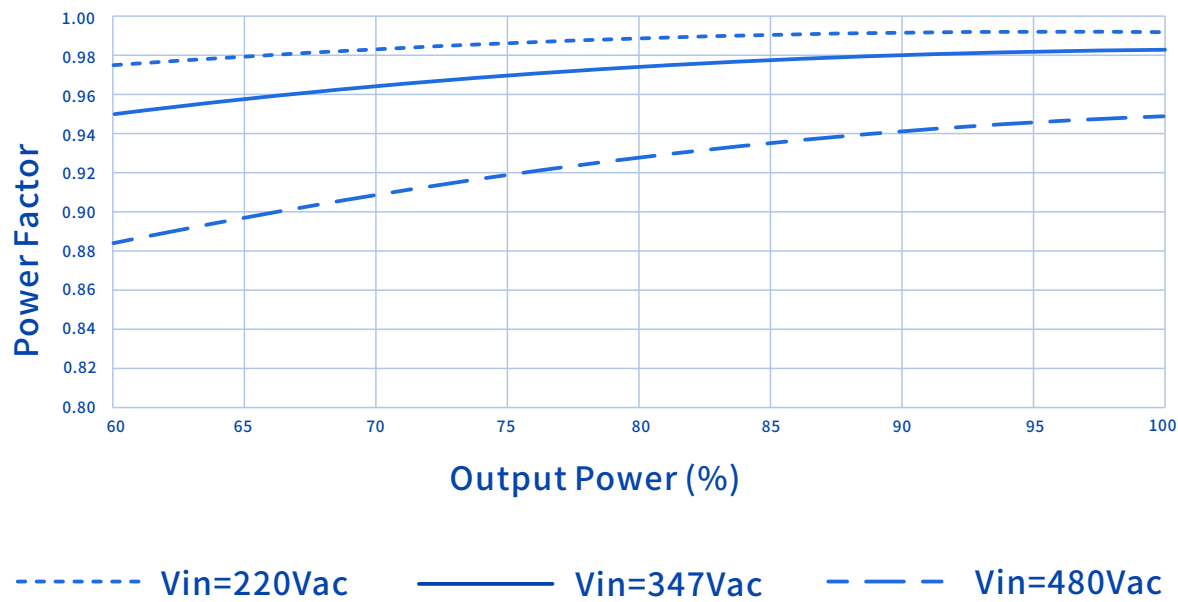
Efficiency Vs. Output Voltage(Vin=480Vac)



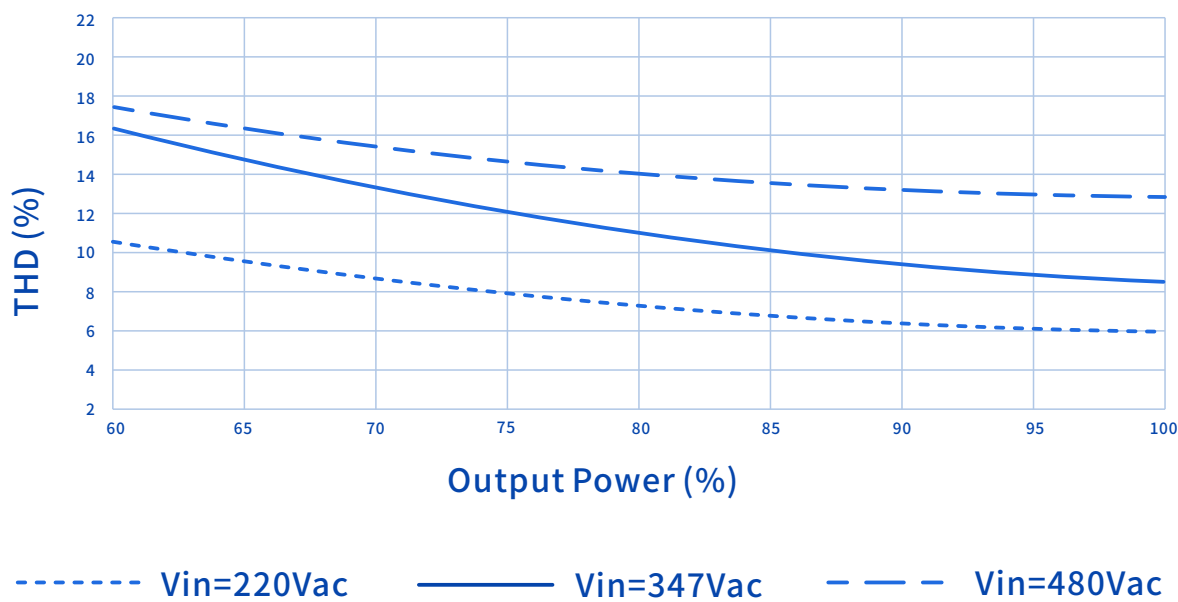
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Performance Curves

Power Factor Vs. Output Power



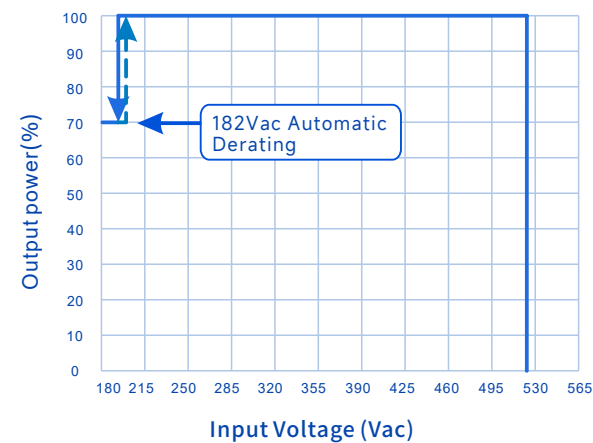
THD Vs. Output Power



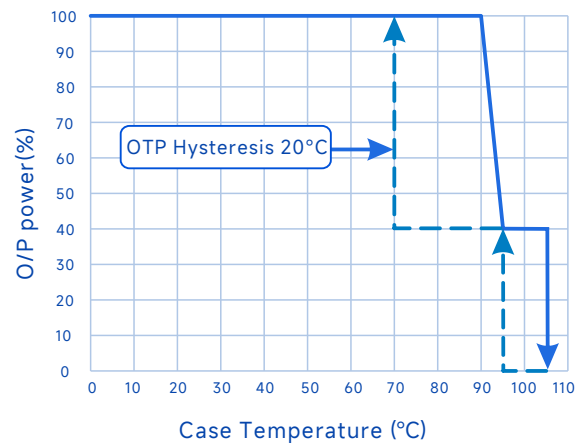
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Performance Curves

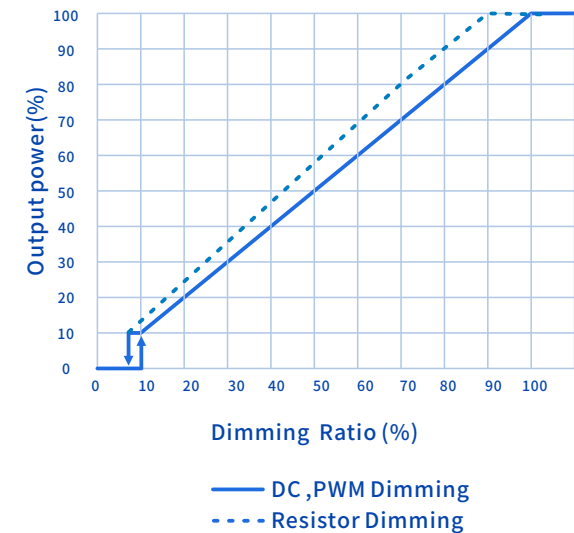
Output Power Vs. Input Voltage



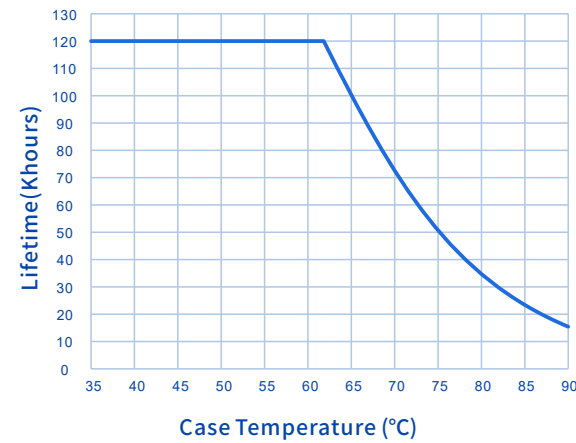
Output Power Vs. Case Temperature



Output Power Vs. Dimming



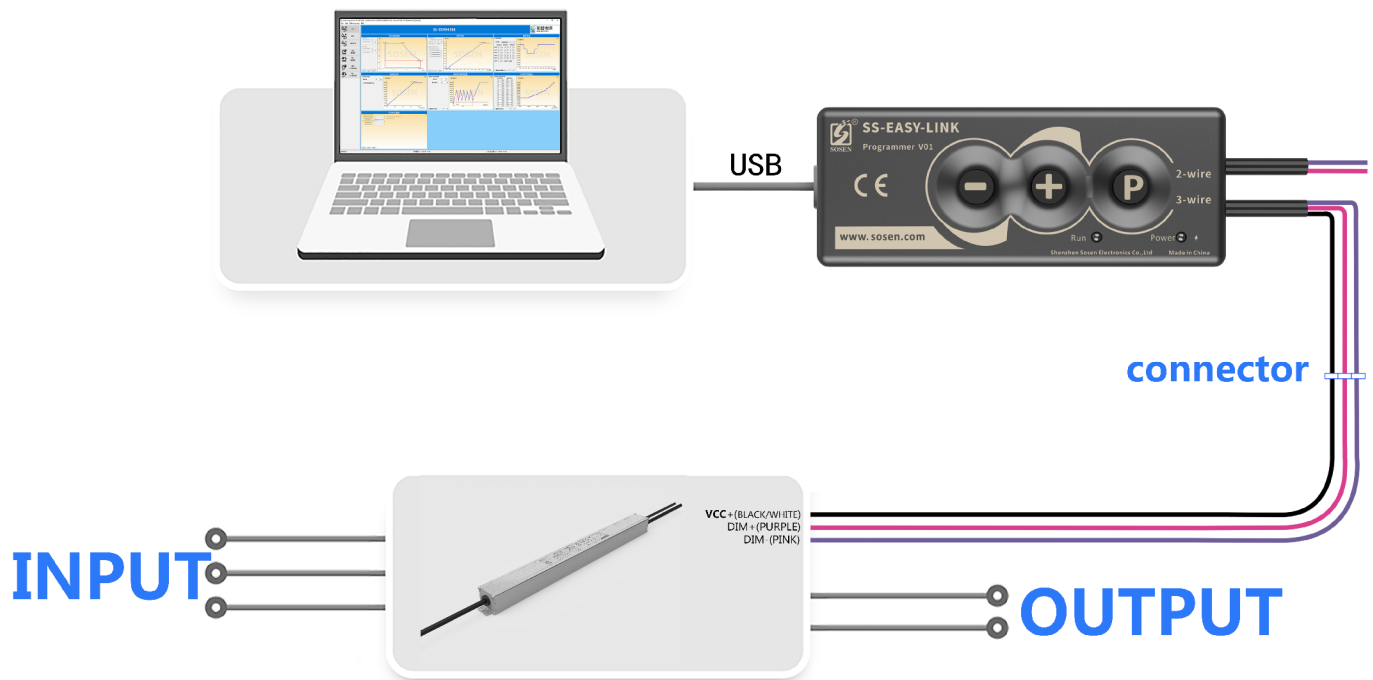
Lifetime Vs. Case Temperature



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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.



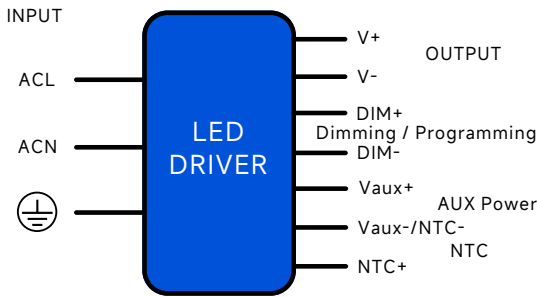
1. During programming, the driver does not need to be powered on to achieve all programming functions.
2. For a driver that is powered on and in use, all programming functions can be performed without needing to disconnect the power.
3. It can operate independently of a PC to achieve offline programming.

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.

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Mechanical Characteristic



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

Global model: SOOW,3*17AWG,O.D: 9.8mm,Brown: ACL,Blue: ACN, Yellow/Green:

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

Global model: SOOW,2*17AWG,O.D: 9.3mm,Brown: V+ Blue: V-
Global model: SOOW,2*17AWG,O.D: 9.8mm,Brown: V+ Blue: V- Yellow/Green:

BH Model

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

UL model: 21996, 3*22AWG,O.D: 5.1mm,Purple: DIM+, Pink: DIM-, Black/White: Vaux+
UL model: 21996, 4*22AWG , O.D: 5.6mm Purple: DIM+, Pink: DIM-, Black/White: Vaux+, Blue/White: Vaux-

BHN Model

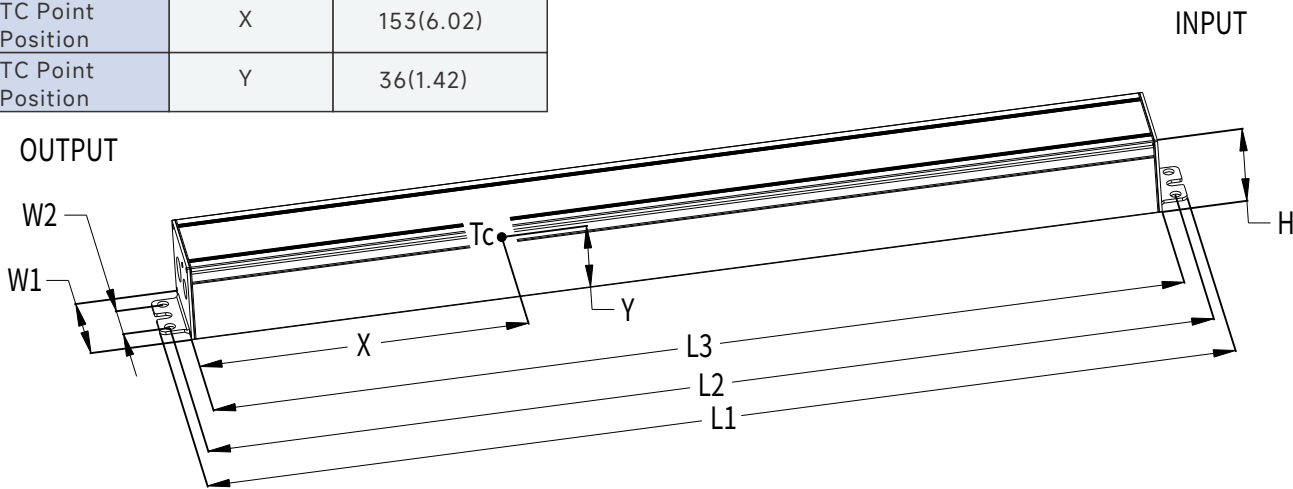
DIM/AUX Power/Programming/NTC Cable (Exposed Length 220±10mm):

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

Name Description	Standard Code	mm(in.)
Case Width	W1	43.5(1.71)
Mounting Hole Width	W2	20(0.79)
Overall Length	L1	508(20)
Mounting Hole Length	L2	498(19.60)
Case Length	L3	482(19)
Case Height	H	38(1.5)
TC Point Position	X	153(6.02)
TC Point Position	Y	36(1.42)

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:43±5mm, Tinned length of wire:10±2mm.



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Assembly Tips

1. Please take isolation and waterproof measures if the dimming cable is not in use.
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. The insulation level of LED light panels should meet the reliability design requirements.
6. For other precautions, please refer to the "LED Driver User Manual".
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. It is recommended to design LED beads in parallel first and then in series.

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 =610mm×385mm×162mm;
- 8PCS/Carton;
- Net weight/Piece: 1.72kg;Gross weight/Carton: 15.72kg;
- 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	2026/04/03	
V01	Modify the tinning stripping length of the wire	2026/06/24	