SOSEN

SPECIFICATIONS

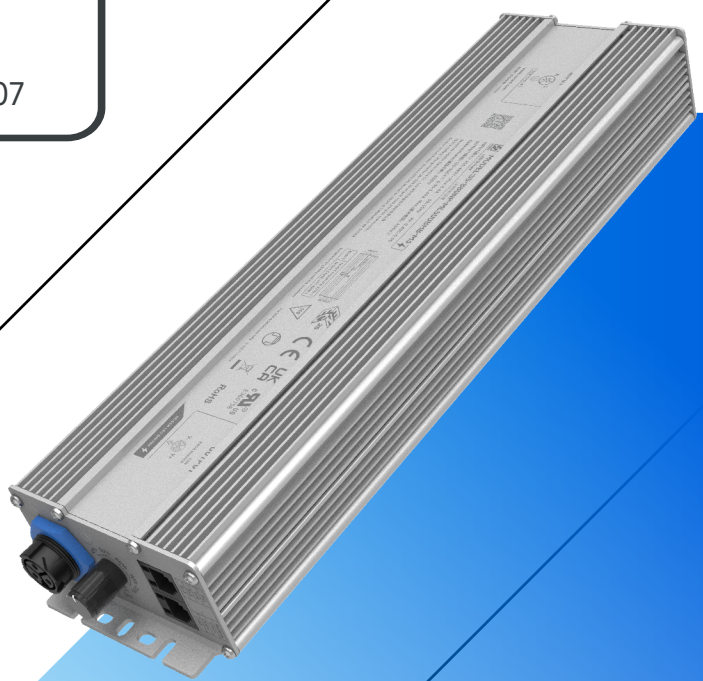
SS-880NP-ML*
CC DRIVER

Model: SS-880NP-ML*

Power: 880W

Rev.: V02

Release date: 2026-04-07



SS-880NP-ML Series LED Driver

Features

- Efficiency up to 97%
- Dimming: 0-10V,PWM,Resistor,Timing
- Surge protection: CM: 6kV, DM: 6kV
- AUX Power: 12V/0.3A
- Soft-start, Constant Lumen, Life Warning
- Communication with PC
- Protections: SCP/OTP/UVP/OPP
- Warranty: 5 years

RoHS E360758

Description

SS-880NP-ML500* is 880W 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, Stadium lighting, Fish lighting

Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vo Range	Iout	THD (Typ.)	PF(Typ.)	Eff.(Typ.)	Max.Tc
SS-880NP-ML500*	180-528Vac	880W	150-500V	252-500V	0.35-3.49A	10%	0.95	97%	90°C

Note:

1.Default Tested: at 400Vac, 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

"*"	AC INPUT		DC OUTPUT			Dimming		Output-Ground	Remark
	Cable	M19-3Pin	Cable	M19-2Pin	M19-3Pin	Knob&RJ25	M12-3Pin		
BHB	✓		✓			✓			
BHB-G	✓		✓			✓		✓	
BHB-M2		✓		✓		✓			
BHB-M3		✓			✓	✓		✓	
BH-M2		✓		✓			✓		
BH-M3		✓			✓		✓	✓	

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	200Vac		277Vac	<Ta:45°C
	277Vac		480Vac	<Ta:50°C
AC Input Range	180Vac		528Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			4.78A	200Vac,Full load
Max Input Power			956W	200Vac,Full load
Max Inrush Current(220Vac)			50A	Cold start
Max Inrush Current(347Vac)			50A	Cold start
Max Inrush Current(400Vac)			50A	Cold start
Max Inrush Current(480Vac)			70A	Cold start
Power Factor	0.95	0.97		230Vac/50Hz, Full load
	0.90			200-480Vac, 70-100% load
THD		6%	10%	347Vac/60Hz, Full load
			20%	200-480Vac, 70-100% load

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O/P Characteristics:

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	150V		500V	Power derated @150-252V
Rated O/P Voltage	252V		500V	Po=Vo*Io=880W, Full load
Rated O/P Current	1.76A		3.49A	3.49A for 252V,1.76A for 500V
Adj. O/P Current (AOC)Range	0.35A		3.49A	Adjustable by program
No Load Voltage			600V	
Efficiency @220Vac	93.0%	94.0%		O/P 500V/1.76A
Efficiency @347Vac	94.0%	96.0%		O/P 500V/1.76A
Efficiency @400Vac	95.0%	97.0%		O/P 500V/1.76A
Efficiency @480Vac	95.0%	97.0%		O/P 500V/1.76A
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	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient	-0.03%/°C		+0.03%/°C	Tc:0°C~90°C
OTP	90°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	Negative dimming by programming Dimming prohibits reverse connection. DIM+ source current 110uA .
	Dim Range	10%loset		100%loset	
	Rec.Dim Range	0V		10V	
0-10V Dimming (Optional)	Rec.Dim Range	0V		10V	DIM+ Maximum sink current is 40uA Dimming prohibits reverse connection. 5-0V by programming
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 .
0-10V Dim to Off	Dim off	7%	8%	9%	By DC voltage, PWM, resistance dimming ratio
	Dim on	8%	9%	10%	By DC voltage, PWM, resistance 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			80% Load,400Vac
MTBF		186,500 hours			400Vac,Full load, Ta=25°C (MIL-HDBK-217F)
Tc		90°C			
Warranty		5 years			Tc: 75°C
Net Weight		2440g			
Dimension		341mm*89.5mm*44.5mm			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°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	✓	
	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: 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	Reinforced insulation
Dim-Case	500Vac	500Vac	Basic insulation
Insulation Resistance	≥10MΩ		Input-DIM,Test voltage:500Vdc
Ground Resistance	≤0.1Ω		25A/1min
Leakage Current	≤0.75mA		480Vac

NOTE:

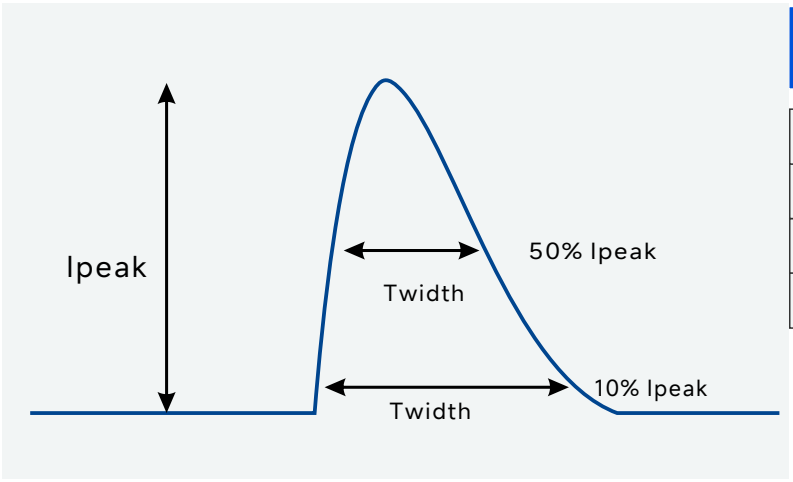
1.SOSEN warrants the LED Driver itself complies with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.

2.Please short (ACL and ACN), (V+ and V-), (Dim+ and Dim - and Vaux+) when Hi-pot test (Turn off ARC) .

3.When applying withstand voltage to ground, the input and outputlines need to be short-circuited together.

Performance Curves:

Input Inrush Current



Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
220Vac	50A	10mS	3mS
347Vac	50A	11mS	4mS
400Vac	50A	11mS	4mS
480Vac	70A	12mS	4mS

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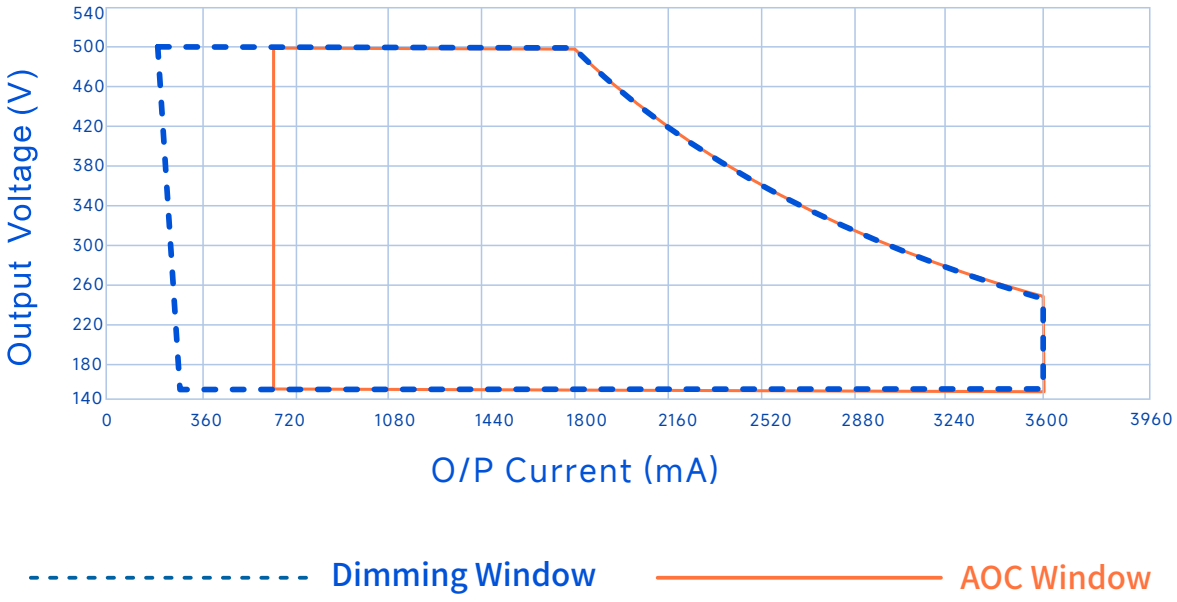
Performance Curves:

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



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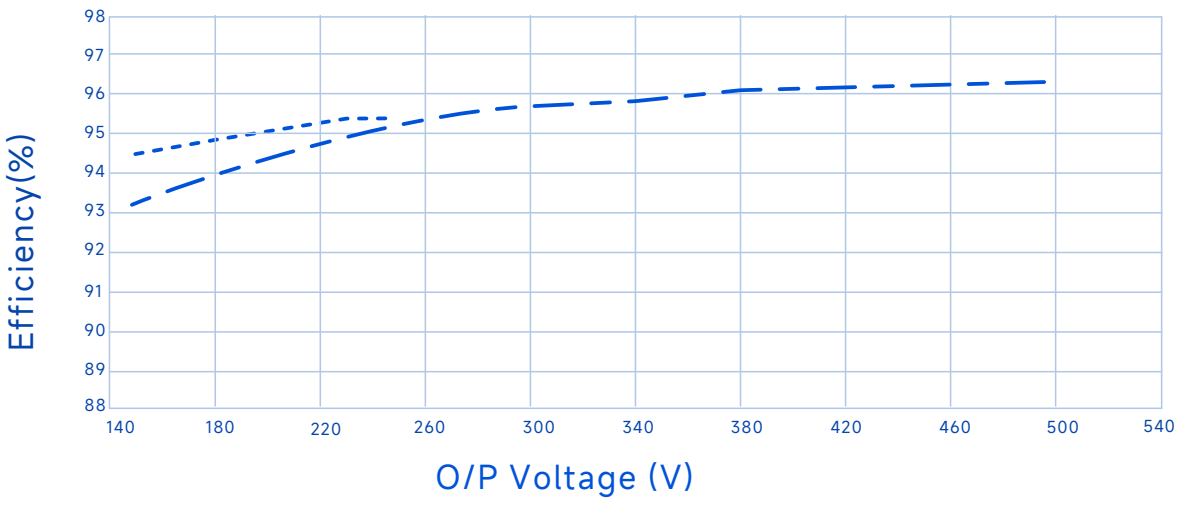
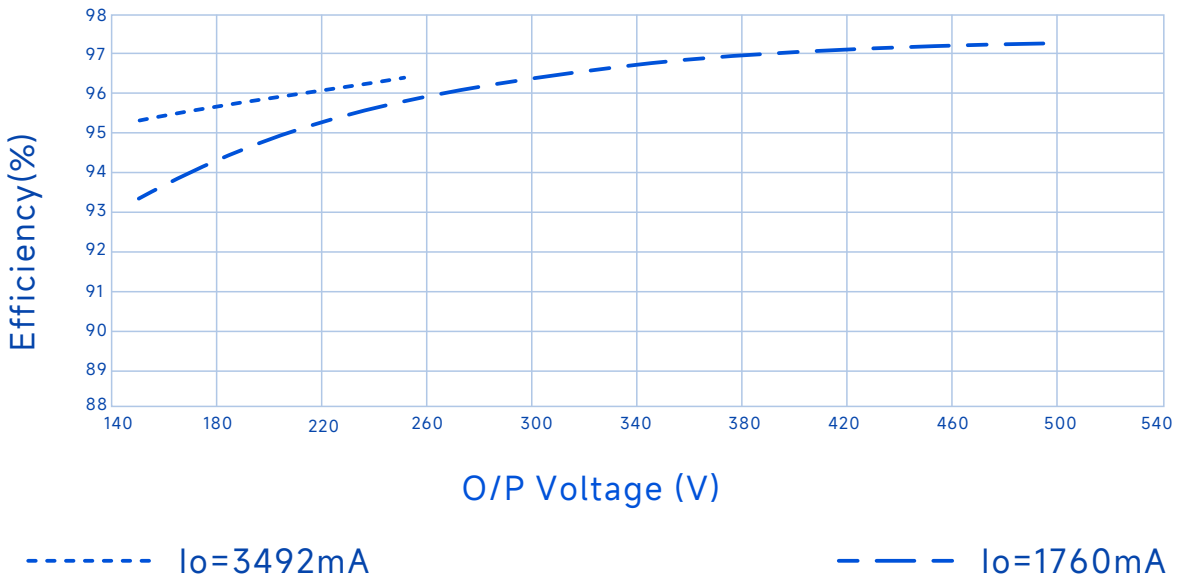
Performance Curves:

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



Efficiency Vs. O/P Voltage (Vin=347Vac)



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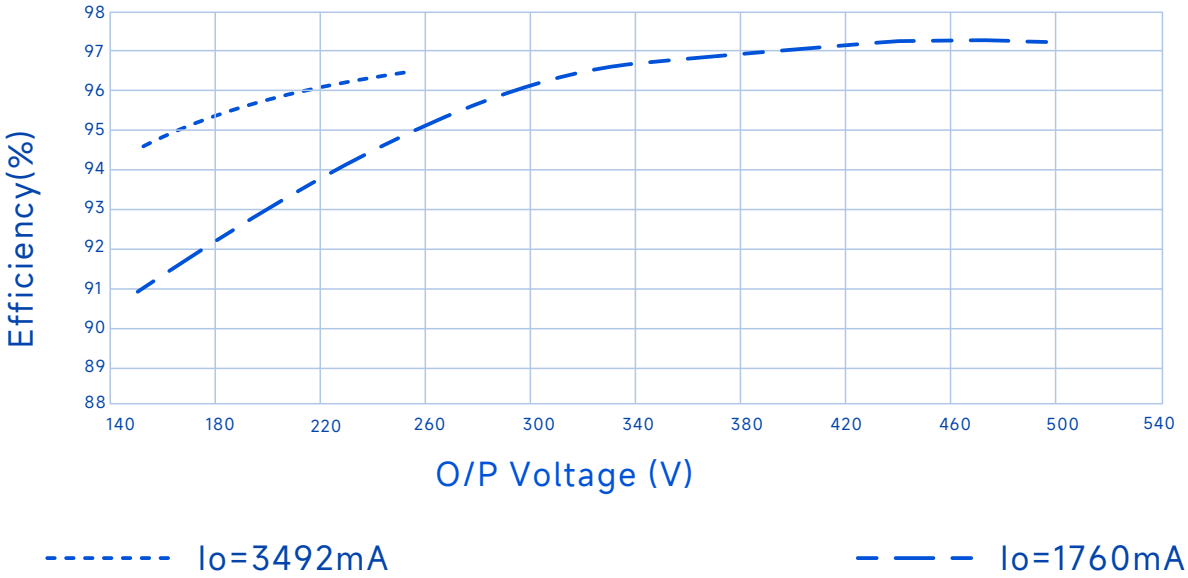
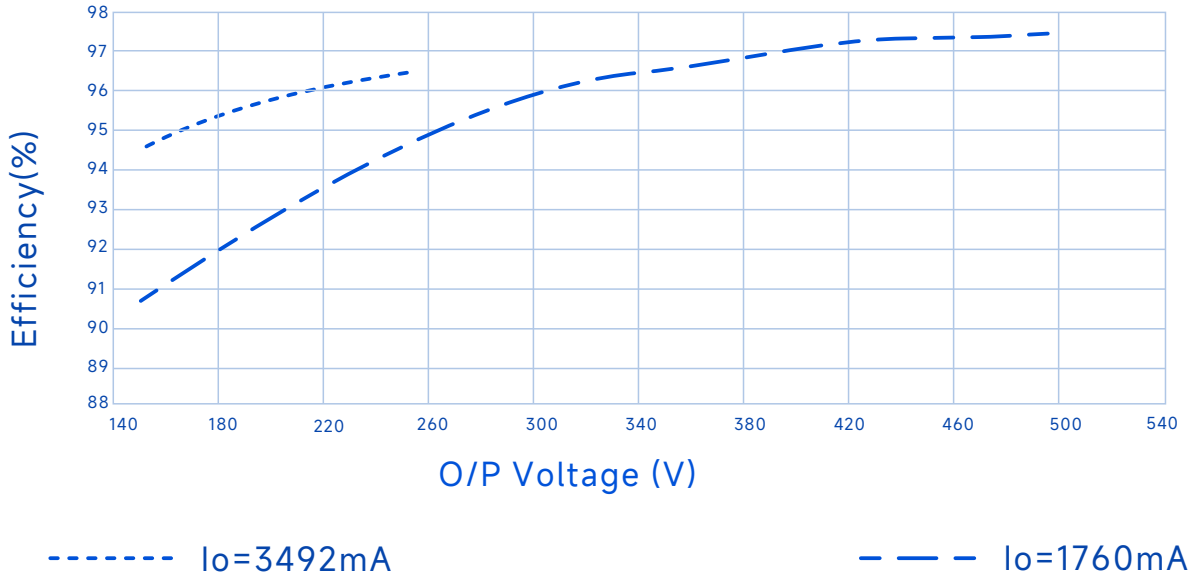
Performance Curves:

Efficiency Vs. O/P Voltage (Vin=400Vac)



Efficiency Vs. O/P Voltage (Vin=480Vac)



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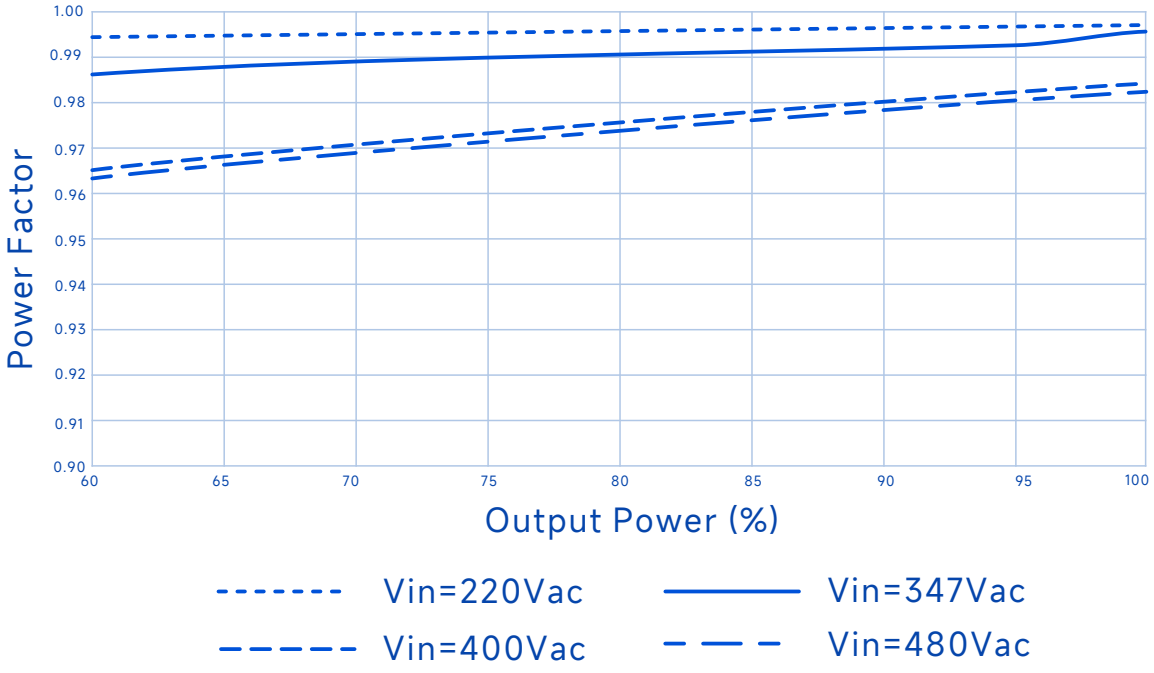
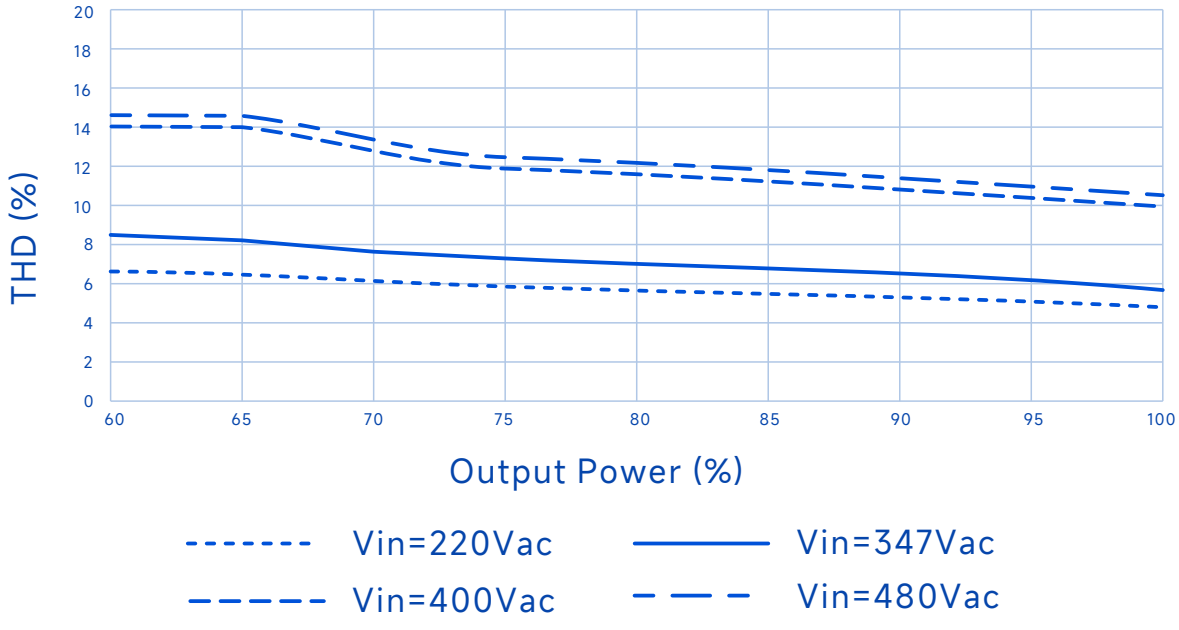
Performance Curves:

Power Factor Vs. O/P Power



THD Vs. O/P Power



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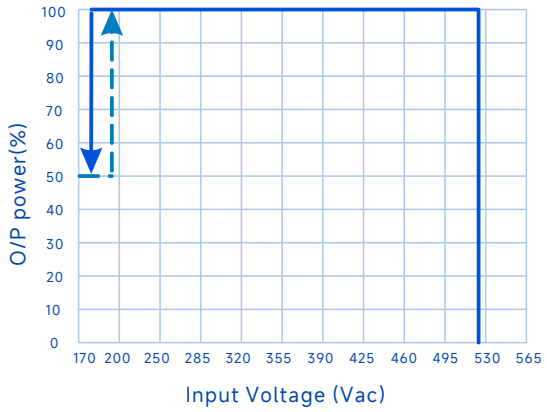
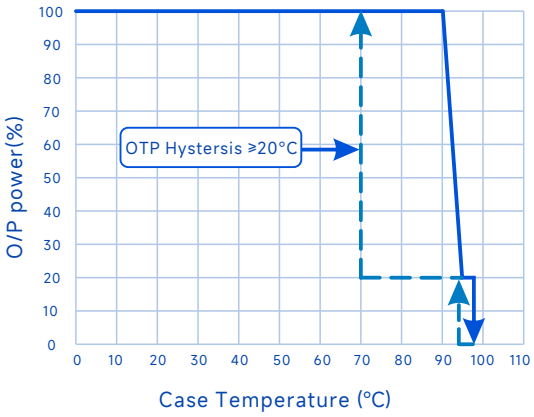
Performance Curves:

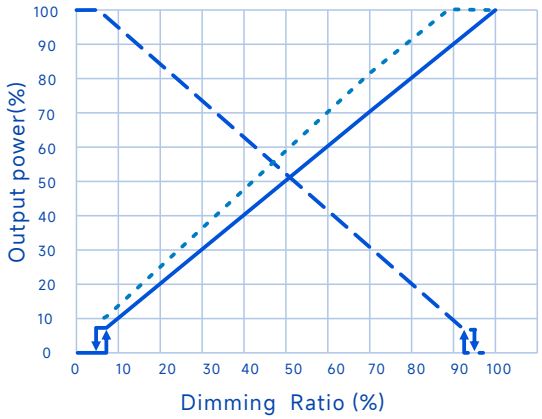
O/P Power Vs. Input Voltage



O/P Power Vs. Dimming

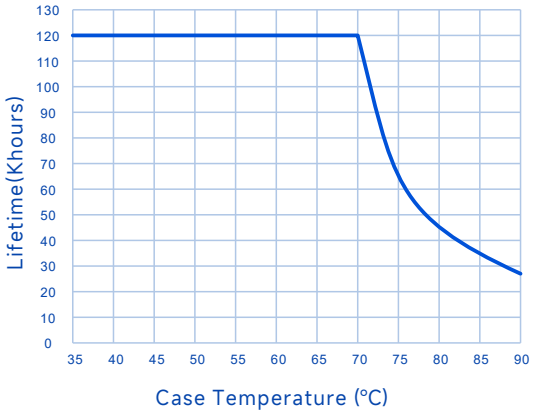


O/P Power Vs. Dimming



0-10V,0-5V,PWM
10-0V,5-0V
Resistor Dimming

Life Time Vs. Case Temperature



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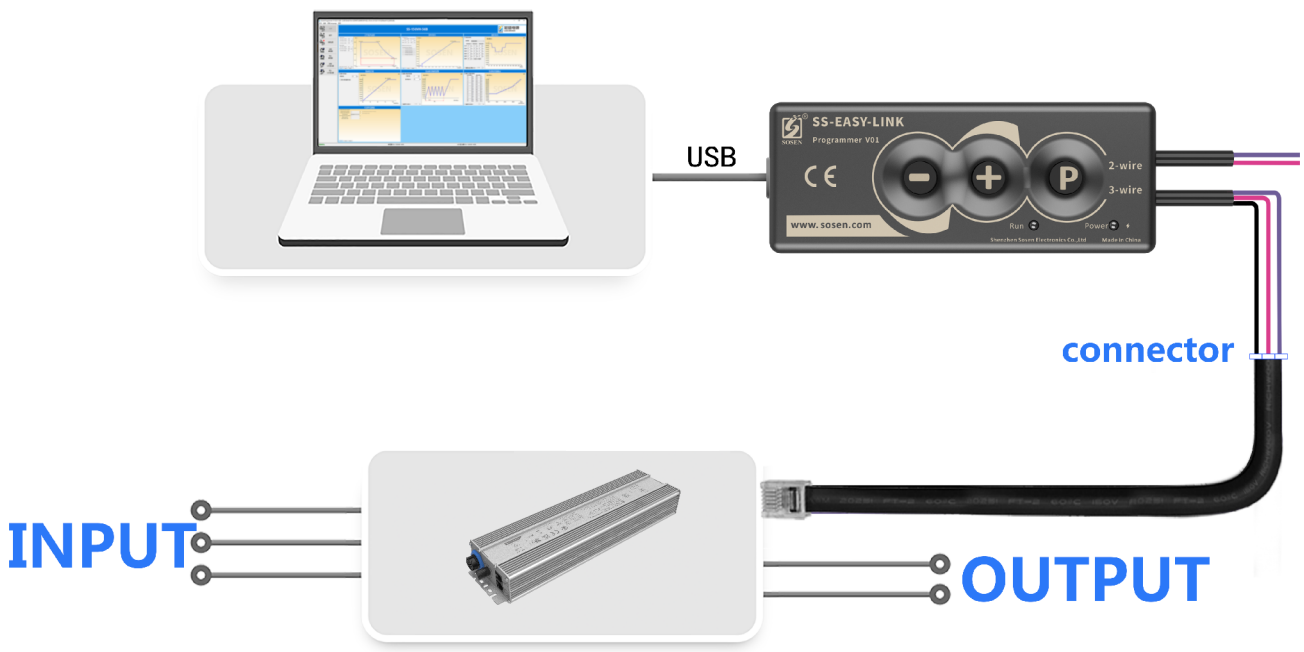
Constant Lumen Output

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:

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.

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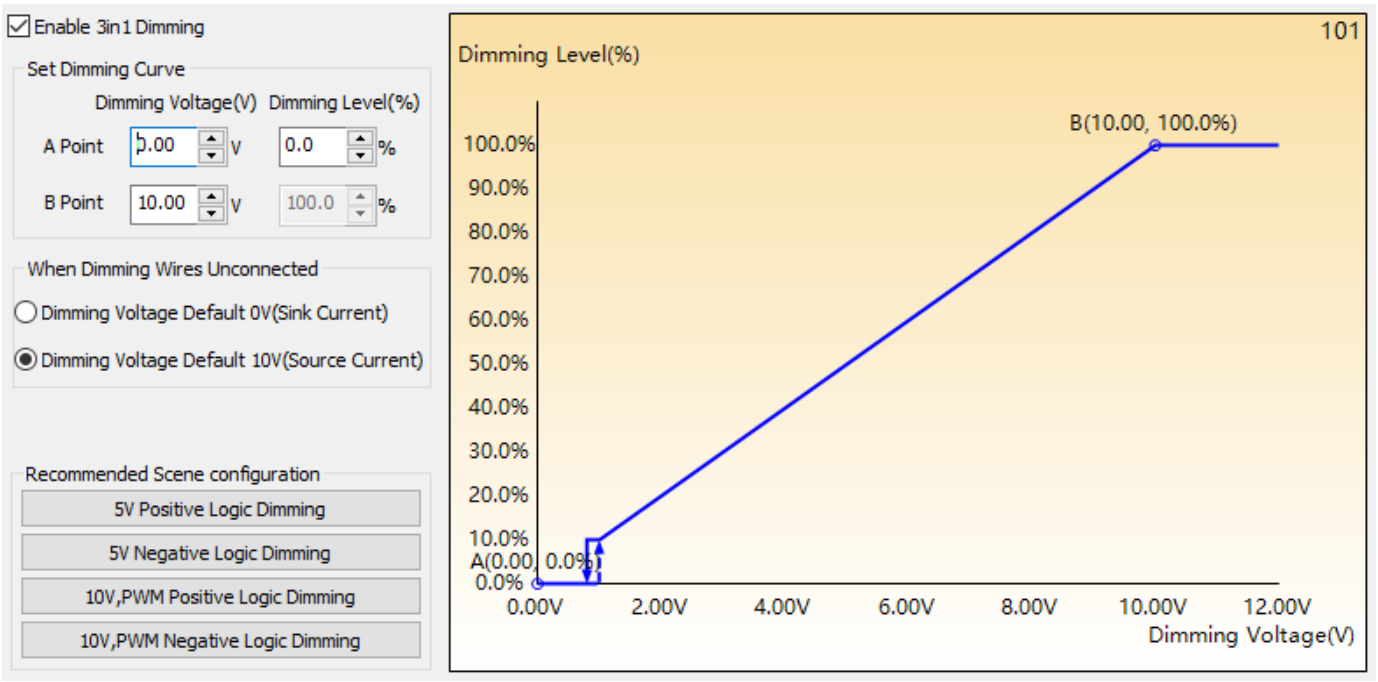
Dimming parameter settings

Parameter		Remark
Dimming Settings	Dimming voltage default 10V (source current)	Factory Default Mode(other models)
	Dimming voltage default 0V (sink current)	Factory Default Mode(BHB* models)

Note:
According to the application of the dimmer, customers can set the two modes of “dimming voltage default 10V (output current)” / “dimming voltage default 0V (draw current)” by Songsheng programming software.

Settings Interface



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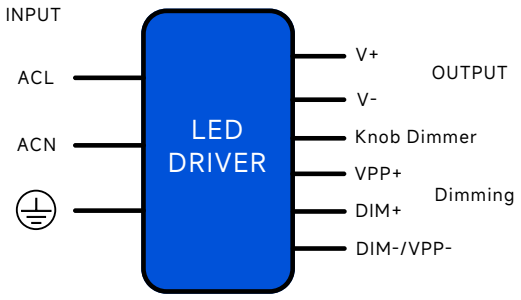
Mechanical Characteristics



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):

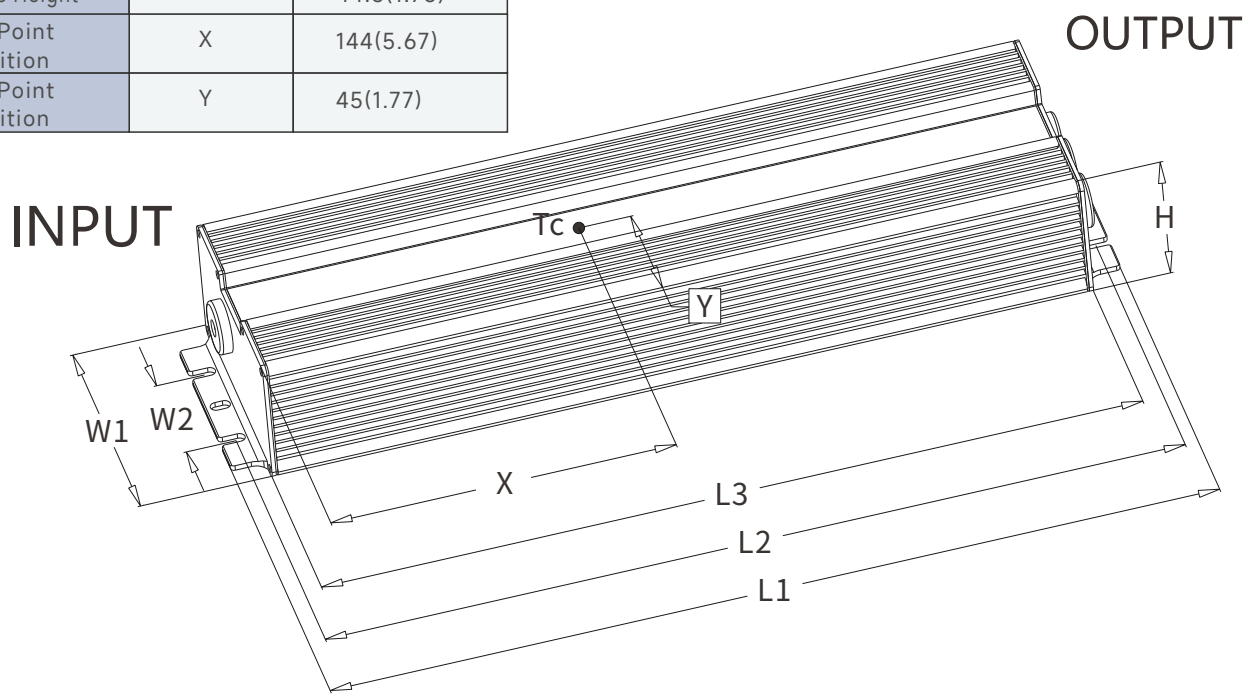
Global model: SOOW,2*17AWG,O.D: 9.3mm,Brown:V+ Blue:V-
Global model:SOOW,3*17AWG,O.D:9.8mm,Brown:V+,Blue:V-,
Yellow/Green:GND(Suffix-G) ⏚

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

Knob Dimmer, RJ25 port

Name Description	Standard Code	mm(in.)
Overall Length	L1	341(12.42)
Mounting Hole Length	L2	330(12.99)
Case Length	L3	310(12.20)
Case Width	W1	89.5(3.52)
Mounting Hole Width	W2	40(1.57)
Case Height	H	44.5(1.75)
TC Point Position	X	144(5.67)
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:43±5mm, Tinned length of wire:10±2mm



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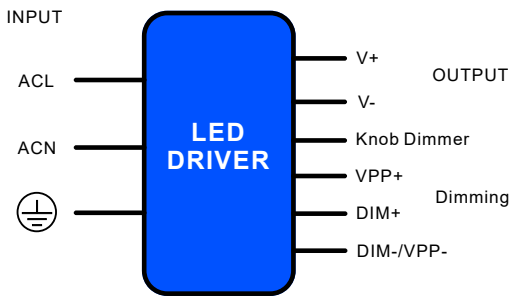
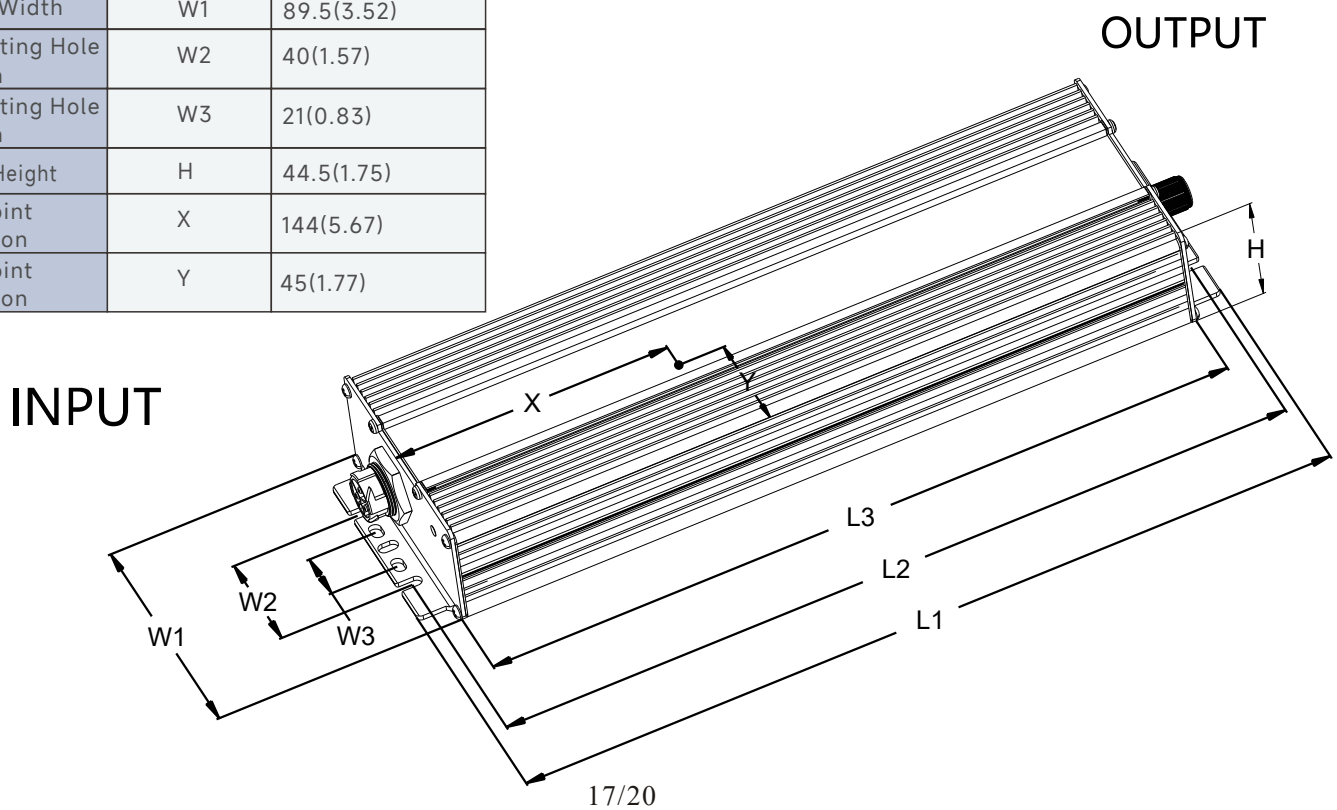
Mechanical Characteristics(BHB-M2/BHB-M3 model)



AC INPUT	DC OUTPUT	
M19LLT-3 Pin	M19LLT-2 Pin	M19LLT-3 Pin
M19JNICON-3 Pin	M19JNICON-2 Pin	M19JNICON-3 Pin
		
DIM/Programming Cable Knob Dimmer, RJ25 port		

Name Description	Standard Code	mm(In.)
Overall Length	L1	341(12.42)
Mounting Hole Length	L2	330(12.99)
Case Length	L3	310(12.20)
Case Width	W1	89.5(3.52)
Mounting Hole Width	W2	40(1.57)
Mounting Hole Width	W3	21(0.83)
Case Height	H	44.5(1.75)
TC Point Position	X	144(5.67)
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:43±5mm, Tinned length of wire:10±2mm



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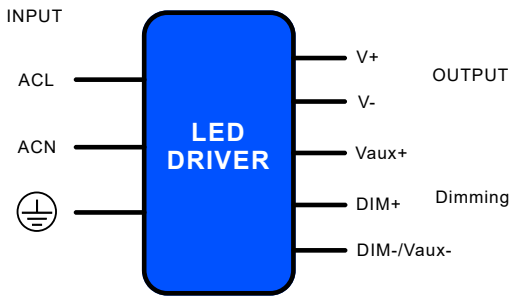
Mechanical Characteristics(BH-M2/BH-M3 model)



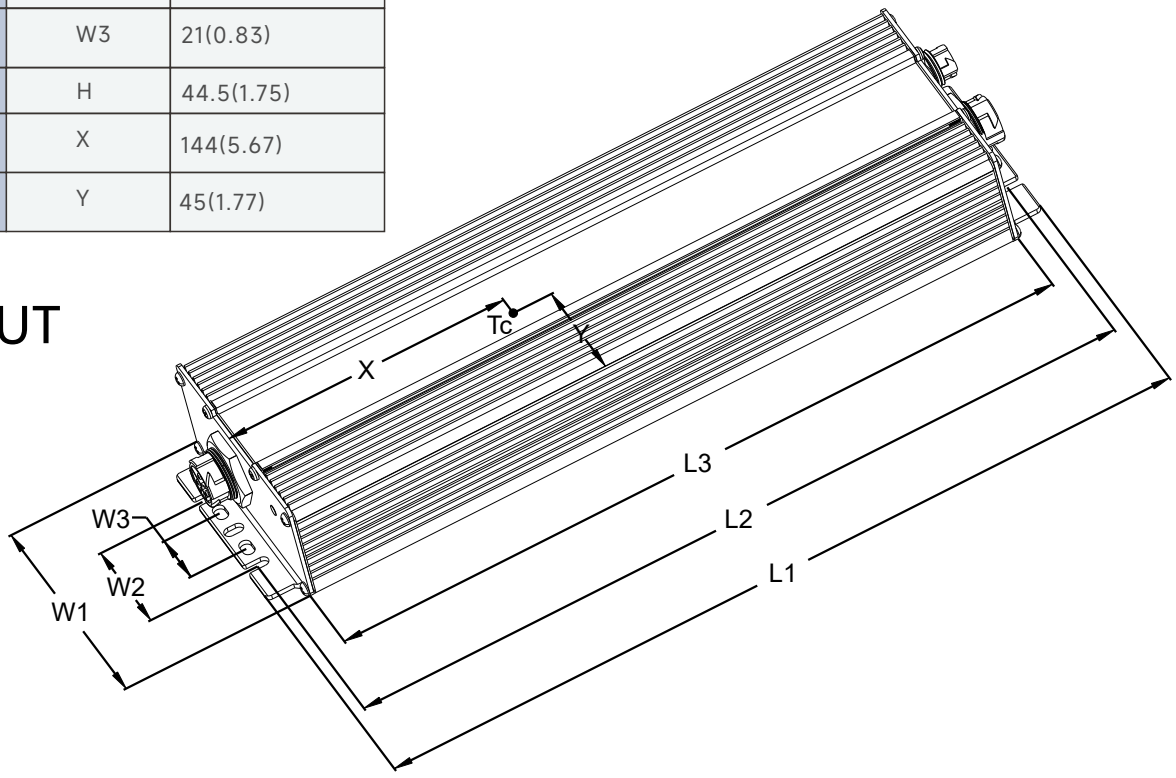
AC INPUT	DC OUTPUT		DIM OUTPUT
M19LLT-3 Pin	M19LLT-2 Pin	M19LLT-3 Pin	M12LLT-3 Pin
M19JNICON-3 Pin	M19JNICON-2 Pin	M19JNICON-3 Pin	M12JNICON-3 Pin
			

Name Description	Standard Code	mm(In.)
Overall Length	L1	341(12.42)
Mounting Hole Length	L2	330(12.99)
Case Length	L3	310(12.20)
Case Width	W1	89.5(3.52)
Mounting Hole Width	W2	40(1.57)
Mounting Hole Width	W3	21(0.83)
Case Height	H	44.5(1.75)
TC Point Position	X	144(5.67)
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:43±5mm, Tinned length of wire:10±2mm

OUTPUT

INPUT



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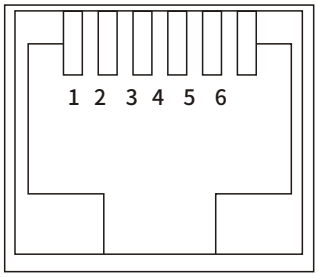
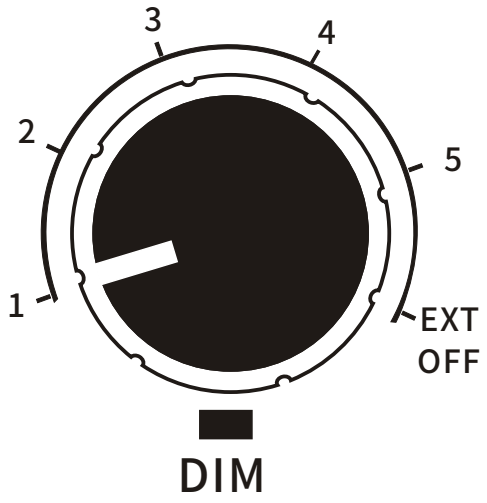
Knob/RJ25 terminal definition:

PLUG



JACK

RJ25 PIN	Definition
1&6	VPP+
2&5	DIM+
3&4	DIM-/VPP-



Switch	Definition
1	40%loset
2	50%loset
3	60%loset
4	80%loset
5	100%loset
EXT/OFF	External Dimming /Dim to off

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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 parllel 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".

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 =495mm×385mm×162mm;
- 5PCS/Carton;
- Net weight/Piece:2.44kg;Gross weight/Carton: 13.275kg;
- 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	2025/08/13	
V01	Expurgate Standby Power Consumption	2025/12/10	
V02	Add warning statements	2026/04/07	

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