SOSEN

SPECIFICATIONS

SS-320VH-E AUX CC DRIVER

Model: SS-320VH-E AUX

Power: 320W

Rev.: V01

Release date: 2026-09-20



SS-320VH-E AUX LED DRIVER

Features

- Efficiency up to 94.5%
- Output current adjustment method:
  Dimmer line programming
- Isolated dimming: 0-10V, PWM, Resistor
- AUX Power: 12V/0.2A
- Standby Power<0.5W
- TIM ELA CLO
- Suitable for Class I lamps
- Protections: SCP/OTP/OVP/OPP
- Surge protection: CM: 10kV, DM: 6kV
- IP66/IP67
- Warranty: 5 years

Class P IP66 IP67 RoHS

Description

VH-E Auxiliary Power Series are constant current LED Driver with wide O/P voltage range and adjustable O/P current by program. LED luminaries manufactures can easily design luminaries and reduce cost.

Applications:

Street lighting, Tunnel lighting , High Pole lighting, High bay lighting, Stadium lighting, Plant lighting, Fish lighting, Stage lighting.

Model List

Model	AC Input Range	Max. Pout	Vout Range	Recommended Volltage	Iout	Default Current	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-320VH-E56*	90-305Vac	320W	18-56V	40-56V	0.7-8A	6.7A	8%	0.97	94%	90°C

Note:

1.Default Tested:220Vac,fullload, 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.

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

“*” Means Additional Function

"*"	0-10V/PWM /Resistor Or 10-0V (suffix:B)	Auxiliary power 12V(suffix:H)	Class I	Class II	Remark
BH	✓	✓	✓		
BHE	✓	✓		✓	

Input Characteristics

Parameter	Min.	Typ.	Max.	Remark
AC Input Range	90Vac	100-277Vac	305Vac	Reference Derating Curve
DC Input Range	127Vdc		300Vdc	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			4.0A	100Vac, Full load
Max Input Power			380W	100Vac, Full load
Max Inrush Current(120Vac)			13A	Cold start
Max Inrush Current(220Vac)			20A	Cold start
Max Inrush Current(277Vac)			32A	Cold start
Standby Power			0.5W	220Vac/50Hz, Dim-to-off
Power Factor	0.95	0.97		220Vac/50Hz, Full load
	0.90			120-277Vac, 60%-100% load
THD		8%	10%	220Vac/50Hz, Full load
			20%	120-277Vac,60%-100% load

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Output Characteristics

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	18V		56V	Power derated @18-40V
Rated O/P Voltage	40V		56V	Po=Vo*Io=320W, Full load
Rated O/P Current	5.7A		8A	8A for 40V,5.7A for 56V
Adj. O/P Current (AOC) Range	0.7A		8A	
No Load Voltage			60V	
Efficiency @120Vac	90.0%	92.0%		Output 48V/6.7A,Test after burn-in
Efficiency @220Vac	92.0%	94.0%		Output 48V/6.7A,Test after burn-in
Efficiency @277Vac	92.5%	94.5%		Output 48V/6.7A,Test after burn-in
O/P Current Tolerance	-5%		+5%	Full load
O/P Current Ripple(PK-AV)		5%	10%	Full load
Start-up Current Overshoot			10%	Full load
Start-up Time			0.5S	120-277Vac,Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient		0.03%/°C		Tc:0°C~90°C
OTP	90°C	100°C	110°C	Drop current when OTP, and it can be automatically restored after the abnormality is removed.
Short Circuit Protection				Driver will not be damaged

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Other Characteristics

Parameter		Min.	Typ.	Max.	Remark
Auxiliary Power	O/P Voltage	10.8V	12V	13.2V	
	O/P Current	0mA		200mA	
	Output Transient Peak Current			500mA	500mA peak for a maximum duration of 2.2 ms in a 6.0ms period during which time the average should not exceed 250mA.
0-10V Dimming (Configurable)	Dim Vmax	0V		12V	DIM+ source current 110uA. Dimming prohibits reverse connection Configurable to 0-5V
	Dim Range	10%Iomax		100%Ioset	
	Rec.Dim Range	0V		10V	
10-0V Negative Dimming (Configurable)	Rec.Dim Range	0V		10V	DIM+ sink current Imax 40uA. Dimming prohibits reverse connection Configurable to 5-0V
PWM Dimming (Optional)	PWM High	9.8V		10.2V	DIM+ source current 110uA. Dimming prohibits reverse connection.
	PWM Low	0V		0.3V	
	Frequency	1KHz		2KHz	
	PWM Duty	0%		100%	
Resistor Dimming (Optional)	Resistance	0Kohm		100Kohm	DIM+ source current 110uA Not available with negative logic.
	Dim Range	10%Iomax		100%Ioset	
0-10V Dim to Off	Dim off	0.7V	0.8V	0.9V	According to the voltage,PWM, resistance dimming ratio.
	Dim on	0.8V	0.9V	1.0V	
10-0V Dim to Off	Dim off	9.0V	9.2V	9.4V	
	Dim on	8.8V	9.0V	9.2V	
Timing Curve(Optional)		By programming			Set by program.
Lifetime(Tc≤80°C)		≥50,000 hours			Full load.
MTBF		256,000 hours			220Vac,Full load, Ta=25°C (MIL-HDBK-217F)
Protection class		IP66/IP67			
Tc		90°C			
Warranty		5 years			Tc 80°C
Net Weight		1350g			
Dimension		243mm*76.5mm*38.5mm			LxWxH

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	✓	Compatible only with the SS-320VH-E56BH
CUL	CAN/CSA C22.2 No.250.13	✓	Compatible only with the SS-320VH-E56BH
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		
UKCA	EN 61347-1 EN 61347-2-13 EN 62493 BS EN 61347-1 BS EN 61347-2-13 BS EN 62493	✓	
EAC	EN 61347-2-13 EN 61347-1 TP TC 004/2011 TP TC 020/2011	✓	

Note: To ensure protection against lightning surges, the housing of BHE models must be reliably grounded.

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Safety and EMI/EMS Standards

EMI/EMS	Criterion	Status	Remark
Conduction Emission	EN IEC 55015	✓	230Vac
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4	✓	120/277Vac;ClassB
Radiation Emission	EN IEC 55015	✓	230Vac
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4	✓	120/277Vac;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
	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(BH Model)

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

Safety Test Items(BHE Model)

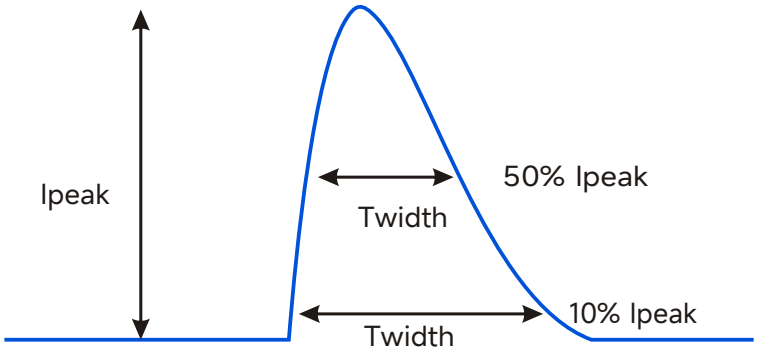
Safety Test Items	Technical Indicators		Remark
Insulation Requirements	ENEC Insulation Requirements	CCC Insulation Requirements	
Input-Output	4U+2000Vac	4U+2000Vac	Reinforced Insulation
Input-Case	4U+2000Vac	4U+2000Vac	Reinforced Insulation
Input-Dim	4U+2000Vac	4U+2000Vac	Reinforced Insulation
Dim-Case	500Vac		Basic insulation
Insulation Resistance	≥10MΩ		Test voltage:500Vdc
Leakage Current	≤0.75mA		277Vac

Note:
1. The power supply complies with the relevant EMC standards. The power supply, as part of the terminal equipment system, needs to be combined with the whole system to reconfirm EMC.
2. During voltage withstand test, please short-circuit between L/N, short-circuit between positive/negative output line, and short-circuit between positive/negative dimmer line and auxiliary power supply.

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Performance Curves

Input Inrush Current

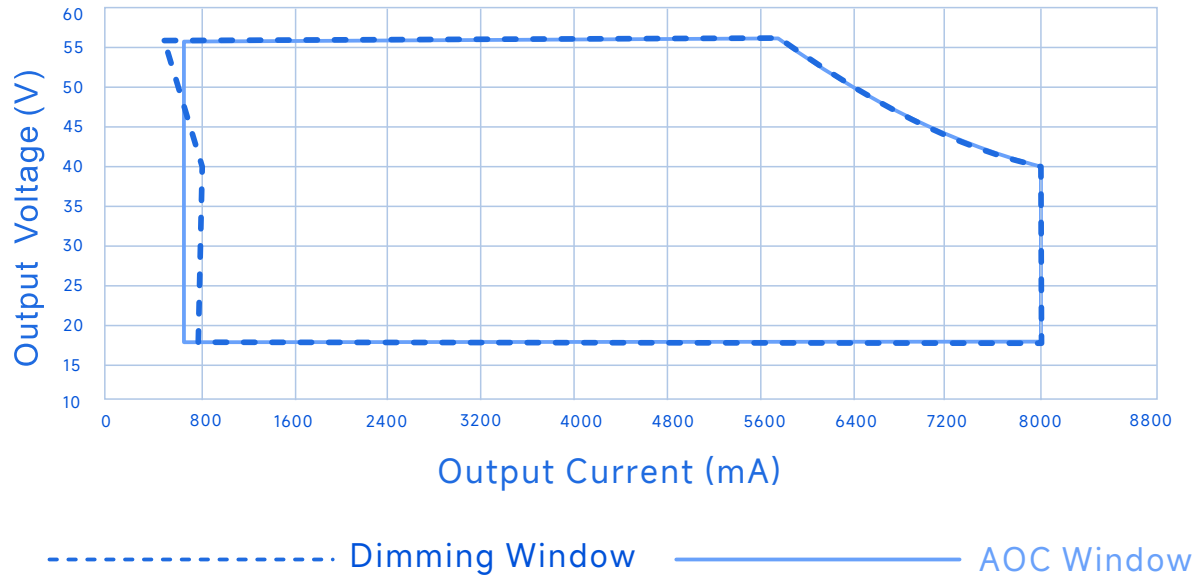


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	13A	4.5mS	/
220Vac	20A	/	1.3mS
277Vac	32A	4.5mS	/

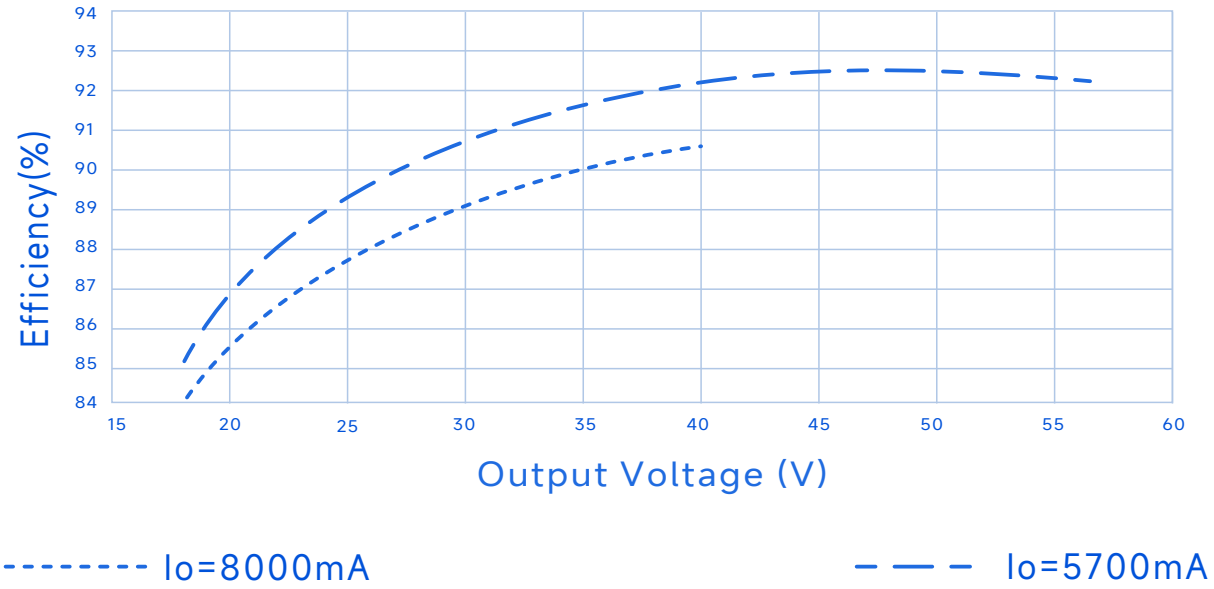
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Performance Curves

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



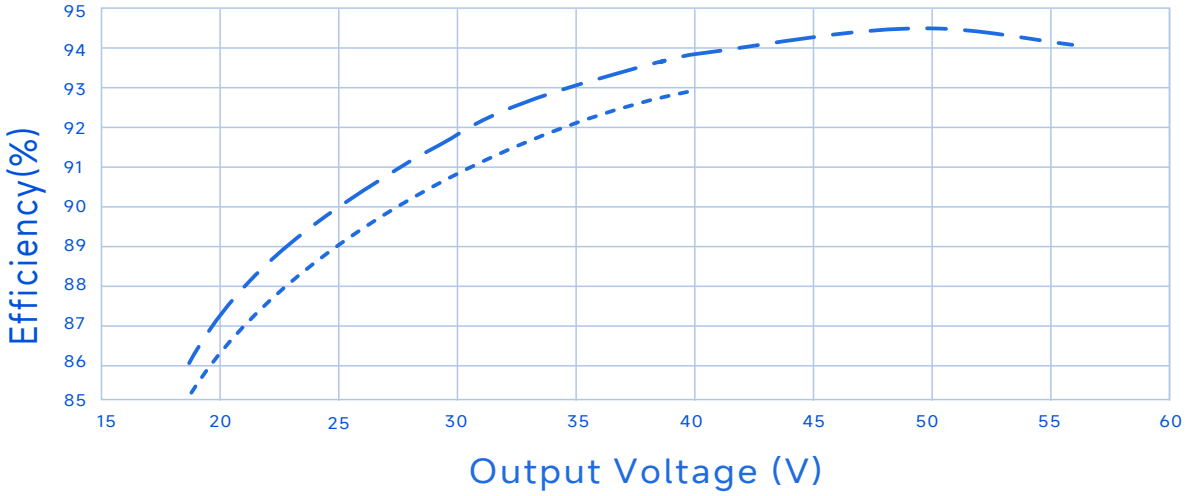
Efficiency Vs. Output Voltage(Vin=120Vac)



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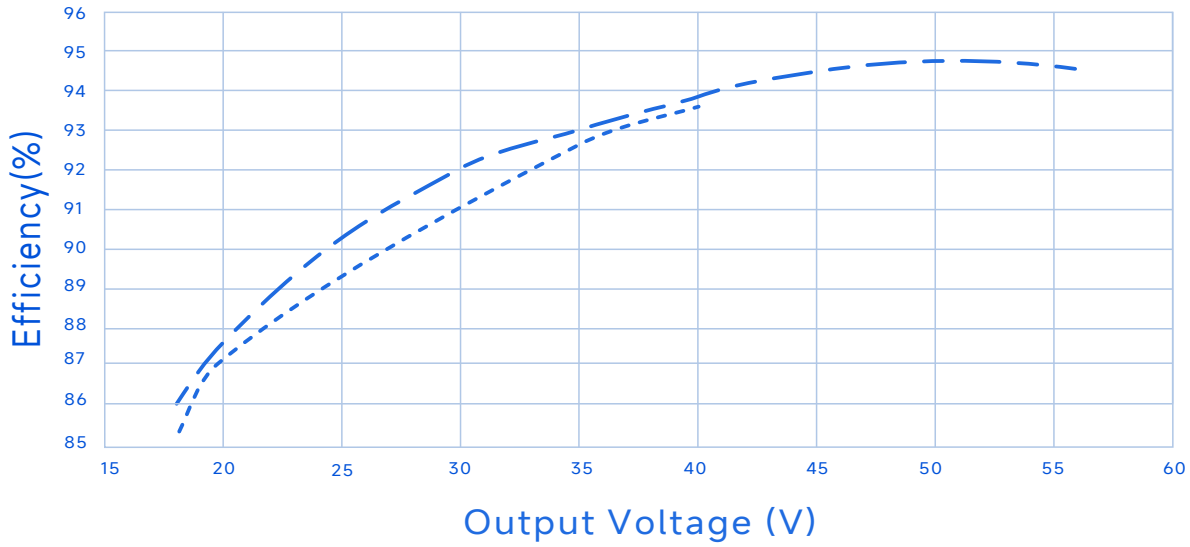
Performance Curves

Efficiency Vs. Output Voltage (Vin=220Vac)



-------- Io=8000mA — — — Io=5700mA

Efficiency Vs. Output Voltage(Vin=277Vac)

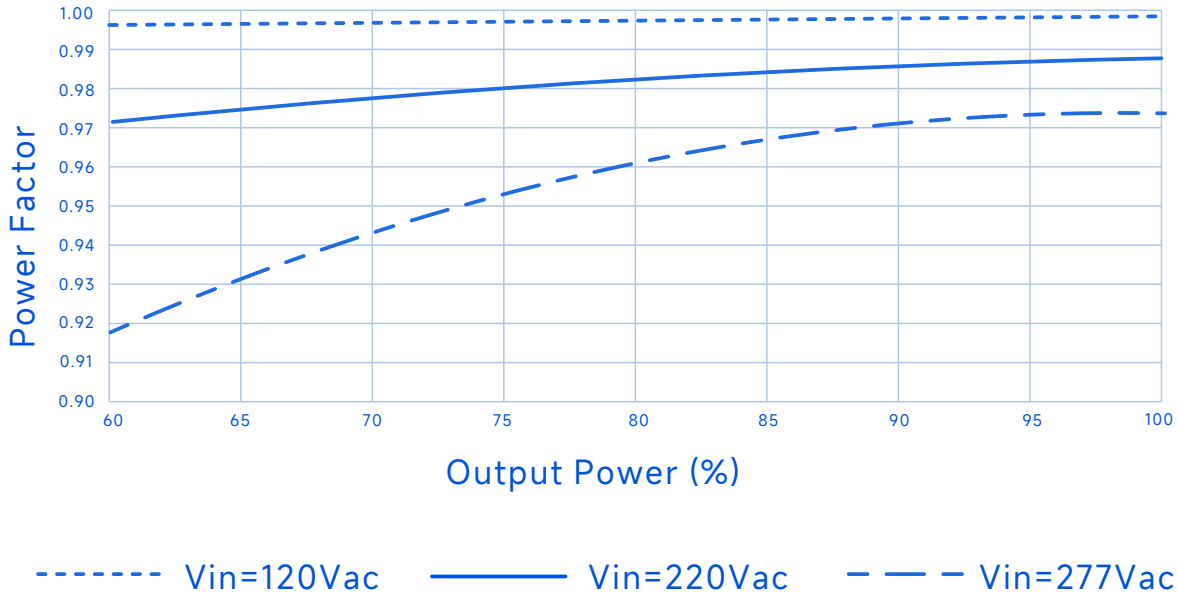


-------- Io=8000mA — — — Io=5700mA

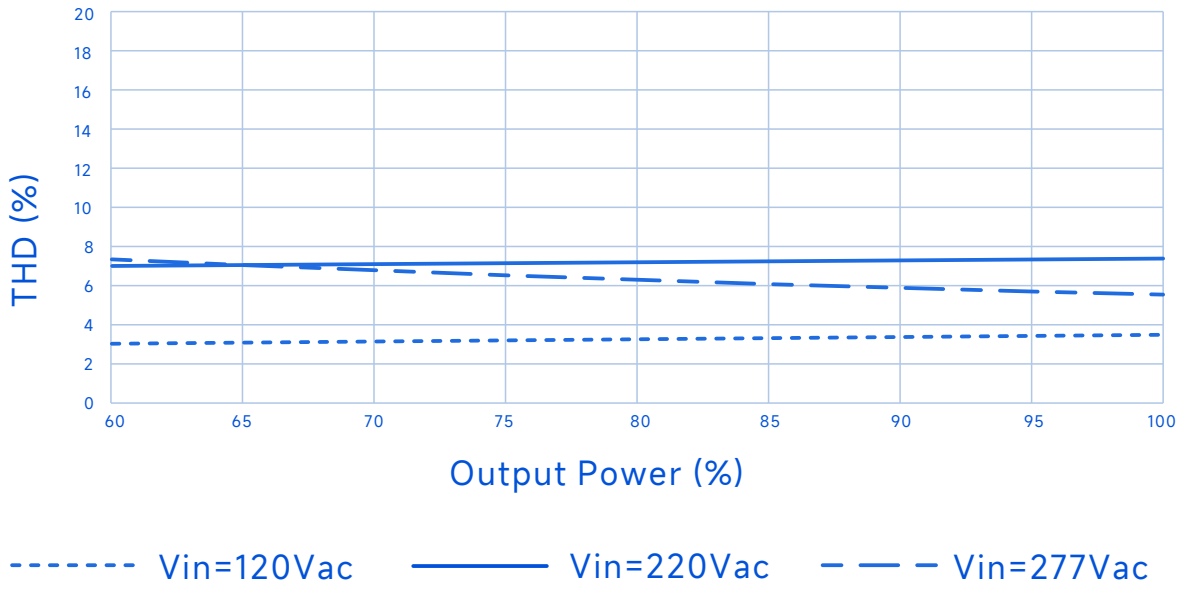
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Performance Curves

Power Factor Vs. Output Power



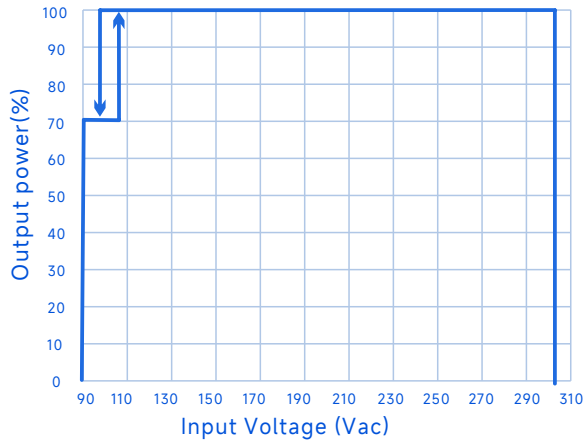
THD Vs. Output Power



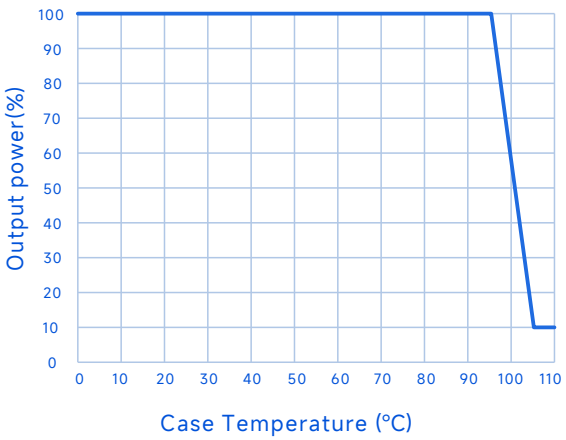
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Performance Curves

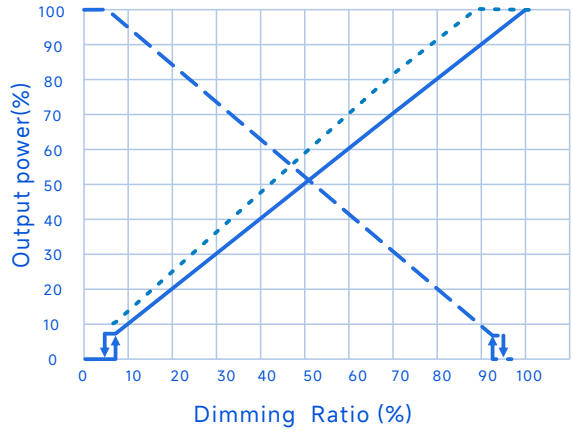
Output Power Vs. Input Voltage



Output Power Vs. Case Temperature



Output Power Vs. Dimming

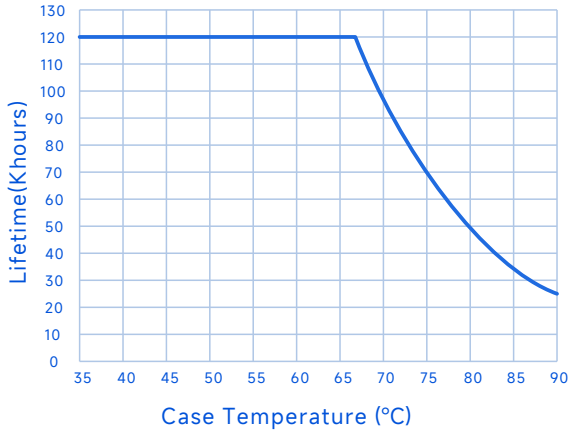


0-10V,0-5V,PWM

10-0V,5-0V

Resistor Dimming(100KΩ)

Lifetime Vs. Case Temperature

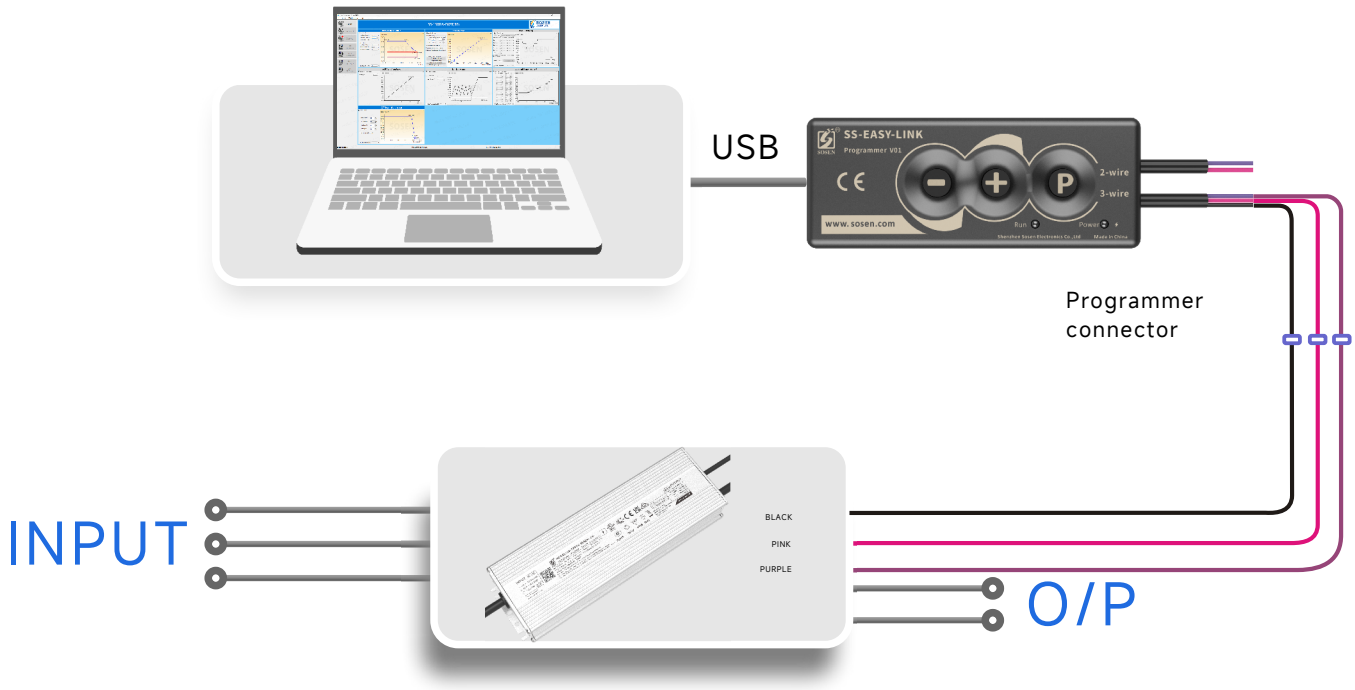


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Programming connection diagram

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.

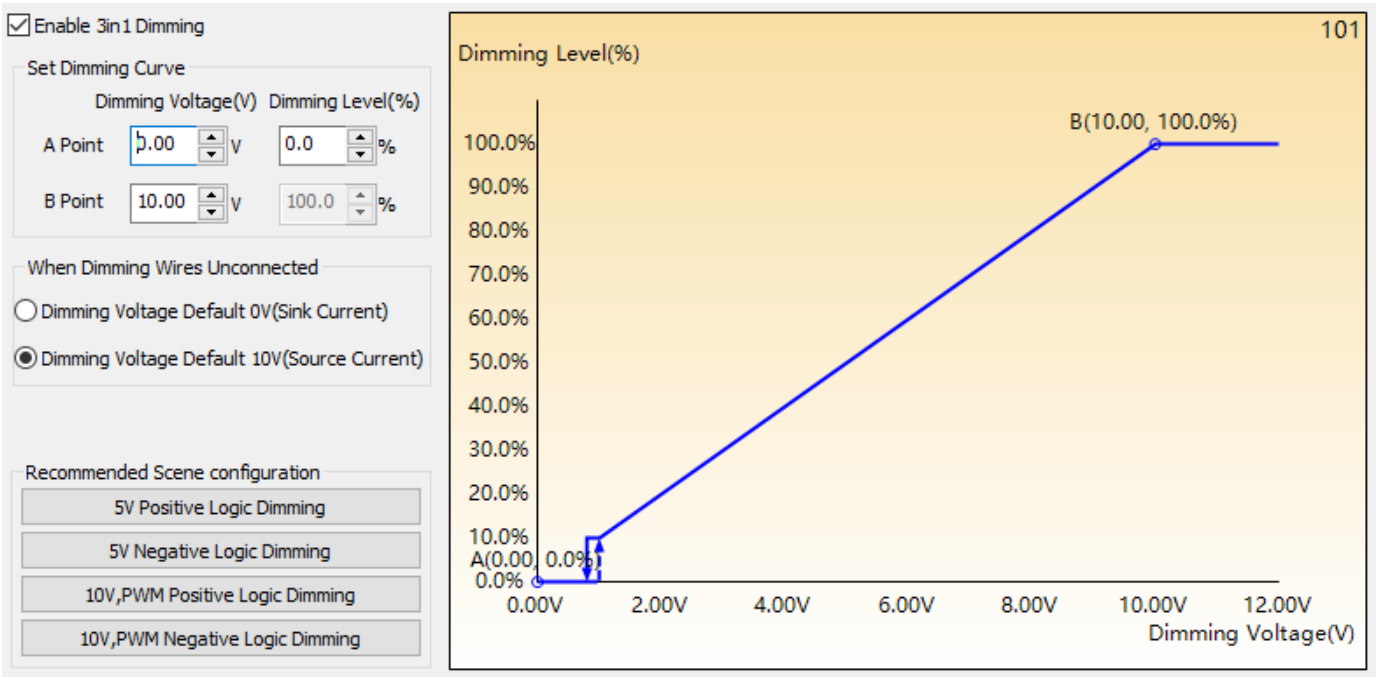


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Dimming parameter settings

Parameter			Remark
Default setting	Positive logic dimming (0-10V)	Dimming voltage default 10V (source current)	
	Negative logic dimming (10-0V)	Dimming voltage default 0V (sink current)	
Dimming optional function	Positive logic dimming (0-10V)	Dimming voltage default 0V (sink current) Resistance dimming not available	When the dimming wire is not connected, the LED driver output is DIM OFF. (to be noted in the order)
			For parallel dimming applications with multiple LED drivers, it is recommended to use the sink current mode (to be noted in the order)

Settings Interface

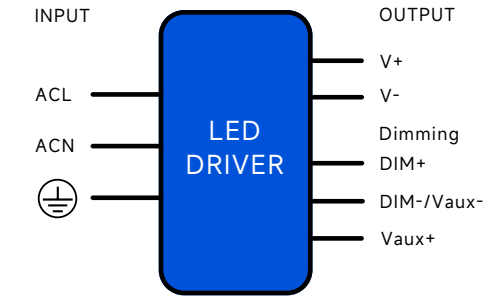


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SS-320VH-E AUX LED DRIVER

Mechanical Characteristic

Wire gauge(BH Model)



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

Global model:SJOW,3×17AWG,O.D:8.0mm,Brown:L,Blue:N,Yellow/Green:⏚
UL model:SJTW,3×18AWG,O.D:7.8mm,Black:L,White:N,Green:⏚

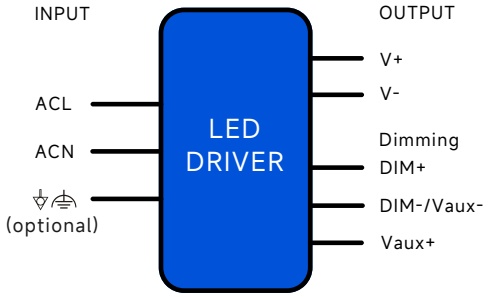
DC Output Cable(Exposed Length 250±10mm):

Global model:SJOW,2×17AWG,O.D:7.7mm,Brown:V+,Blue:V-
UL model:SJTW,2×18AWG,O.D:7.3mm,Red:V+,Black:V-

DIM Cable(Exposed Length 220±10mm):

UL model:STYLE 21996,3×22AWG.O.D:4.9mm,Purple:DIM+,Pink:DIM-/Vaux-,
Black/White:Vaux+

Wire gauge(BHE Model)



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

EU model: H05RN-F, 2×1.0 mm²,O.D:7.0 mm, Brown: L, Blue: N
EU model: H05RN-F, 3×1.0 mm²,O.D:7.3 mm, Brown: L, Blue: N,
Black: ⏚ ⏚ (optional)

DC Output Cable(Exposed Length 250±10mm):

EU model: H05RN-F, 2×1.0 mm²,O.D:7.0 mm, Brown: V+, Blue: V-

DIM Cable(Exposed Length 220±10mm):

UL model: STYLE 21996,3×22AWG.O.D:4.9mm,Purple:DIM+,Pink:DIM-/Vaux-,
Black/White:Vaux+

NOTE:
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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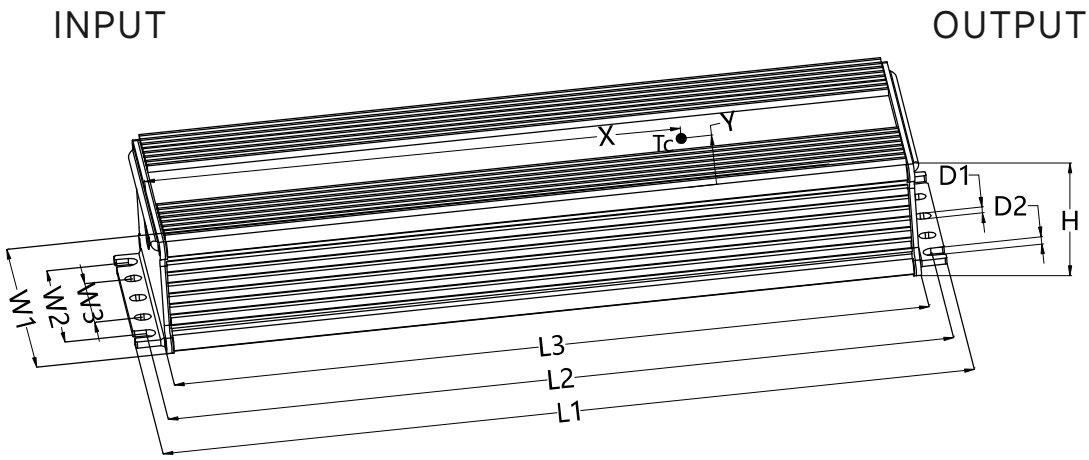
Mechanical Characteristic

Outline and mounting dimensions

Name Description	Standard Code	mm(In.)
Overall Length	L1	243(9.56)
Mounting Hole Length	L2	235(9.25)
Case Length	L3	226(8.89)
Overall Width	W1	76.5(3.01)
Mounting Hole Width	W2	50(1.96)
Mounting Hole Width	W3	27(1.06)
Mounting Hole Width	H1	38.5(1.51)
Screw Hole Width	D1	4(0.15)
Screw Hole Width	D2	5(0.19)
TC Point Position	X	166(5.53)
TC Point Position	Y	42(1.65)

Note

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



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Assembly Tips

When the dimmer line is not in use, please seal the connector of the dimmer line with insulating sleeve.

Package

- Outside carton dimension: L×W×H =493mm×385mm×116mm;
- 7PCS/Carton;
- Net weight/Piece: 1.35kg;Gross weight/Carton: 10.8kg;
- 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	2025/07/22	
V01	Add BHE Models	2026/09/20	

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