

SOSEN LED Driver, Your Smart Choice

Specifications

SS-320SN-E260*Series LED Driver

Model: SS-320SN-E260*

Description: 320W LED Driver

Rev.: V00

Release Date: 2024-11-19

SS-320SN-E260* Series LED Driver

SOSEN

LED DRIVER

LED DRIVER

—

SN-E260*



BHB/BHD机型



BH机型



IP65RoHS

Features:

- Efficiency up to 95%
- Isolated dimming: 0-10V,PWM,Resistor
- AUX Power: 12V/0.2A
- Dim to off
- Protections: SCP/OTP/UVF
- IP65
- Surge protection: CM: 6kV, DM: 6kV
- Warranty: 5 years

Description:

SS-320SN-E260* series is 320W round non-isolated constant current driver products, this series of products for LED lighting design, specifically for industrial and mining lamps; with isolated dimming function, ultra-high efficiency, fully encapsulated thermally conductive silicone to ensure heat dissipation and waterproof performance, with high reliability, high cost-effective and other advantages.

Applications:

High bay 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-320SN-E260*	108-380Vac	320W	180-260V	214-260V	1.1-1.5A	7%	0.97	95.5%	90°C

Note:

- Default Tested: at 347Vac, full load, Ta 25°C.
- 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-320SN-E260* Series LED Driver

“★” Means Additional Function

“★”	AUX 12V (suffix:H)	Dimming off 0-10V/PWM/Resistor	Adjust power (Single DIP)	Adjust power/color temperature (Double DIP)	Remark
BH	✓	✓			
BHB	✓	✓	✓		
BHD	✓	✓		✓	

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	120Vac		347Vac	
AC Input Range	108Vac		380Vac	Ref. derating curve
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			3.5A	120Vac, Full load
Max Input Power			355W	120Vac, Full load
Max Inrush Current(120Vac)			80A	Cold start
Max Inrush Current(220Vac)			120A	Cold start
Max Inrush Current(347Vac)			150A	Cold start
Standby Power			0.5W	220Vac/50Hz
Power Factor	0.95	0.97		220Vac/50Hz, Full load
	0.90			120-347Vac/50Hz, 70-100% load
THD		7%	12%	220Vac/50Hz, Full load
			20%	120-347Vac/50Hz, 70-100% load

SS-320SN-E260* Series LED Driver

Dip Switches:

BHD: Dip Switch to adjust output power
+ Dip Switch to adjust color temperature

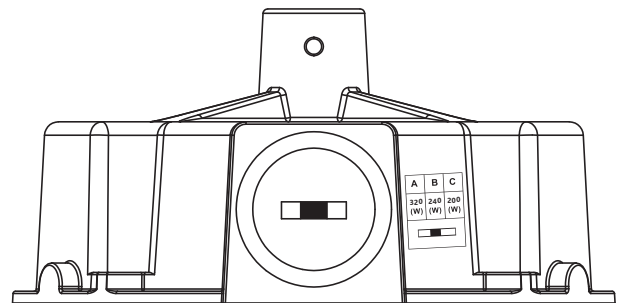
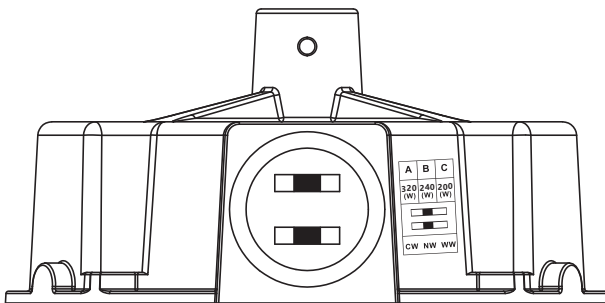
A	B	C
320 (W)	240 (W)	200 (W)
		
CW NW WW		

320W(A)-240W(B)-200W(C)
CW: White light NW: Neutral light WW: Warm light

BHB: Dip Switch to adjust output power

A	B	C
320 (W)	240 (W)	200 (W)
		

320W(A)-240W(B)-200W(C)
CW NW WW No special meaning



- Note: 1、 To adjust the output power and color temperature, you need to operate after AC OFF.
- 2、 When dialing the code to adjust the power, you need to pay special attention to whether the switch is dialed in place to hear a clear sound.

SS-320SN-E260* Series LED Driver

O/P Characteristics:

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	180V		260V	180-214V derated use
Rated O/P Voltage	214V		260V	$P_o = V_o \cdot I_o = 320W$, Full load
Rated O/P Current	1.23A		1.5A	1.5 A for 214V, 1.23A for 260V
Adj. O/P Current (AOC) Range	1.1A		1.5A	A
	1.84A		1.2A	B
	0.75A		1.05A	C
No Load Voltage			310V	
Efficiency @120Vac	91.0%	93.0%		O/P 260V/1.23A
Efficiency @220Vac	93.0%	95.0%		O/P 260V/1.23A
Efficiency @347Vac	94.0%	96.0%		O/P 260V/1.23A
O/P Current Tolerance	-5%		+5%	
O/P Current Ripple(PK-AV)		5%	10%	
Start-up Current Overshoot			10%	Full load
Start-up Time			1.0S	120Vac
			0.5S	347Vac
Line Regulation	-5%		+5%	Full load
Load Regulation	-5%		+5%	
Temperature Coefficient	-0.05%/°C		+0.05%/°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

SS-320SN-E260* Series LED Driver

Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
Aux Power	O/P Voltage	10.8V	12V	13.8V	
	O/P Current			200mA	
0-10V Dimming	Dim Voltage	0V		12V	DIM+ source current 100uA.
	Dim Range	10%loset		100%loset	Dimming prohibits reverse connection
	Rec.Dim Range	0V		10V	
PWM Dimming	PWM High	9.8V		10.2V	DIM+ source current 100uA.
	PWM Low	0V		0.3V	Dimming prohibits reverse connection
	Frequency	1KHz		2KHz	
	PWM Duty	0%		100%	Dimming can be off.
Resistor Dimming	Resistance	0Kohm		100Kohm	Dimming can be off.
	Dim Range	10%loset		100%loset	DIM+ source current 100uA.
Dim to Off	Dim off	0.7V	0.8V	0.95V	Dim to Off Without afterglow
	Dim on	0.9V	1.0V	1.1V	
Life Time(Tc≤85°C)		50,000 hours			
MTBF		198,000 hours			347Vac,Full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP65			
Tc		90°C			
Warranty		5 years			Tc: 85°C
Net Weight		1142g			
Dimension		Φ146mm*61.8mm			D x H

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

SS-320SN-E260* Series LED Driver

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/cUL	UL8750	✓	
TUV	EN 61347-2-13:2014/A1:2017 EN 61347-1:2015 EN 62493:2015		
RCM	AS/NZS61347.2.13		
CCC	GB 19510.14-2009		
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013		

EMI/EMS	Criterion	Remark
Conduction Emission	FCC Part15: Subpart A; ANSI 63.4:2014	Class A
Radiation Emission	FCC Part15: Subpart A; ANSI 63.4:2014	Class A
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5-2017	DM: 6kV,CM: 6kV,Criterion B
Ring Wave	IEC/EN 61000-4-12;ANSI/C82.77-5-2017	DM: 6kV,CM: 6kV,Criterion B

Note: ANSI/C82.77-5-2017 surge standard is optional.

SS-320SN-E260* Series LED Driver

Safety Test Items:

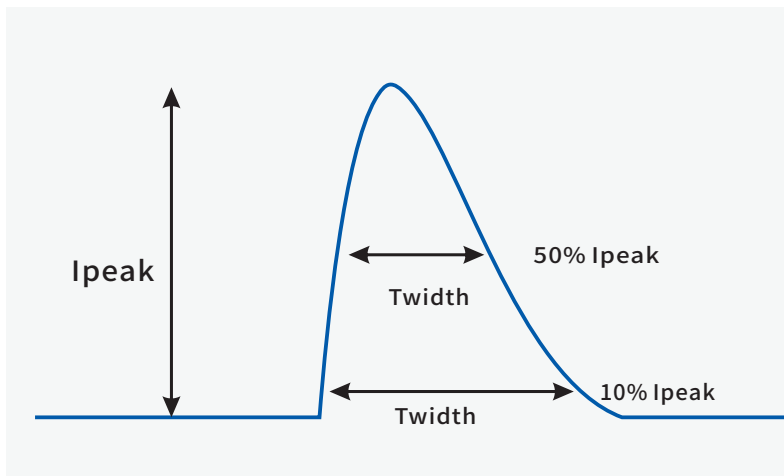
Safety test items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	TUV Insulation Requirements	
Input-Case	1700Vac	/	Basic insulation
Input-Dim	1700Vac	/	Reinforced insulation
O/P-Dim	1700Vac	/	Reinforced insulation
Dim-Case	500Vac	/	Basic insulation
Insulation Resistance	$\geq 10M\Omega$		Input-Dim, Test voltage: 500Vdc
Ground Resistance	$\leq 0.1\Omega$		25A/1min
Leakage Current	$\leq 0.75mA$		347Vac

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), (V+ and V-), (Dim+ and Dim - and Vaux+ and Vaux-) when Hi-pot test.
3. During the HI-POT, the built-in GDT and the ground connection terminal wire shall be disconnected.

Performance Curves:

Input Inrush Current

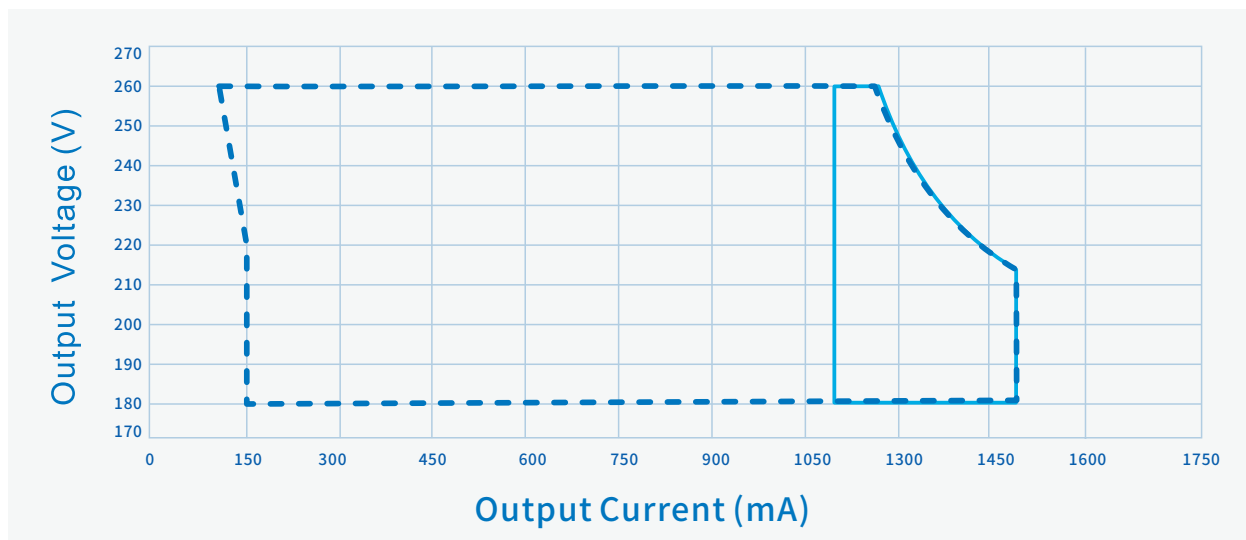


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	80A	520uS	
220Vac	120A		200uS
347Vac	150A	520uS	

SS-320SN-E260* Series LED Driver

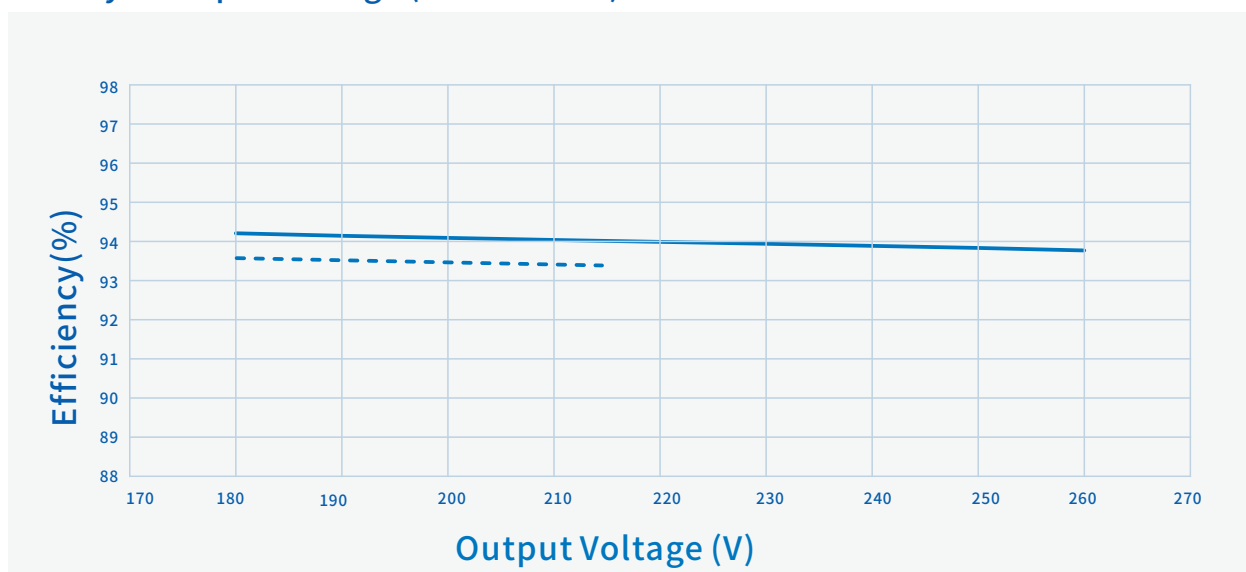
Performance Curves:

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



----- Dimming Window ————— AOC Window

Efficiency Vs. Input Voltage ($V_{in}=120V_{ac}$)

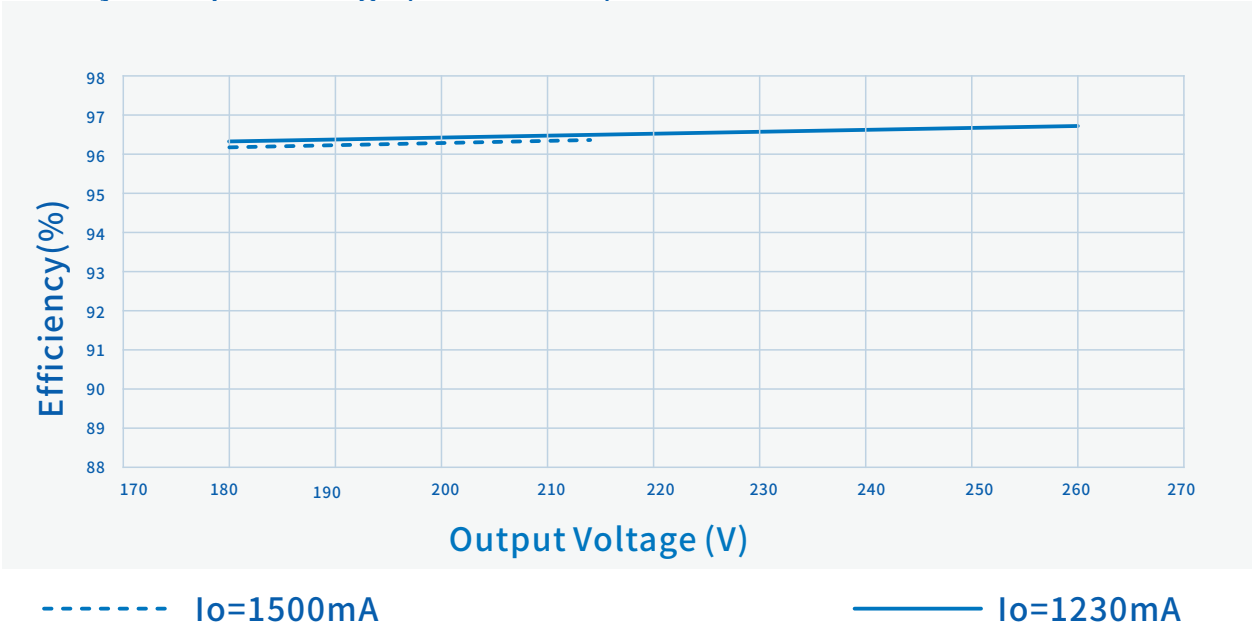


----- $I_o=1500mA$ ————— $I_o=1230mA$

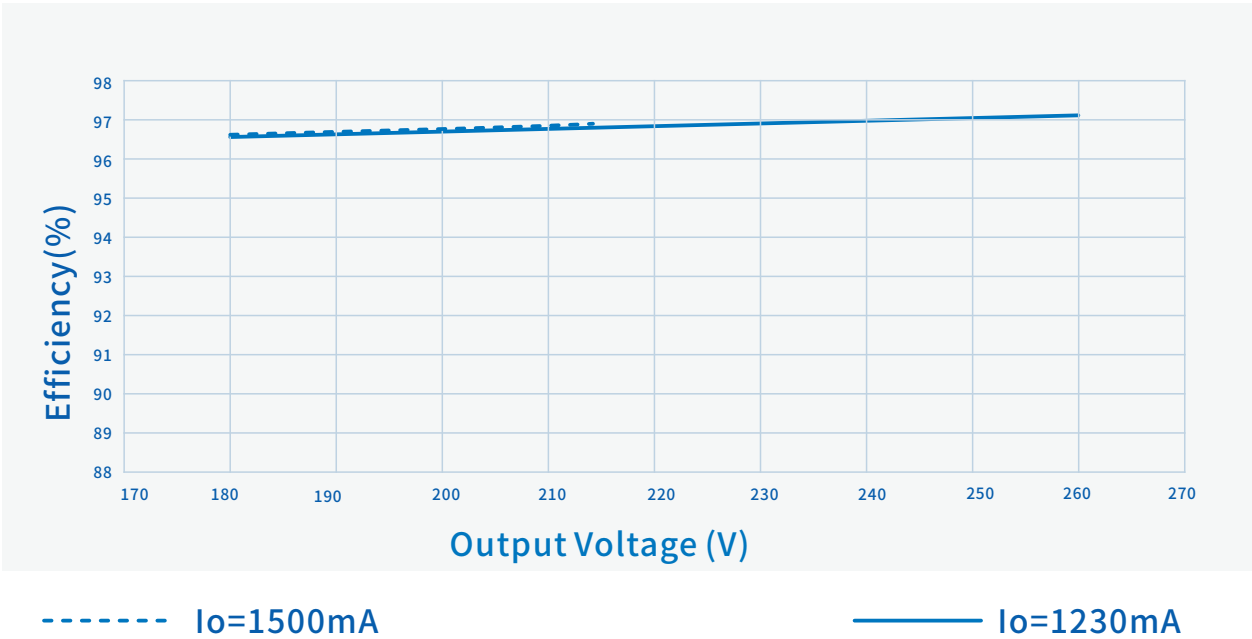
SS-320SN-E260* Series LED Driver

Performance Curves:

Efficiency Vs. Input Voltage (Vin=220Vac)



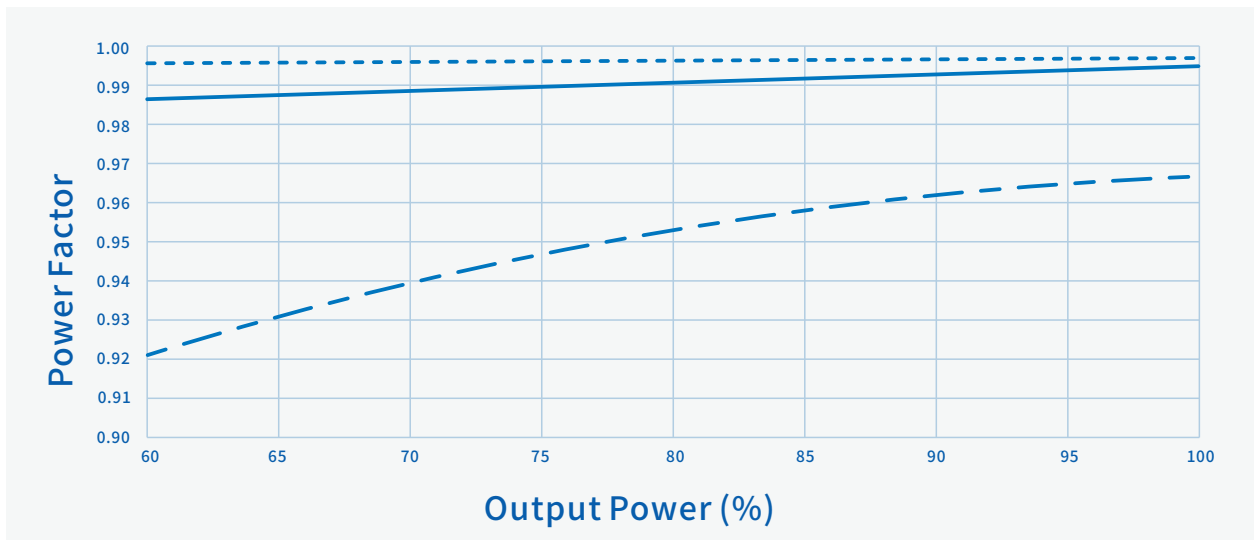
Efficiency Vs. Input Voltage (Vin=347Vac)



SS-320SN-E260* Series LED Driver

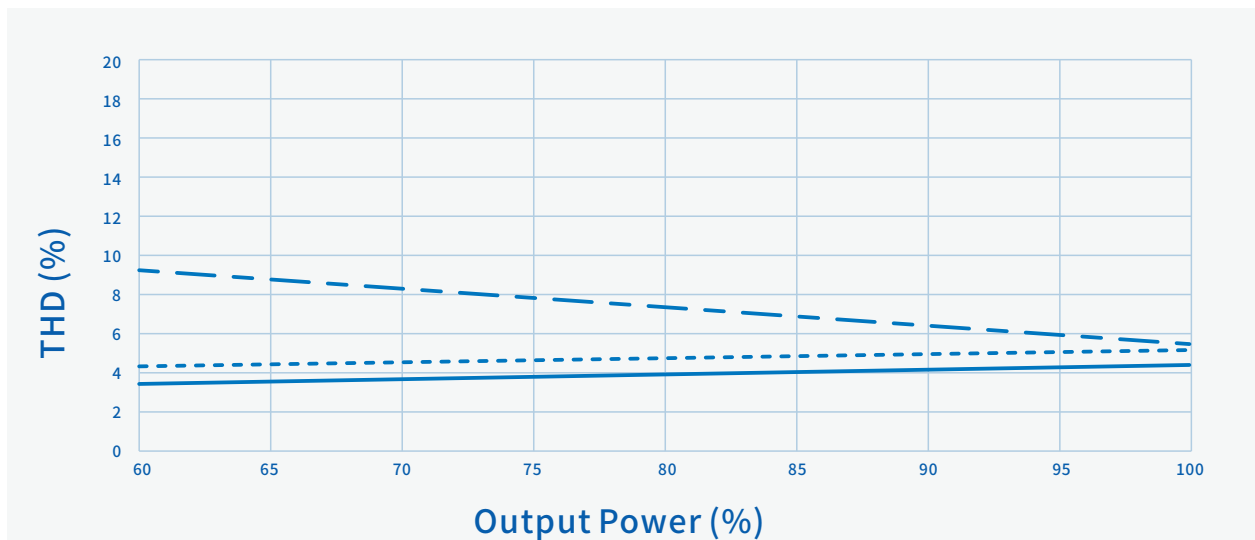
Performance Curves:

Power Factor Vs. O/P Power



----- Vin=120Vac ————— Vin=220Vac - . - . Vin=347Vac

THD Vs. O/P Power

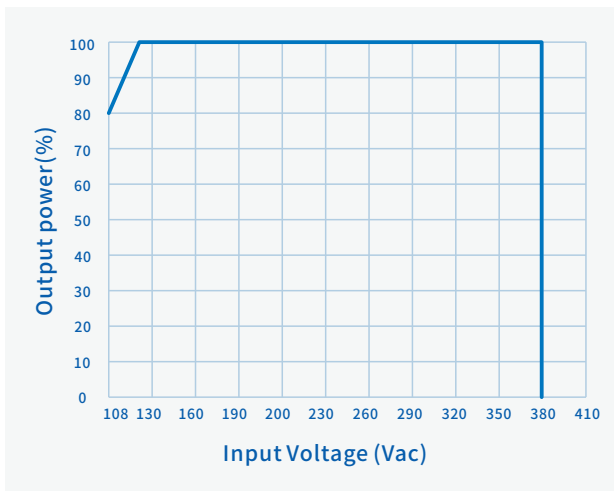


----- Vin=120Vac ————— Vin=220Vac - . - . Vin=347Vac

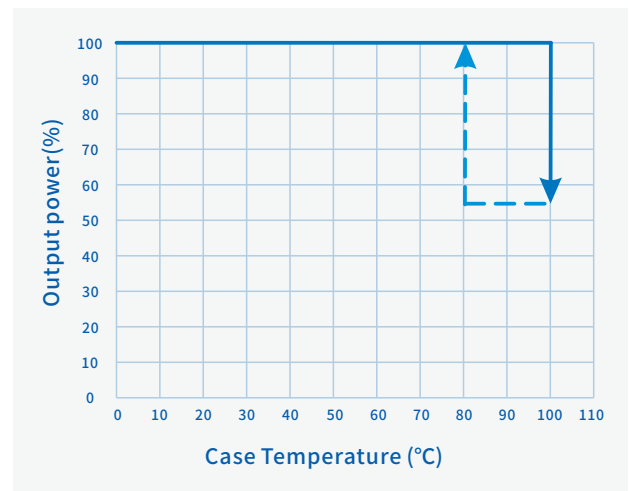
SS-320SN-E260* Series LED Driver

Performance Curves:

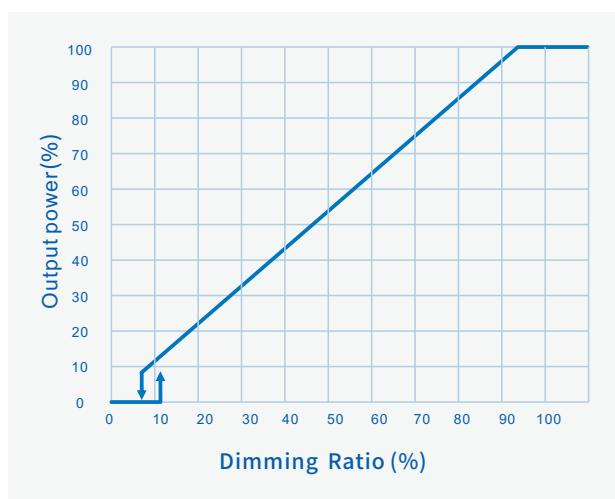
O/P power Vs. Input Voltage



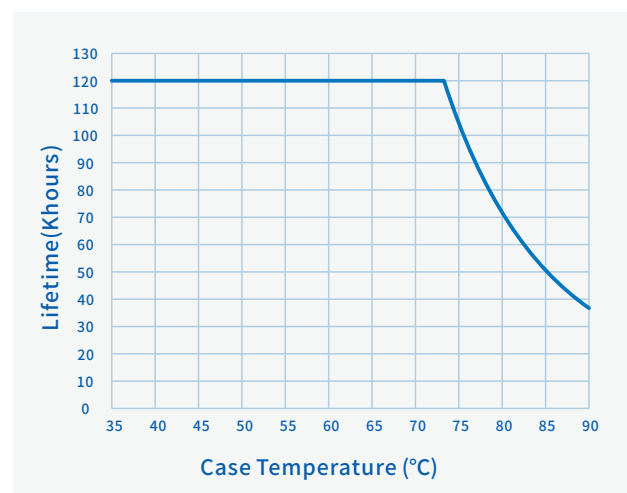
O/P power Vs. Case Temperature



O/P Power Vs. Dimming

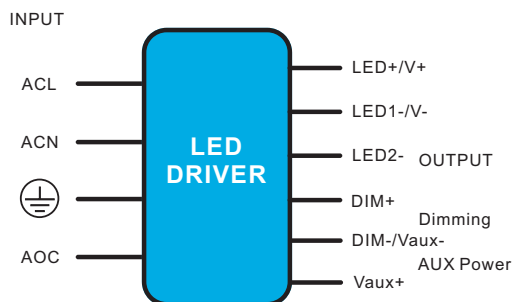


Lifetime Vs. Case Temperature



SS-320SN-E260* Series LED Driver

Mechanical Characteristics:



AC Input Cable(Exposed Length $300 \pm 10\text{mm}$):

UL model: STW,3*18AWG ,O.D:9.4mm,Black:ACL, White:ACN,Green: ⏏

DC Output Cable(Exposed Length $300 \pm 10\text{mm}$):

UL model(BH/BHB): SJTW,2*18AWG, O.D:7.3mm, Red: V+, Black: V-

UL model(BHD): SJTW,3*18AWG, O.D:7.8mm, Red: LED+,
Blue: Warm light(LED1-), Black: White light(LED2-)

DIM/AUX Cable(Exposed Length $220 \pm 10\text{mm}$):

UL Model:

UL 21996 3*22AWG , O.D:4.9mm, Purple: DIM+, Pink: DIM-/Vaux-,

Black/White: Vaux+

UL 21996 2*22AWG , O.D:4.7mm, Purple: DIM+, Pink: DIM-

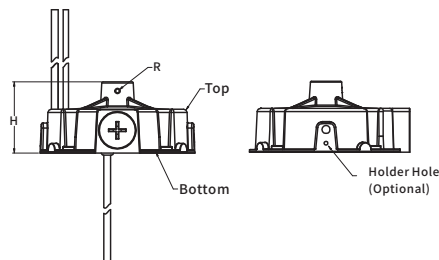
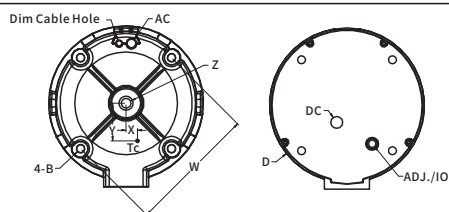
Name Description	Standard code	mm(In.)
Input line hole	A	13(0.51)
Mounting Screw Diameter	4-B	$\Phi 7.0(0.28)$
Case Diameter	D	$\Phi 146(5.75)$
Height	H	61.8(2.43)
Ring Hole	Z	M10*1.5(Depth 18mm) G1/2(Depth 17mm)
Ring Fixed Hole	R	M4*0.7
Mount Size	W	113(4.45)
TC Point Position	X	10(0.39)
TC Point Position	Y	33(1.3)

Note:

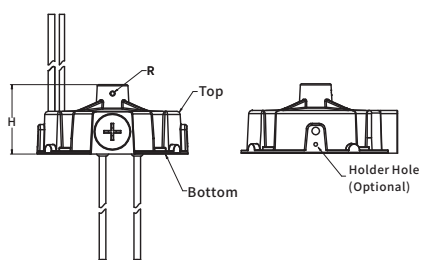
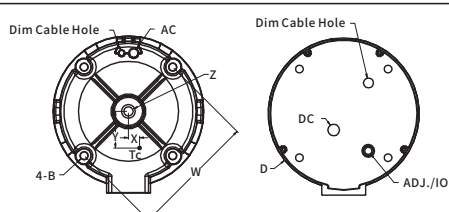
1,Please follow the "LED Driver User Manual" obtained from SOSEN's official website for assembly.

2,AC Input Cable,DC O/P Cable,DIM/AUX Power/Programming Cable:
Peeled length of cable: $43 \pm 5\text{mm}$, Tinned length of wire: $10 \pm 2\text{mm}$

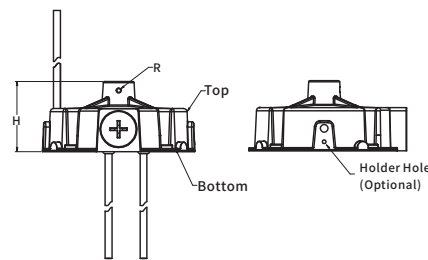
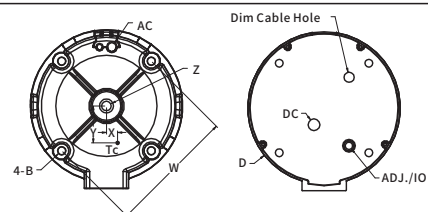
DIM cable from the top



DIM cable from the bottom and top



DIM cable from the bottom



SS-320SN-E260* Series LED Driver



Assembly Tips

1. Highly recommended to seal the adjustable hole with silicon glue(#704 preferred) after adjusting the Driver's output current. Avoid permanent damage to adjust the potentiometer with suitable strength.
2. Dimming or AUX Power tinned connectors should be capped if not used to avoid dimming or AUX Power parts damage from external signals.
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 parallel first and then in series.
7. The insulation level of LED light panels should meet the reliability design requirements.
8. For other precautions, please refer to the "LED Driver User Manual" .

Package

- Outside carton dimension: L×W×H=495mm×385mm×162mm;
- 9PCS/Carton;
- Net weight/Piece: 1.142kg;Gross weight/Carton:11.495kg;
- 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 installation.

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	2024/11/19	

