



SPECIFICATIONS

SS-50CNH-G300

CC DRIVER

Model: SS-50CNH-G300

Power: 50W

Rev.: V00

Release date: 2026-08-24



SS-50CNH-G300 LED DRIVER

Features

- Efficiency up to 95%
- Protections: SCP/OTP/OVP/UVP
- IP65
- Surge protection: CM: 6kV,DM: 6kV
- Long lifetime
- Warranty: 5 years



IP65

Description

SS-50CNH-G300 is 50W round non-isolated constant current LED driver. This product has the advantages of super high efficiency, fully potted type,good heat dissipation and waterproof performance, high reliability and so on.

Applications:
industrial lights, sports lighting

Model List

Model	AC Input Range	Max. Pout	Vout Range	Recommended Voltage	Iout	Default Current	THD (Typ.)	PF (Typ.)	Eff. (Typ.)	Max.Tc
SS-50CNH-G300	90-264Vac	50W	180-300V	200V-300V	0.167-0.25A	0.19A	7%	0.96	95%	90°C

Note:

1.Default Tested:at220Vac,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-50CNH-G300 LED DRIVER

Input Characteristics

Parameter	Min.	Typ.	Max.	Remark
AC Input Range	90Vac		264Vac	Reference derating curve
Rated operating Voltage Range	200Vac		240Vac	
Input DC Voltage Range	140Vdc		280Vdc	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			0.28A	198Vac, Full load
Max Input Power			55W	198Vac, Full load
Max Inrush Current(220Vac)			70A	Cold start, Full load
Power Factor	0.95	0.97		220Vac, Full load
	0.90			198-264Vac,70%-100% load
THD		7%	12%	220Vac, Full load
			20%	198-264Vac,70%-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=50W, Full load
Rated O/P Current	0.167A		0.25A	0.25A for 200V,0.167A for 300V
No Load Voltage			350V	
Efficiency @220Vac	94.0%	95.0%		Output 300V/0.167A
O/P Current Tolerance	-6%		+6%	0.167A~0.25A
O/P Current Ripple(PK-AV)		5%	10%	
Start-up Current Overshoot			10%	Full load
Start-up Time			0.75S	220Vac
Line Regulation	-3%		+3%	Full load
Load Regulation	-6%		+6%	
Temperature Coefficient	-0.06%/°C		+0.06%/°C	Tc:0°C~90°C
OTP	90°C	93°C	96°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-50CNH-G300 LED DRIVER

Other Characteristics

Parameter	Min.	Typ.	Max.	Remark
Lifetime(Tc≤85°C)	≥50,000 hours			80% load
MTBF	200,000 hours			220Vac,Full load, Ta=25°C (MIL-HDBK-217F)
Protection class	IP65			
Tc	90°C			
Warranty	5 years			Tc 85°C
Net Weight	580g			Input line: 300mm
Dimension	Φ110mm*59.5mm			WxH

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

SS-50CNH-G300 LED DRIVER

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	CSA/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	Criterion	Status	Remark
Conduction Emission	EN IEC 55015	✓	
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		
Radiation Emission	EN IEC 55015	✓	
	GB/T 17743		
	FCC Part 15 Subpart B;ANSI C63.4		
Harmonic Current Emissions	EN IEC 61000-3-2	✓	ClassC
	GB 17625.1		
Surge	IEC/EN61000-4-5	✓	DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5		
Ring Wave	IEC/EN 61000-4-12	✓	DM: 6kV,CM: 6kV,Criterion B
	ANSI/C82.77-5		

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Safety Test Items

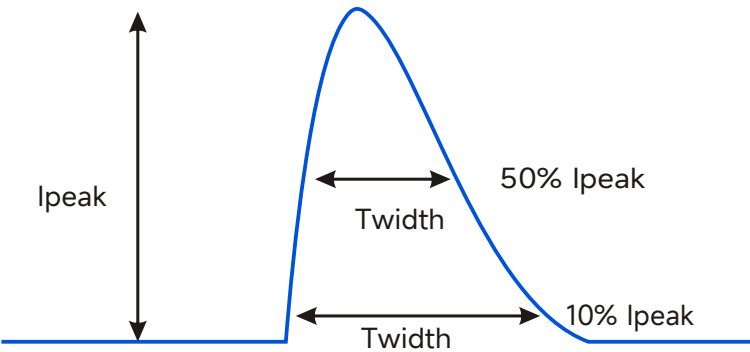
Safety Test Items	Technical Indicators	Remark
Insulation Requirements	TUV Insulation Requirements	
Input-Case	2U+1000Vac	Basic insulation
Insulation Resistance	$\geq 10\text{M}\Omega$	Input-Dim,Test voltage:500Vdc
Ground Resistance	$\leq 0.1\Omega$	25A/1min
Leakage Current	$\leq 0.75\text{mA}$	240Vac

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.

Performance Curves

Input Inrush Current

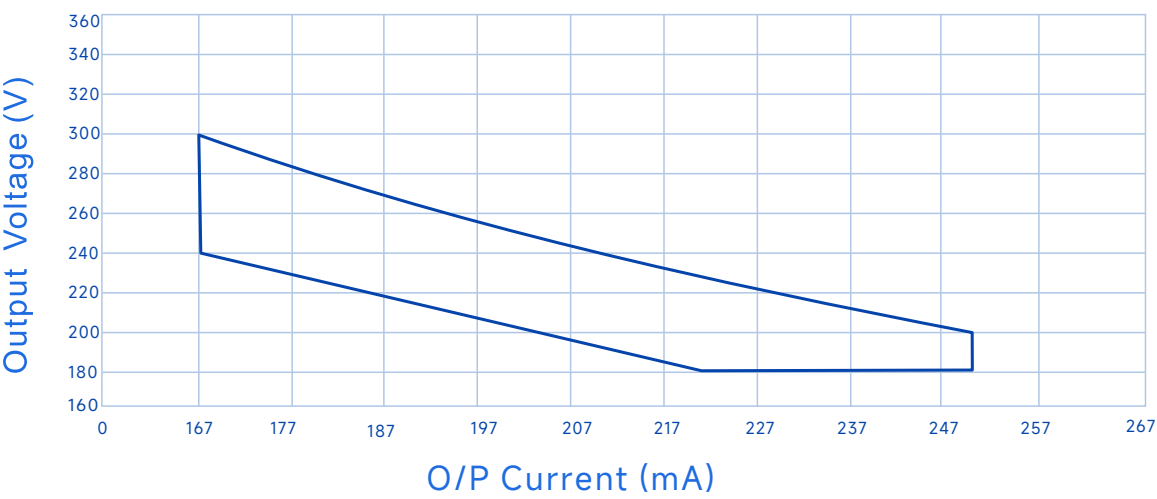


V_{in}	I_{peak}	$T(@10\% \text{ of } I_{peak})$	$T(@50\% \text{ of } I_{peak})$
220Vac	70A	400uS	200uS

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Performance Curves

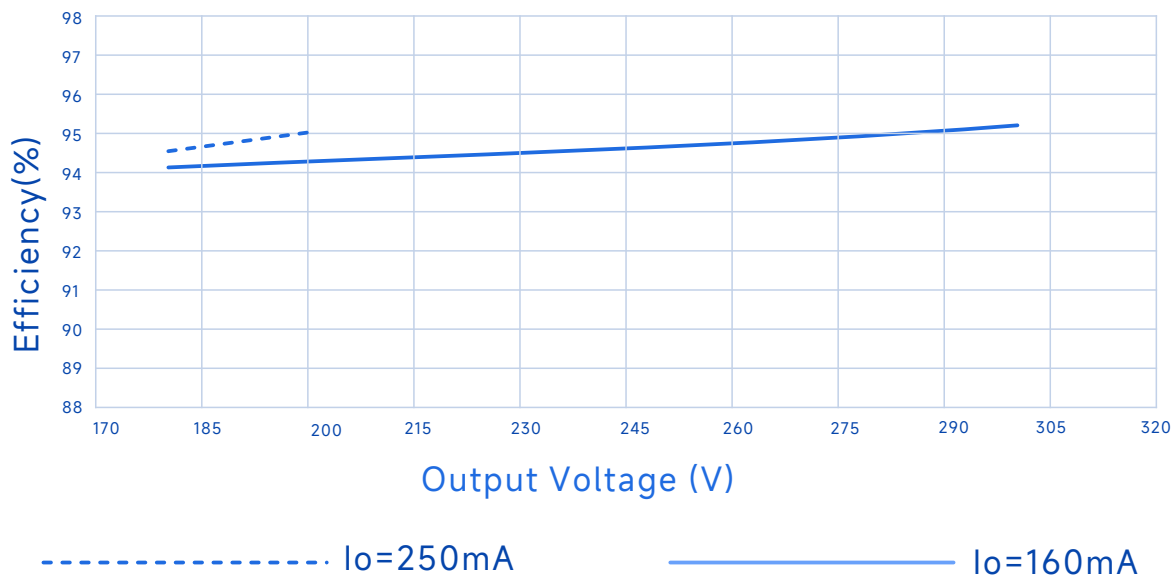
Output Voltage Vs. Output Current



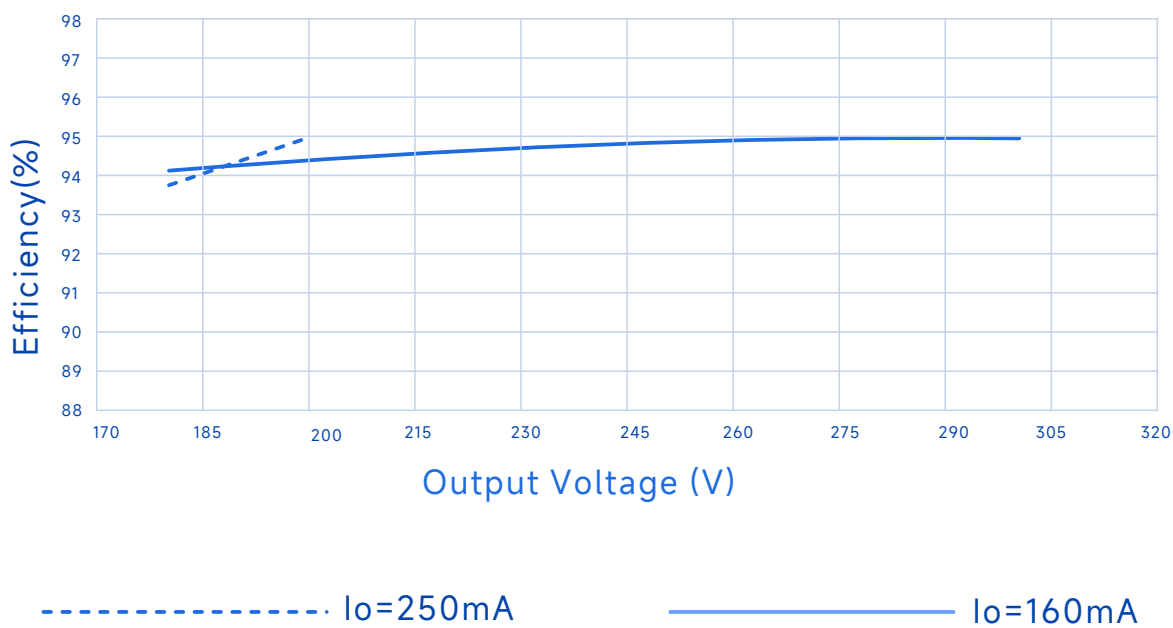
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Performance Curves

Efficiency Vs. Output Voltage (Vin=220Vac)



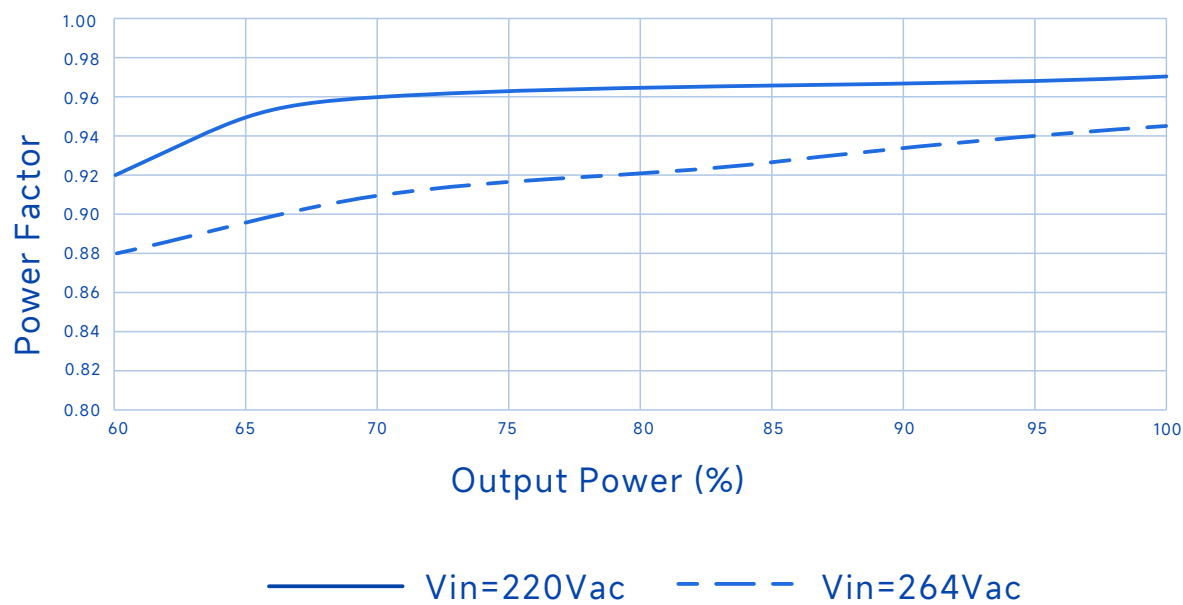
Efficiency Vs. Output Voltage(Vin=264Vac)



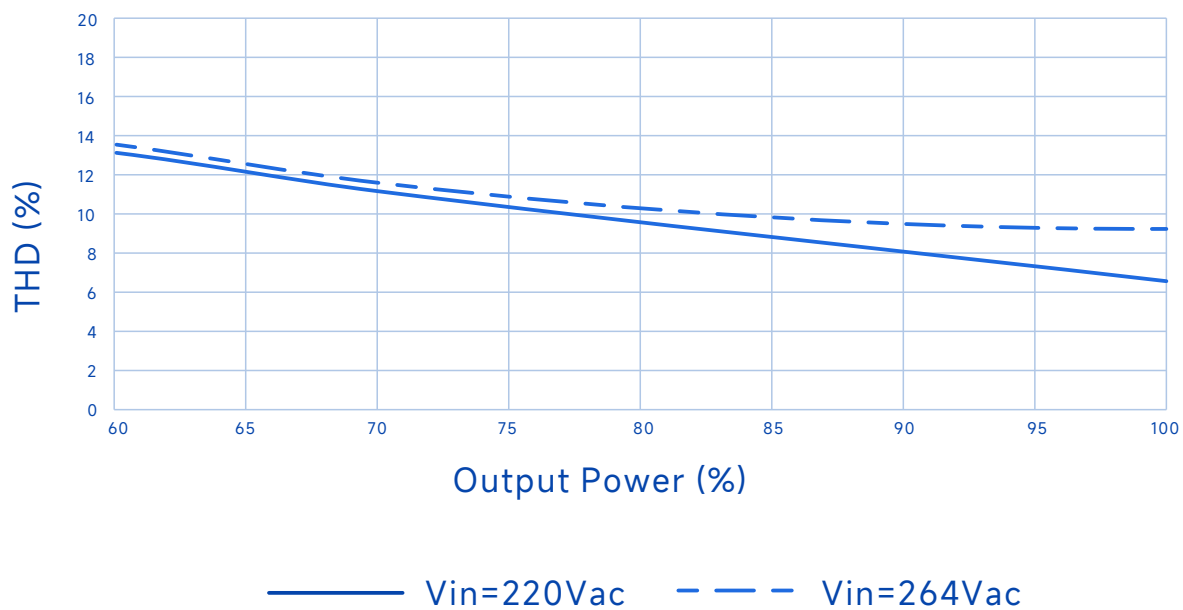
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Performance Curves

Power Factor Vs. Output Power



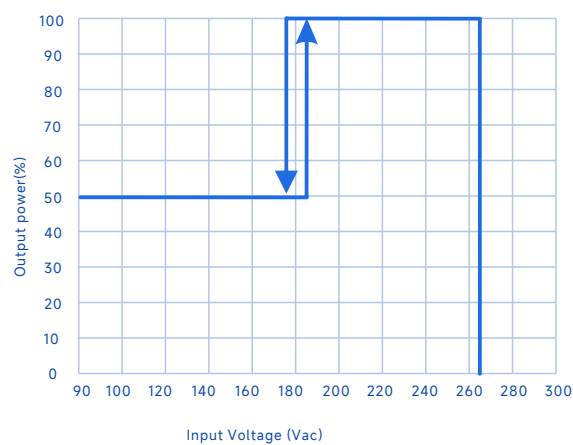
THD Vs. Output Power



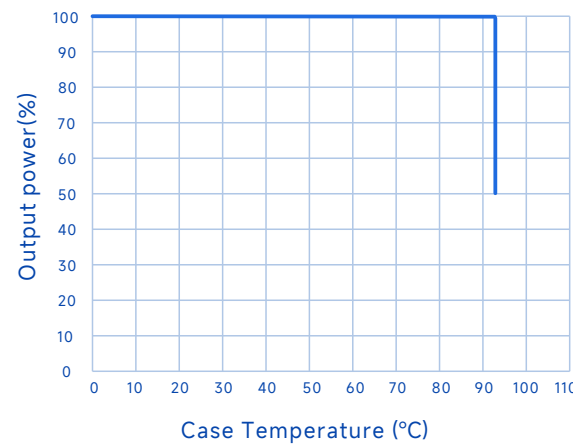
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Performance Curves

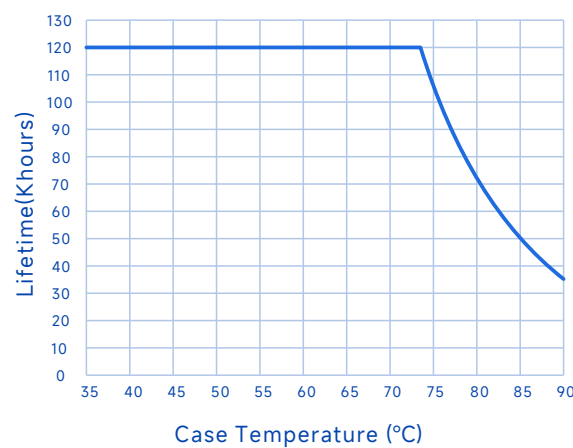
Output Power Vs. Input Voltage



Output Power Vs. Case Temperature

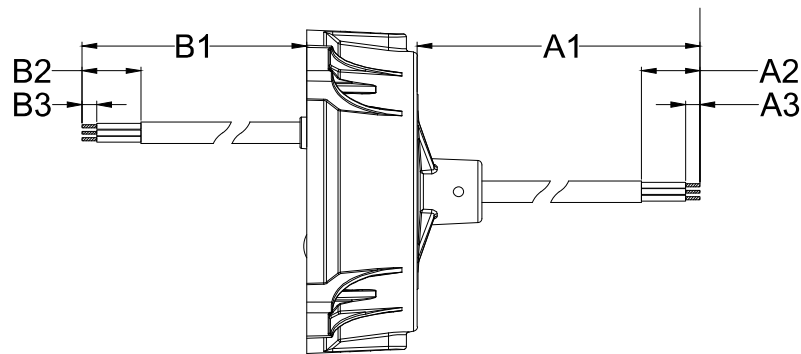


Lifetime Vs. Case Temperature



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Mechanical Characteristic



Optional wires	AC Input Cable (mm)			DC ouput Cable mm		
	A1	A2	A3	B1	B2	B3
1#	1530±10	L/N:45±5 ⊕:57±5	8	200±10	22±3	9±1
2#	300±10	L/N:45±5 ⊕:57±5	8	200±10	22±3	9±1

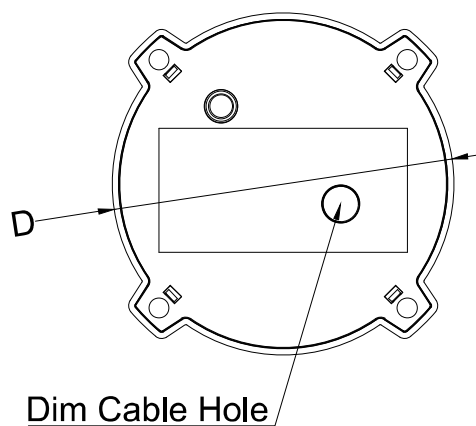
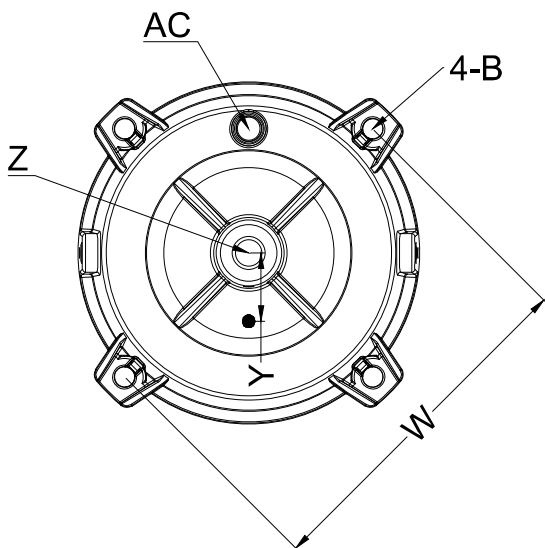
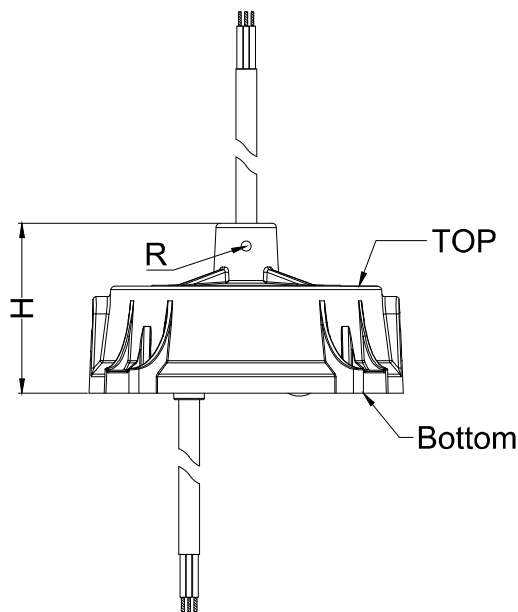
AC Input Cable	DC ouput Cable
EU H05RN-F, 3x1.0mm, Brown:ACL, Blue:ACN, Yellow/Green:⊕; L/N/Ground plus copper terminal;	EU H05RN-F 2*1.0mm^2, Brown:V+, Blue:V-;

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Mechanical Characteristic

Name Description	Standard Code	mm(In.)
Fixing screw hole diameter	4-B	Φ6.5(0.26)
Housing Diameter	D	Φ110(4.33)
Enclosure height	H	59.5(2.34)
Eyelet hole (optional)	Z	M10*1.5
Eyebolt Holes	R	M4*0.7
Mounting hole size	W	113(4.45)
Tc point location	Y	22(0.866)

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



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Assembly Tips

- 1.If the product has an external adjustable potentiometer, please adjust the current, it is recommended to use 704 silicone to adjust the current of the Seal the hole of adjusting current with 704 silicone and cover it with waterproof rubber plug.
- 2.When the dimmer line is not in use, please seal the connector of the dimmer line with insulating sleeve, so as not to string into the interfering signals and cause damage to the dimmer line, affecting the power supply. dimming line damage, affecting the normal operation of the power supply.
- 3.The trace routing on aluminum substrates is designed in compliance with creepage distance requirements specified by relevant certification regulations.
- 4.The creepage distance between LED+ and LED- on the aluminum substrate is designed in compliance with the relevant certification regulations.
5. aluminum substrate to minimize the laying of copper area, reduce junction capacitance, reduce eakage current.
6. LED lamp bead arrangement is recommended first and then string.
7. LED light board insulation level should meet the reliability design requirements.
- 8.other notes, please refer to the “LED driver power supply instruction 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 =577mm×385mm×162mm;
- 15PCS/Carton;
- Net weight/Piece: 0.58kg;Gross weight/Carton: 10.2kg;
- 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	2026/08/24	