SOSEN
LED DRIVER

SOSEN LED Driver, Your Smart Choice

Specifications

SS-120CF Series LED Driver

Model: SS-120CF-XX

Description: 120W LED Driver

Rev.: V00

Release Date: 2024-05-10

SS-120CF Series LED Driver

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—
CF Series

Features:

- Efficiency up to 90.8%
- Isolated dimming: 0-10V,PWM,Resistor
- Dim-to-Off
- Surge protection: CM: 6kV, DM: 4kV
- AUX Power: 12V/0.2A
- IP65
- Protections: SCP/OTP/UVP
- Warranty: 5 years

RoHS

Description:

SS-120CF series is a 120W circular non-isolated constant current LED Driver. This series has isolation dimming function, ultra-high efficiency, compact shell, fully potted , good cooling and waterproof, high reliability, high cost performance and other advantages.

Applications:

Explosion proof lamp

Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vo Range	Iout	THD(Typ.)	PF(Typ.)	Eff.(Typ.)	Max.Tc
SS-120CF-58*	90-264Vac	120W	30-58V	48-58V	1.05-2.1A	10%	0.95	90%	90℃

Note:

1.Default Tested: at 230Vac, full load, Ta 25℃.

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

"*"	ON-OFF	AUX 12V (suffix:H)	Dimming off 0-10V/PWM/Resistor(suffix:B)	Remark
No Suffix(Optional)	✓			
BH		✓	✓	

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	100Vac		240Vac	Reference Curve
AC Input Range	90Vac		264Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			1.4A	100Vac, Full load
Max Input Power			140W	100Vac, Full load
Max Inrush Current			56A	230Vac, Cold start
Standby Power			0.5W	230Vac/50Hz, Dim to off
Power Factor	0.93	0.95		100Vac/50Hz, Full load
	0.90			120-240Vac, 70-100% load
THD		7%	9%	220Vac/50Hz, Full load
			10%	120-240Vac, 70-100% load

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O/P Characteristics:

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	30V		58V	
Rated O/P Voltage	48V		58V	At 58V, Po=Vo*Io=121.8W, Full load
				At 48V, Po=Vo*Io=100.8W, Full load
Rated O/P Current		2.1A		2.1A for 58V
AdJ. O/P Current (AOC)Range	1.05A		2.1A	Adjustable built-in potentiometer
No Load Voltage			80V	
Efficiency @240Vac	89.0%	90.0%		O/P 58V/2.1A
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	1.0S	100Vac, Full load
		0.5S	1.0S	240Vac, Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
OTP	93°C	98°C	103°C	>Tc Typ., Current derating, reduce power by 55% <Tc Min., Current recovery
Short Circuit Protection				Driver will not be damaged, Hiccup mode

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Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
AUX Power (Optional)	O/P Voltage	10.8V	12V	13.5V	
	O/P Current			200mA	Operate max 15min at 300mA
0-10V Dimming (Optional)	Dim Vmax	0V		12V	DIM+ source current 110uA.
	Dim Range	10%Ioset		100%Ioset	Dimming prohibits reverse connection
	Rec.Dim Range	0V		10V	
PWM Dimming (Optional)	PWM High	9.8V		10.2V	DIM+ source current 110uA.
	PWM Low	0V		0.3V	Dimming prohibits reverse connection
	Frequency	1KHz		2KHz	
	PWM Duty	0%		100%	
Resistor Dimming (Optional)	Resistance	0Kohm		100Kohm	DIM+ source current 110uA.
	Dim Range	10%Iomax		100%Ioset	
Dim to Off (Optional)	Dim off	0.7V	0.8V	0.9V	When DIM- and Vaux- are shared with single wire output, the dimming off point and dimming on point are tested under no load of the auxiliary power.
	Dim on	0.8V	0.9V	1.0V	
Life Time(Tc≤75℃)		50,000 hours			Full Load, 230Vac
MTBF		198,000 hours			230Vac,Full load, Ta=25℃ (MIL-HDBK-217F)
IP Grade		IP65			
Tc		90℃			
Warranty		5 years			Tc: 75℃
Net Weight		745g			
Dimension		Φ110mm*38mm			D x H

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

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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
CCC	GB 19510.14-2009 GB 17625.1-2022 GB/T17743-2021	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	GB/T17743-2021	
Radiation Emission	GB/T17743-2021	
Harmonic Current Emissions	GB 17625.1-2022	
Surge	GB/T17626.5-2019	DM: 4kV,CM: 6kV,Criterion B
Ring Wave	GB/T17626.12-2023	DM: 4kV,CM: 4kV,Criterion B

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Safety Test Items:

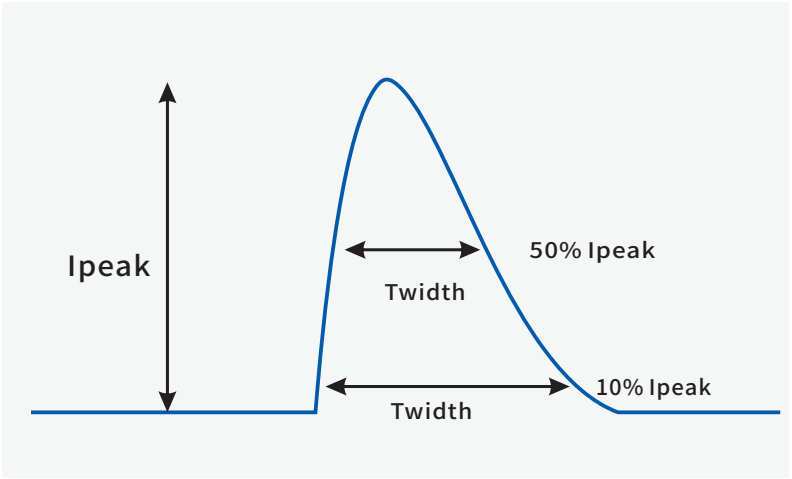
Safety Test Items	Technical Indicators	Remark
Insulation requirements	CCC Insulation Requirements	
Input to Housing	2U+1000	Basic insulation
Insulation Resistance	⩾10MΩ	Input-Output,Test voltage:500Vdc
Ground Resistance	⩽0.1Ω	25A/1min
Leakage Current	⩽0.75mA	240Vac

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 -)when Hi-pot test.
3. The CCC withstand voltage test needs to disconnect the built-in lightning protection tube.According to the IEC 60598-1:14 standard section 10.2, the “built-in lightning protection tube” can be marked on the nameplate to disconnect the discharge tube on testing.

Performance Curves:

Input Inrush Current



Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
230Vac	56A	400uS	350uS

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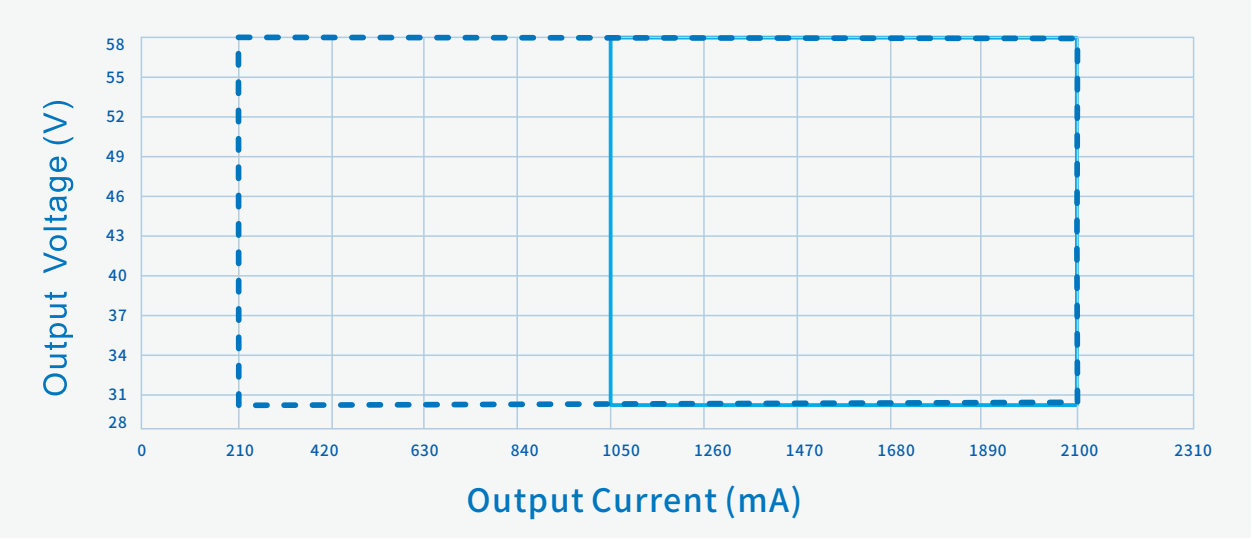
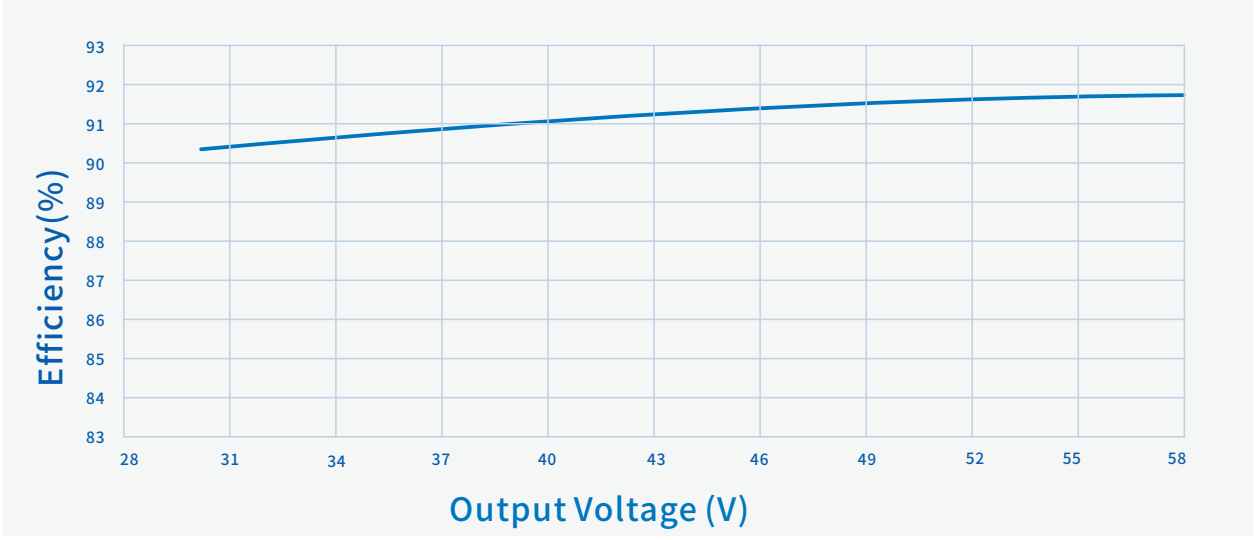
Performance Curves:

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



Dimming Window AOC Window

Efficiency Vs. O/P Voltage (Vin=230Vac)



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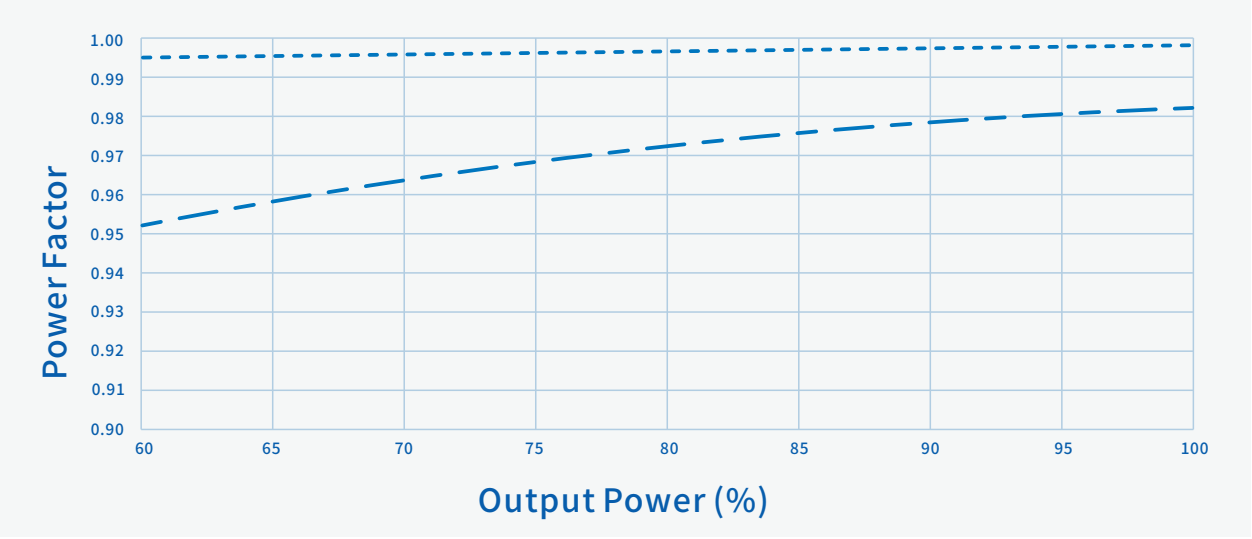
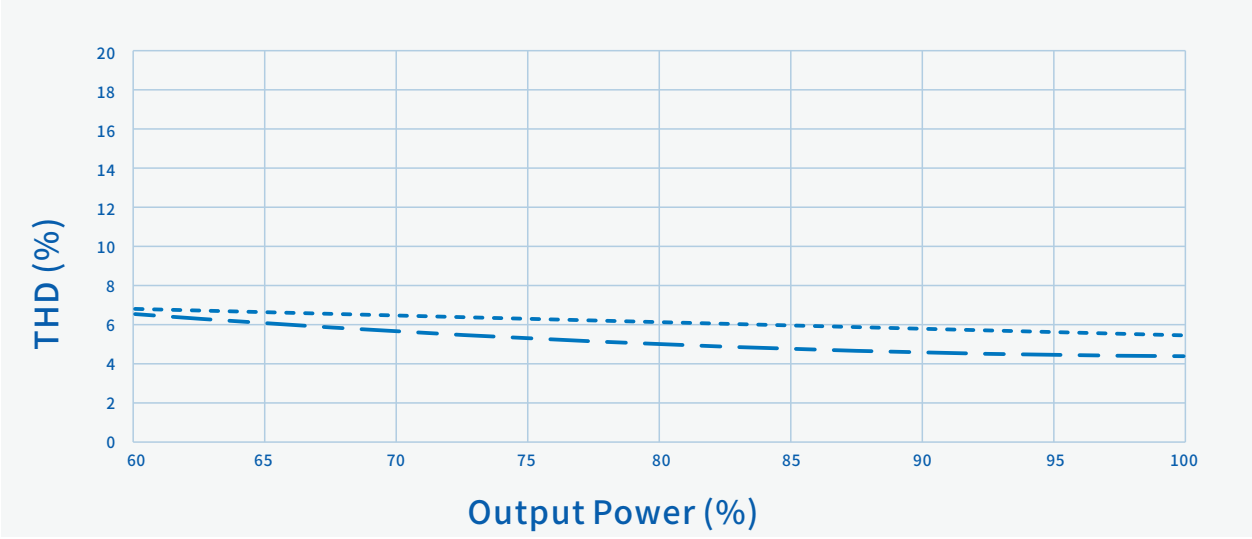
Performance Curves:

Power Factor Vs. O/P Power



Vin=100Vac Vin=230Vac

THD Vs. O/P Power



Vin=100Vac Vin=230Vac

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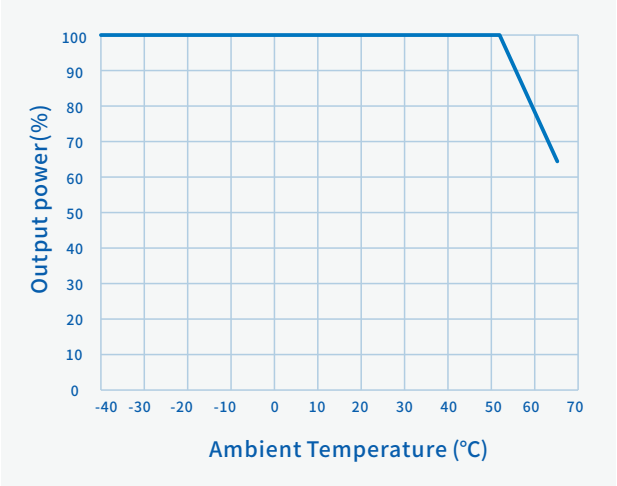
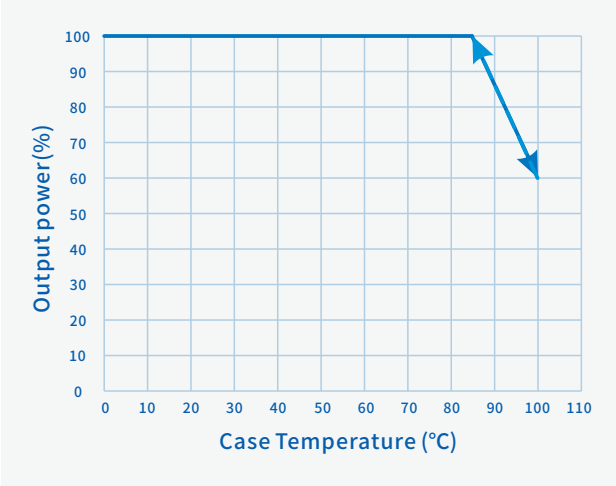
Performance Curves:

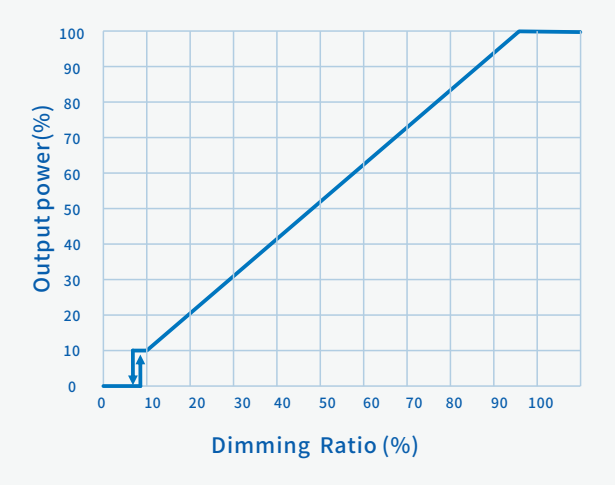
O/P power Vs. Ambient Temperature (230Vac)



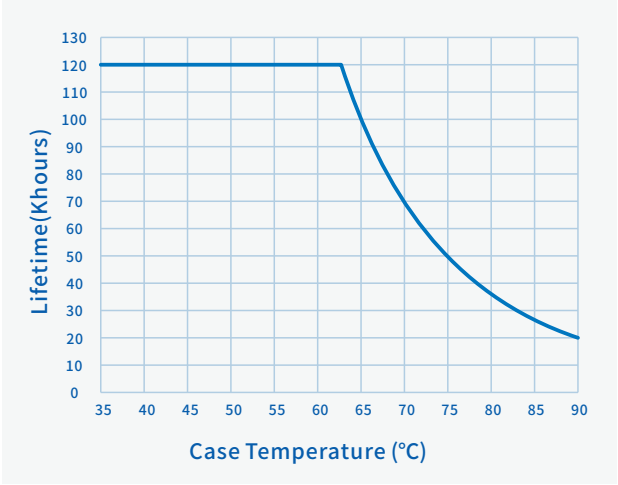
O/P power Vs. Case Temperature



O/P Power Vs. Dimming



Lifetime Vs. Case Temperature



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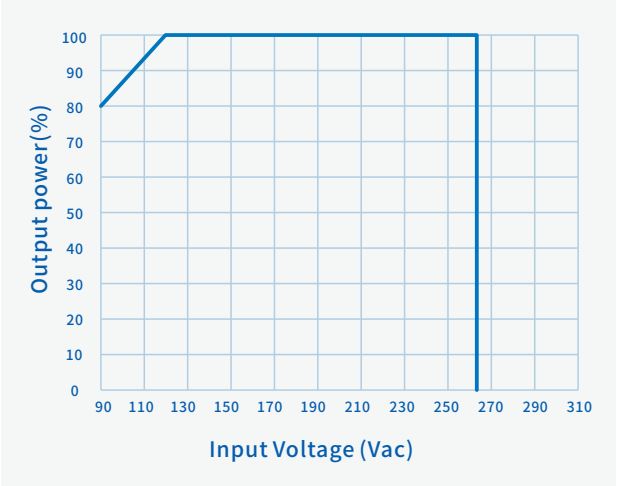
Performance Curves:

O/P power Vs. Input Voltage



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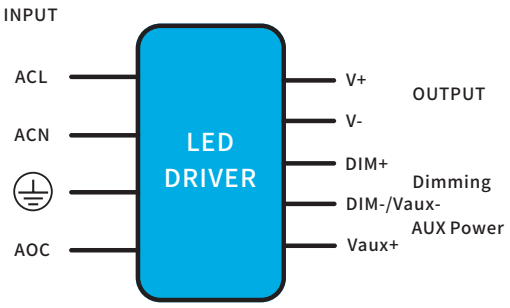
Mechanical Characteristics



AC Input Cable(Exposed Length 180±20mm):

Cable: H05RN-F，3*1.0mm²，O.D: 7.3mm, Brown:L, Blue:N, Yellow/Green: ⏚
Electronic cable: UL3398，18AWG, O.D: 2.55mm, Brown:L, Blue:N
Electronic cable: UL3239，18AWG, O.D: 2.17mm, Yellow/Green: ⏚

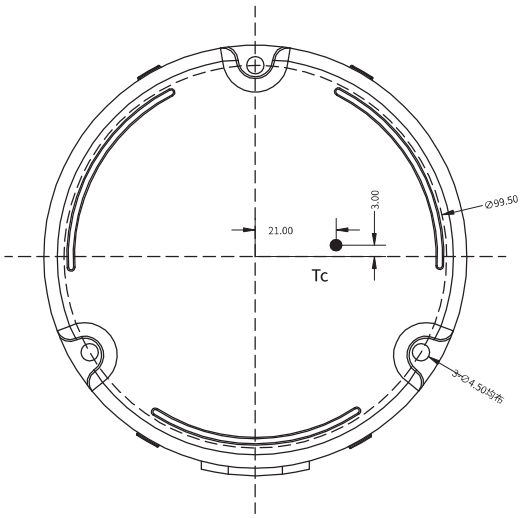
DC O/P Cable(Exposed Length 180±20mm):

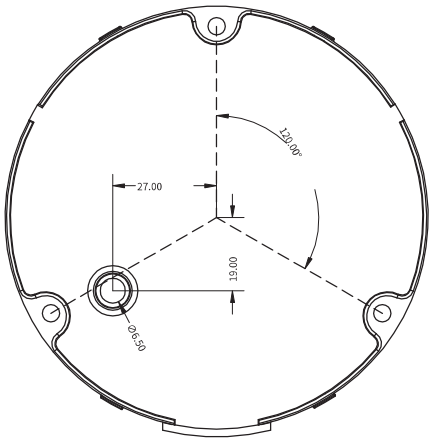
Cable: H05RN-F，2*1.0mm²，O.D: 7.0mm, Brown: V+, Blue: V-,
Electronic cable: UL3239, 18AWG, O.D: 2.17mm, White: V+, Yellow: V-,

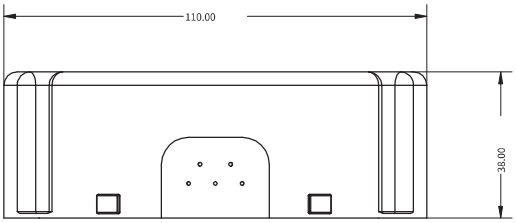
DIM /AUX Cable(Exposed Length 180±20mm):

Cable: UL 21996, 3*22AWG, O.D: 4.9mm, Purple: DIM+,
Pink: DIM-/Vaux-, Black/White: Vaux+
Electronic cable: UL 1032, 22AWG, O.D: 2.12mm, Purple: DIM+,
Pink: DIM-/Vaux-, Black/White: Vaux+

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±3mm







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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.

Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 18PCS/Carton;
- Net weight/Piece: 0.745kg;Gross weight/Carton: 15.175kg;
- 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	2024/05/10	

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