SOSEN

SPECIFICATIONS

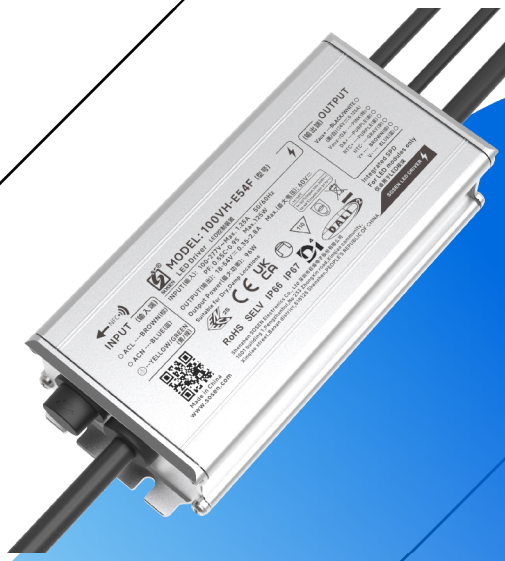
100VH-E D4i
CC DRIVER

Model: 100VH-E D4i

Power: 96W

Rev.: V01

Release date: 2026-06-09



100VH-E D4i LED DRIVER

Features

- Efficiency up to 92.5%
- Can be programmed via NFC
- Isolated Auxiliary Power Supply: 24V/0.125A (Peak Power: 6W)
- Full Power, Wide Range Input/Output
- DALI-2 & D4i Certified
- Over-Temperature Protection for LED Module
- Standby Power<0.5W
- Time control, End life alarm, Constant lumen compensation
- Integrated 16Vdc DALI bus power supply
- Integrated AC power metering with accuracy up to ±1%
- Protections: SCP/OTP/OVP/OPP
- Surge protection: CM: 10kV, DM: 6kV
- Suitable for Class I and Class II luminare
- IP66/IP67
- Warranty: 5 years

RoHS SELV IP66 IP67

Description

The VH-E D4i series are NFC-programmable waterproof LED constant-current drivers that fully complies with D4i and DALI-2 standards. It is compatible with various smart lighting systems and controllers, enabling precise lighting control and management. Additionally, it integrated high-precision AC power metering and can monitor luminaire status and faults, supporting remote management and maintenance. Additionally, it incorporates multiple protectionfuncation, providing stable and efficient power supply for LED luminaires

Applications:

Street lighting, Tunnel lighting , High Pole lighting, High bay lighting, Stadium 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
100VH-E54*	90-305Vac	96W	18-54V	34-54V	0.35-2.8A	2.0A	8%	0.97	92%	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.

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“*” Means Additional Function

"*"	DALI-2	NFC	Class I	Class II	Remark
F	✓	✓	✓		
FE	✓	✓		✓	

Input Characteristics

Parameter	Min.	Typ.	Max.	Remark
AC Input Range	90Vac	100-277Vac	305Vac	Reference Derating Curve
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			1.25A	100Vac, Full load
Max Input Power			125W	100Vac, Full load
Max Inrush Current(120Vac)			23A	Cold start
Max Inrush Current(220Vac)			45A	Cold start
Max Inrush Current(277Vac)			59A	Cold start
Built-in AC power Metering	-2%	1%	+2%	220Vac, Full load active power
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		54V	Power derated @18-34V
Rated O/P Voltage	34V		54V	Po=Vo*Io=96W, Full load
Rated O/P Current	1.78A		2.8A	2.8A for 34V,1.78A for 54V
Adj. O/P Current (AOC) Range	0.35A		2.8A	
No Load Voltage			60V	
Efficiency @120Vac	88.0%	90.0%		Output 47.5V/2.0A,Test after burn-in
Efficiency @220Vac	90.0%	92.0%		Output 47.5V/2.0A,Test after burn-in
Efficiency @277Vac	90.5%	92.5%		Output 47.5V/2.0A,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			1.0S	120-277Vac,Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient		0.03%/°C		Tc:0°C~90°C
Over Temperature Protetion	90°C	95°C	100°C	Drop current when OTP, Software-configurable，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 Supply Function	Rated Output Voltage	21.6V	24V	26.4V	For a reference voltage of “DA-”, within a 6ms cycle,the maximum sustained duration of the 250mA peak output current is 2.2ms,and the average value shall not exceed 125mA.
	Rated Output Current	0mA		125mA	
DALI-2	DA+, DA- High Level	9.5V	16V	22.5V	
	DA+, DA- Low Level	-6.5V	0V	6.5V	
	DA+, DA- current	0mA		2mA	
Built-in DALI bus power supply voltage		12V	16V	20V	
Built-in DALI bus power supply current		50mA		60mA	Enabled by default; can be disabled through programming.
Timing Control(Optional)		By programming			Set by program.
Over-Temperature Protection for LED Lighting Modules					Thermistor - 10K - B3950K
Lifetime(Tc≤80°C)		≥50,000 hours			100%Full load.
MTBF		256,200 hours			220Vac,Full load, Ta=25°C (MIL-HDBK-217F)
IP Rating		IP66/IP67			
Tc Max		90°C			
Warranty		5 years			Tc: 80°C
Net Weight		650g			
Dimension		149mm*66mm*34.75mm			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		
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	✓	
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		

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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: 10kV,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

Note: FE models, to ensure surge protection performance, the casing must be reliably grounded, Complies with IEC 61000-4-5 (CM: 8 kV).

Certification	Standard	Status
D4i/DALI-2	IEC62386-101,102 & 207,150,250,251,252,253	✓

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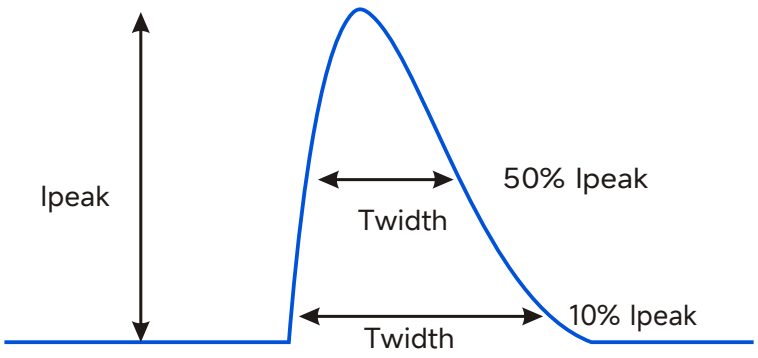
Safety Test Items

Safety Test Items	Technical Indicators				Remark
Models	F Models		FE Models		
Insulation Requirements	ENEC Insulation Requirements	UL Insulation Requirements	ENEC Insulation Requirements	UL Insulation Requirements	
Input-Output	4U+2000Vac	2U+1000Vac	4U+2000Vac	/	
Input-Case	2U+1000Vac	2U+1000Vac	4U+2000Vac	/	
Input-Dim	4U+2000Vac	2U+1000Vac	4U+2000Vac	/	
Dim-Case	500Vac				Basic insulation
Insulation Resistance	≥10MΩ				Test voltage:500Vdc
Ground Resistance	≤0.1Ω				25A/1min
Leakage Current (Class I)	≤0.75mA				277Vac
Leakage Current (Class II)	≤0.7mA				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.

Performance Curves

Input Inrush Current



Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	23A	650uS	/
220Vac	45A	/	300uS
277Vac	59A	650uS	/

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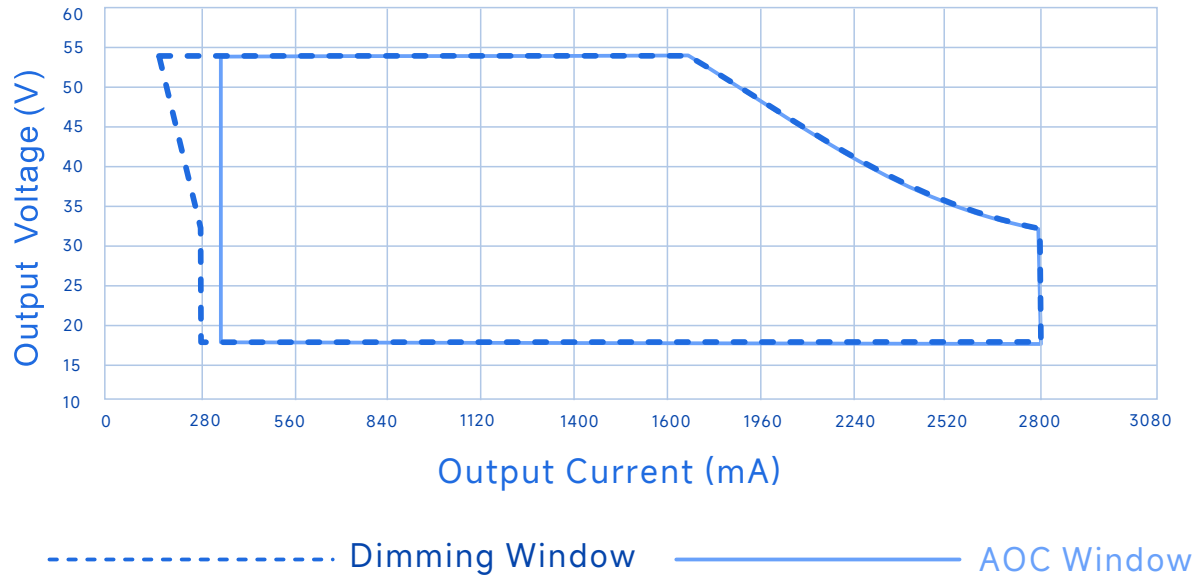
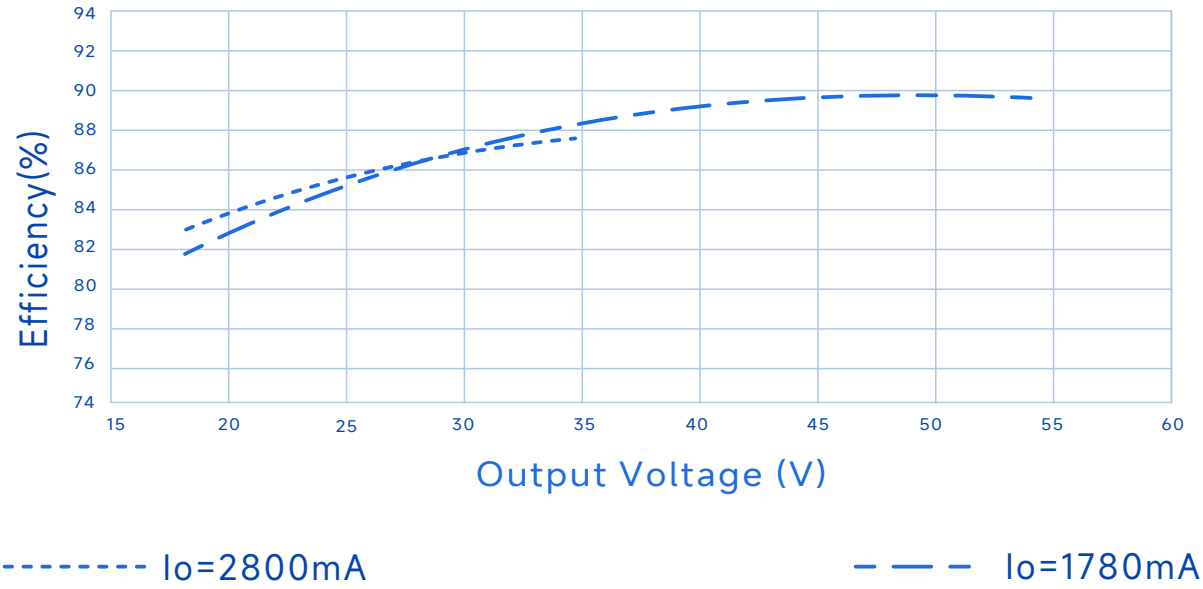
Performance Curves

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



Efficiency Vs. Output Voltage(Vin=120Vac)



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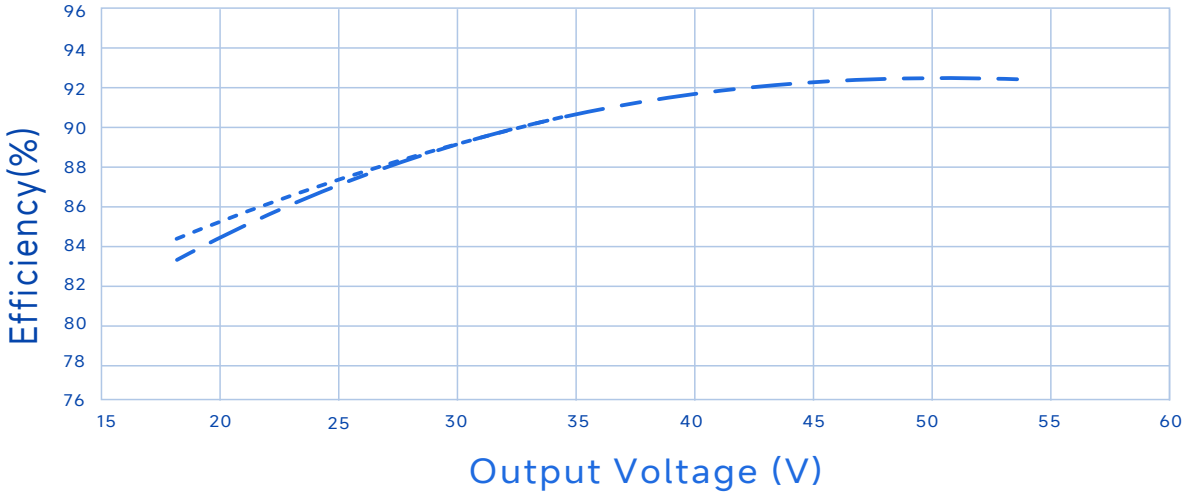
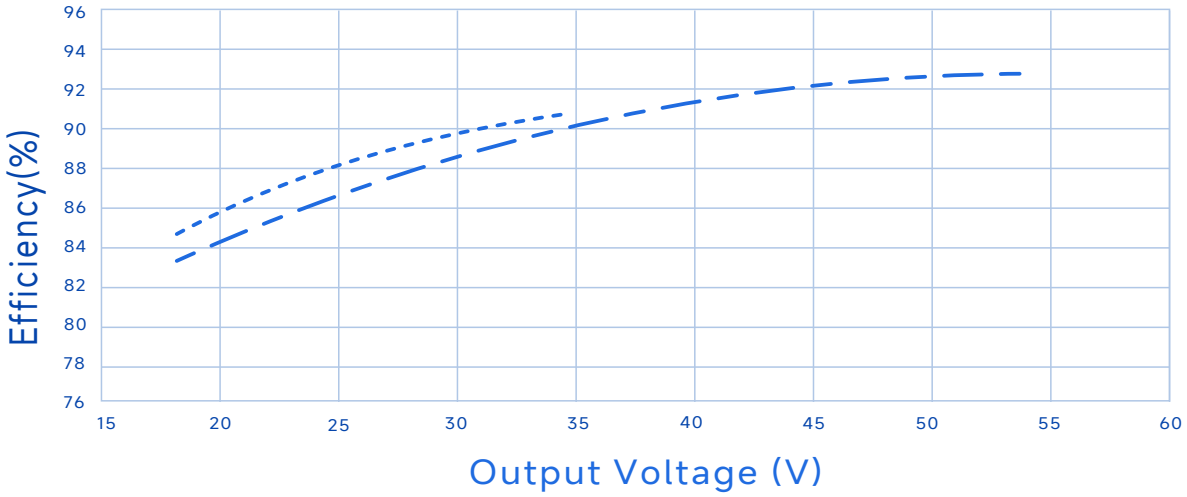
Performance Curves

Efficiency Vs. Output Voltage (Vin=220Vac)



-------- Io=2800mA – — – Io=1780mA

Efficiency Vs. Output Voltage(Vin=277Vac)



-------- Io=2800mA – — – Io=1780mA

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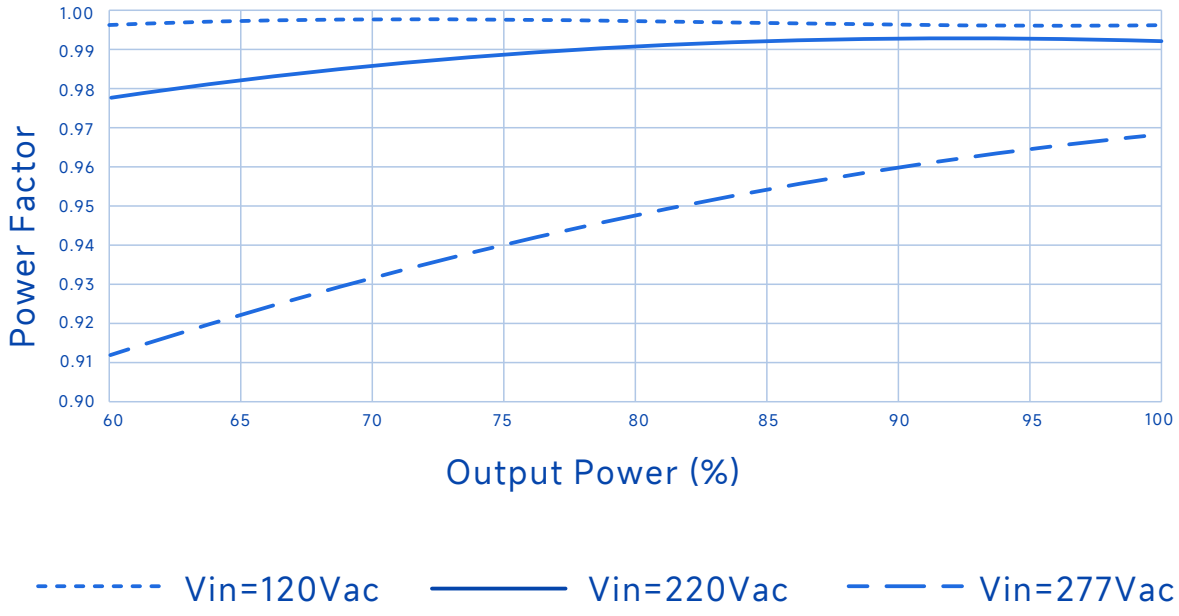
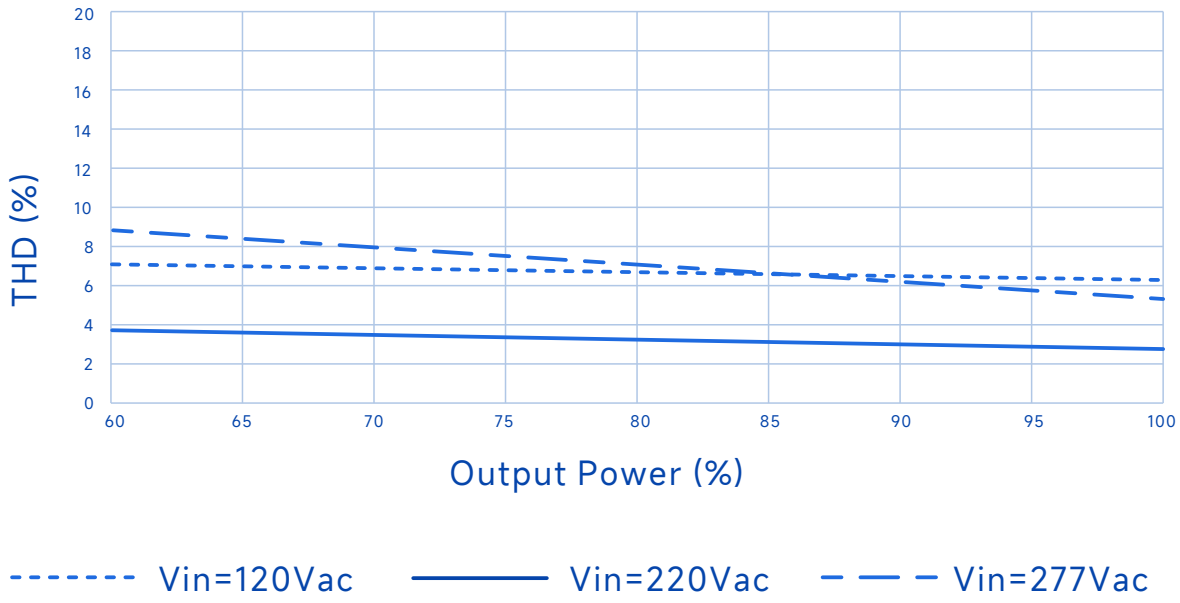
Performance Curves

Power Factor Vs. Output Power



THD Vs. Output Power



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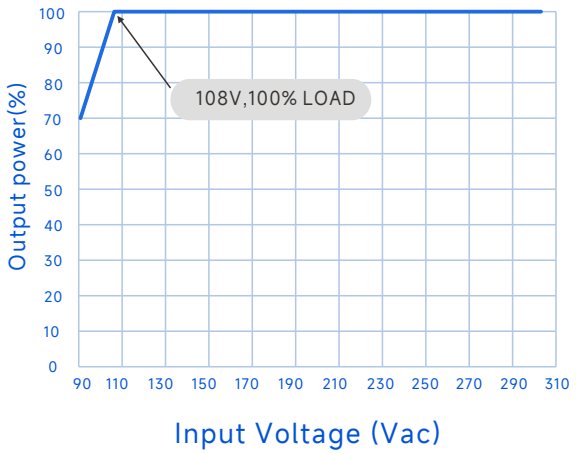
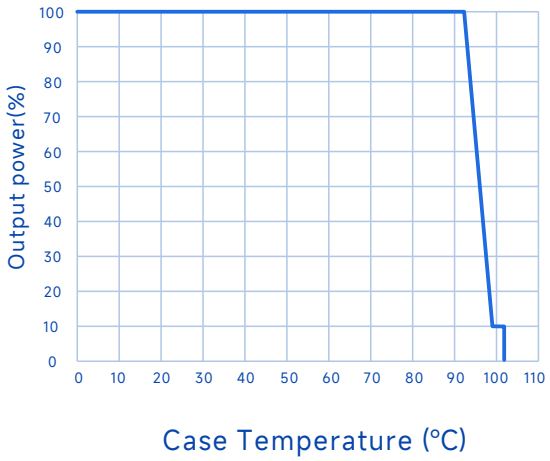
Performance Curves

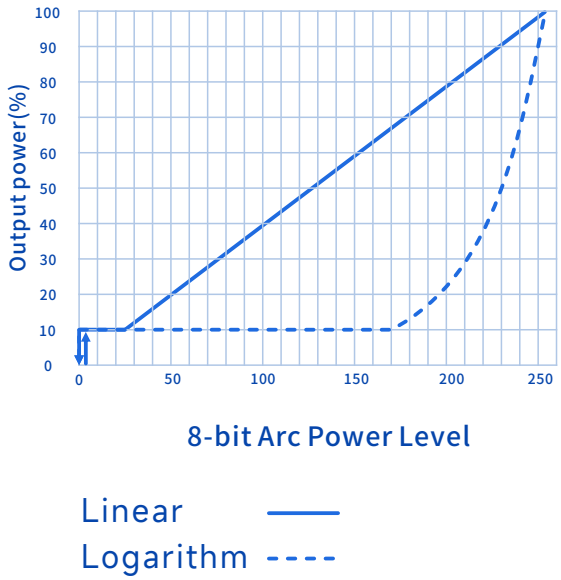
Output Power Vs. Input Voltage



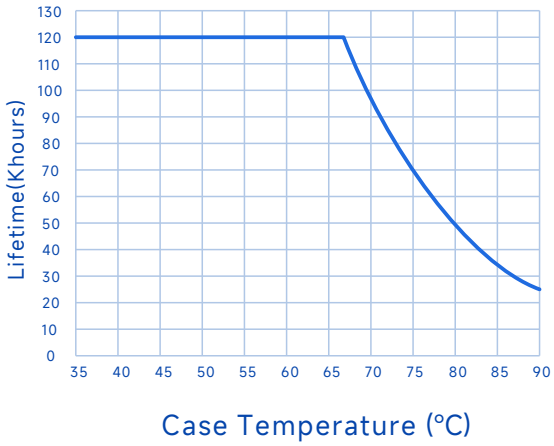
Output Power Vs. Case Temperature



Dimming Curve



Lifespan vs. Case Temperature



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Software OTP Function:

Software OTP is an optional feature. OTP parameters can be configured through the software interface.

Time-controlled dimming:

Automatic switching between Daylight Saving Time (DST) and Standard Time ,Support Traditional timed control mode,Self Adaptive midnight mode,self adaptive percentage mode
Timed dimming profiles can be configured using an 8-segment curve for percentage settings.
Traditional timed control mode
Upon power-on, the system operates according to the preset timed dimming curve. A configurable fade time enables smooth transitions between dimming levels, preventing abrupt brightness changes that may cause glare.
Self Adaptive midnight mode
Valid power-on times are automatically recorded.After four valid operating cycles, the system calculates an adaptive cycle period to approximate local midnight.
self adaptive percentage mode
The system executes the initially defined dimming curve based on the automatically derived adaptive cycle period.

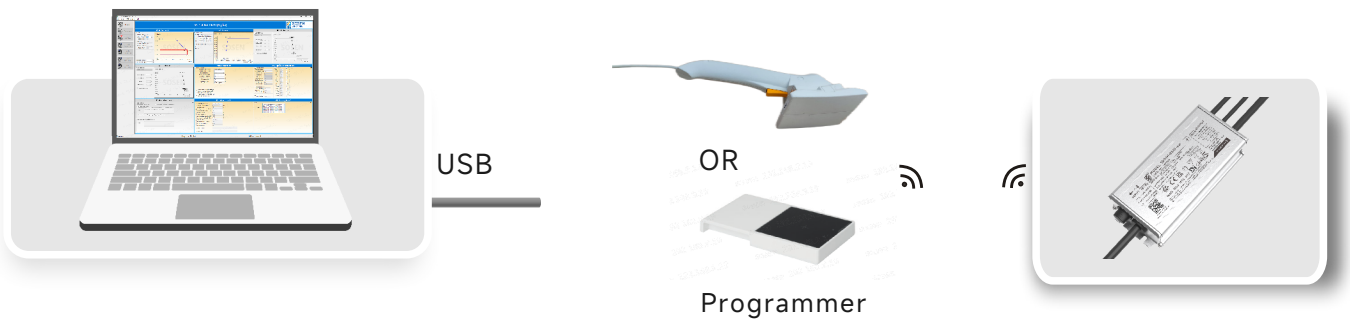
CLO Constant Lumen Compensation

Throughout the luminaire's lifespan, constant luminous flux output is achieved by gradually increasing the output current to maintain the luminaire's luminous efficacy.

ELA End-of-Life Alert:

The LED fixture's lifespan is preset, such as 50,000 hours. Once the fixture's cumulative operating time reaches 50,000 hours, it will flash five times each time it is powered on,alerting the user to replace the driver.

NFC Programming Connection Diagram:



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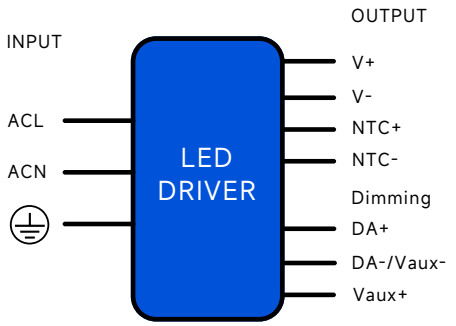
Mechanical Characteristic

Wire gauge(F models)



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-

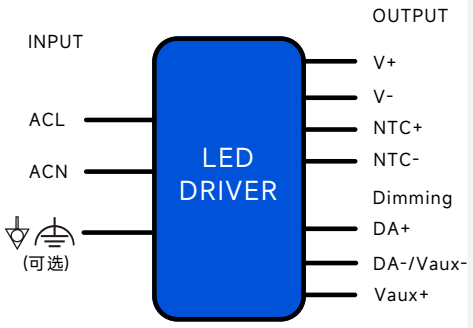
DA Cable(Exposed Length 220±10mm):

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

NTC Cable(Exposed Length 220±10mm):

UL model: 21996,2*22AWG.O.D:4.7mm,Purple:NTC+,Gray:NTC-

Wire gauge (FE models)



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

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

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-

DA Cable(Exposed Length 220±10mm):

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

NTC Cable(Exposed Length 220±10mm):

UL model: 21996,2*22AWG.O.D:4.7mm,Purple:NTC+,Gray:NTC-

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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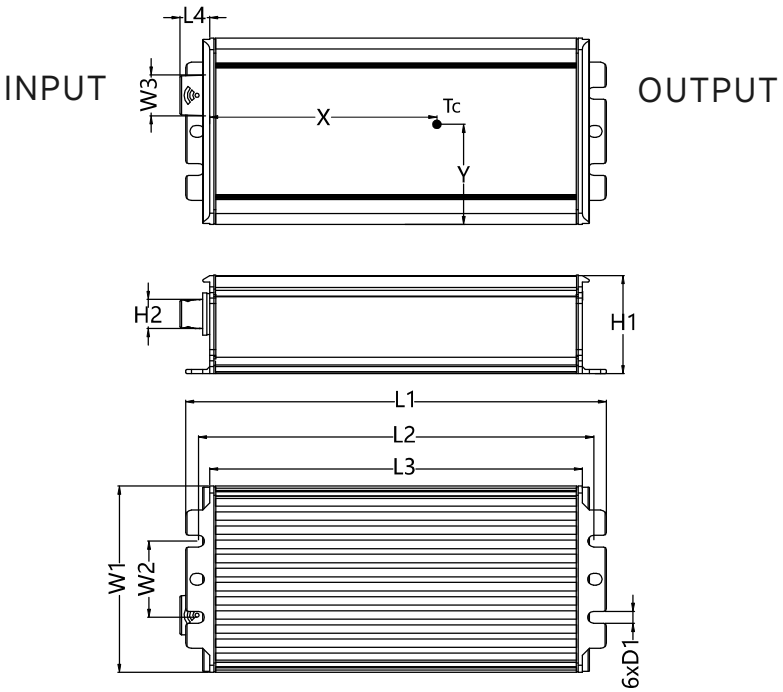
Mechanical Characteristic

Outline and mounting dimensions

Name Description	Standard Code	mm(In.)
Overall Length	L1	149(5.86)
Mounting Hole Length	L2	140(5.51)
Case Length	L3	132(5.19)
NFC antenna length	L4	10.5(0.41)
Overall Width	W1	66(2.6)
Mounting Hole Width	W2	27(1.06)
NFC antenna Width	W3	14.4(0.57)
Housing Height	H1	34.75(1.37)
NFC Antenna Height	H2	10.3(0.4)
Screw Hole Width	D1	4.2(0.16)
TC Point Position	X	80.5(3.16)
TC Point Position	Y	35.5(1.39)



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 =495mm×385mm×162mm;
- 16PCS/Carton;
- Net weight/Piece: 0.65kg;Gross weight/Carton: 11.6kg;
- 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	2026/05/12	
V01	Update the wiring	2026/06/09	

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