SOSEN LED DRIVER

SOSEN LED Driver, Your Smart Choice

Specifications

SS-800VP-G Series LED Driver

Model: SS-800VP-GXX

Description: 800W LED Driver

Rev.: V01

Release Date: 2025-02-20

SS-800VP-G Series LED Driver

SOSEN
LED DRIVER

LED DRIVER
—
VP-G Series

CB CE IP67 E360758

Features:

- Efficiency up to 95.5%
- Dimming: 0-10V,PWM,Resistor,Timing
- Dim-to-Off
- Surge Protection: CM: 10kV, DM: 6kV
- AUX Power：12V/0.2A
- Constant Lumen, Life Warning
- External NTC to Protect LED Module
- Standby Power<0.5W
- IP67
- Communication Function With PC
- Type HL, suitable for hazardous locations
- Protections: SCP/OTP/OVP
- Warranty: 5 years

Description:

SS-800VP-G series are 800W 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.

Application:

Stadium lighting,Square lighting,Plant lighting,Fish lighting

Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vout Range	Iout	Default Current	THD (Typ.)	PF(Typ.)	Eff.(Typ.)	Max.Tc
SS-800VP-G56*	180-305Vac	800W	28-56V	48-56V	1.75-16.7A	14.3A	10%	0.95	95%	90℃

Note:

1.Default Tested: at 220Vac, 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

"*"	DALI (suffix:D)	AUX 12V (suffix:H)	NTC (suffix:N)	Timing	0-10V/PWM Dim /Resistor (suffix:B)	Remark
BH		✓		✓	✓	
BHN		✓	✓	✓	✓	

Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	200Vac		277Vac	
AC Input Range	180Vac		305Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			6.5A	200Vac, full load
Max Input Power			910W	200Vac, full load
Max Inrush Current(220Vac)			56A	Cold Start
Max Inrush Current(277Vac)			70A	Cold Start
Standby Power			0.5W	220Vac/50Hz, Dim to off
Power Factor	0.95	0.97		220Vac/50Hz, full load
	0.90			200-277Vac, 70-100% load
THD		8%	10%	220Vac/50Hz, full load
			20%	200-277Vac, 70-100% load

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O/P Characteristics:

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	28V		56V	Power Derated @28-48V
Rated O/P Voltage	48V		56V	Po=Vo*Io=800W, full load
Rated O/P Current	14.3A		16.7A	16.7A for 48V,14.3A for 56V
Adj. O/P Current (AOC)Range	1.75A		16.7A	By Programming
No Load Voltage			60V	
Efficiency @220Vac	93.0%	95.0%		O/P 56V/14.3A
Efficiency @277Vac	93.5%	95.5%		O/P 56V/14.3A
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	220Vac,Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient		0.03%/℃		Tc:0℃~90℃
OTP	90℃	100℃	110℃	Drop current when OTP, and it can be automatically restored after the abnormality is removed.
Short Circuit Protection				Driver not be damaged

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SS-800VP-G Series LED Driver

Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
AUX Power	O/P Voltage	11.4V	12V	13.8V	
	O/P Current	0mA	200mA		
0-10V Dimming (Optional)	Dim Vcc	0V		12V	Negative dimming by programming
	Dim Range	10%Ioset		100%Ioset	DIM+ source current 110uA .
	Rec.Dim Range	0V		10V	Dimming prohibits reverse connection.
PWM Dimming (Optional)	PWM High	9.8V		10.2V	Negative dimming by programming
	PWM Low	0V		0.3V	DIM+ source current 110uA .
	Frequency	1KHz		2KHz	Dimming prohibits reverse connection.
	PWM Duty	0%		100%	
Resistor Dimming (Optional)	Resistance	0K		100K	Negative dimming by programming
	Dim Range	10%		100%	DIM+ source current 110uA .
Dim to Off	Dim off	7%	8%	9%	According to the voltage, PWM, resistance dimming ratio
	Dim on	8%	9%	10%	According to the voltage, PWM, resistance dimming ratio
Timing Curve(Optional)		By programming			
Constant Lumen(Optional)		By programming			
Life Warning(Optional)		By programming			
Life Time(Tc≤75℃)		50,000 hours			80% Load
MTBF		201,200hours			220Vac,full load, Ta=25℃ (MIL-HDBK-217F)
IP Grade		IP67			Suitable for dry, humid,rainy environments
Tc		90℃			
Warranty		5 years			Tc：75℃
Net Weight		2500g			
Dimension		325mm*89.5mm*44.5mm			L x W x H

NOTE:

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

2. When using resistor dimming (parallel connection of dimming wires), if the number of parallels is: N, the dimming resistor should be realized 0-100% dimming range, resistance value: 91KΩ/N.

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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
UL/cUL	UL8750	✓	
ENEC	EN 61347-1:2015 EN 61347-2-13:2014 EN 61347-2-13:2014/A1:2017	✓	
UKCA	EN 61347-1:2015+A1:2021 EN 61347-2-13:2014+A1:2017 EN 62493:2015 BS EN 61347-1:2015+A1:2021 BS EN 61347-2-13:2014+A1:2017 BS EN 62493:2015	✓	
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	EN55015:2013+A1:2015	230Vac
	FCC Part 15 Subpart B; ANSI C63.4:2014	277Vac: Class A
Radiation Emission	EN55015:2013+A1:2015	230Vac
	FCC Part 15 Subpart B; ANSI C63.4:2014	277Vac: Class A
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN 61000-4-5	DM: 6kV,CM: 10kV,Criterion B
	ANSI/C82.77-5-2017	DM: 6kV,CM: 6kV,Criterion B
Ring Wave	IEC/EN 61000-4-12	DM: 6kV,CM: 6kV,Criterion B

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Safety Test Items:

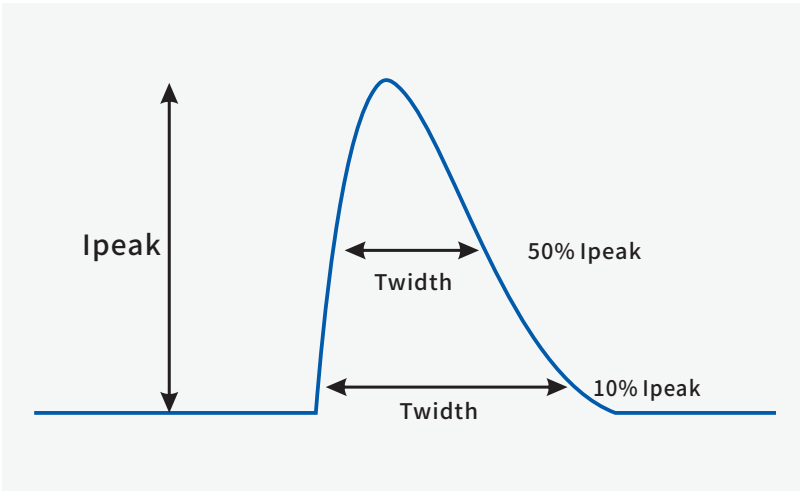
Safety Test Items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	TUV Insulation Requirements	
Input-O/P	2U+1000Vac	4U+2000Vac	
Input-Case	2U+1000Vac	2U+1000Vac	
Input-Dim	2U+1000Vac	4U+2000Vac	
Insulation Resistance	⩾10MΩ		Input-O/P,Test voltage:500Vdc
Ground Resistance	⩽0.1Ω		25A/1min
Leakage Current	⩽0.75mA		277Vac

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 as component.
2. Please short (ACL and ACN), (V+ and V-), (Dim+ and Dim - and Vaux+ and Vaux-) when Hi-pot test.

Performance Curves:

Input Inrush Current



Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
220Vac	56A	10mS	5mS
277Vac	70A	12mS	8mS

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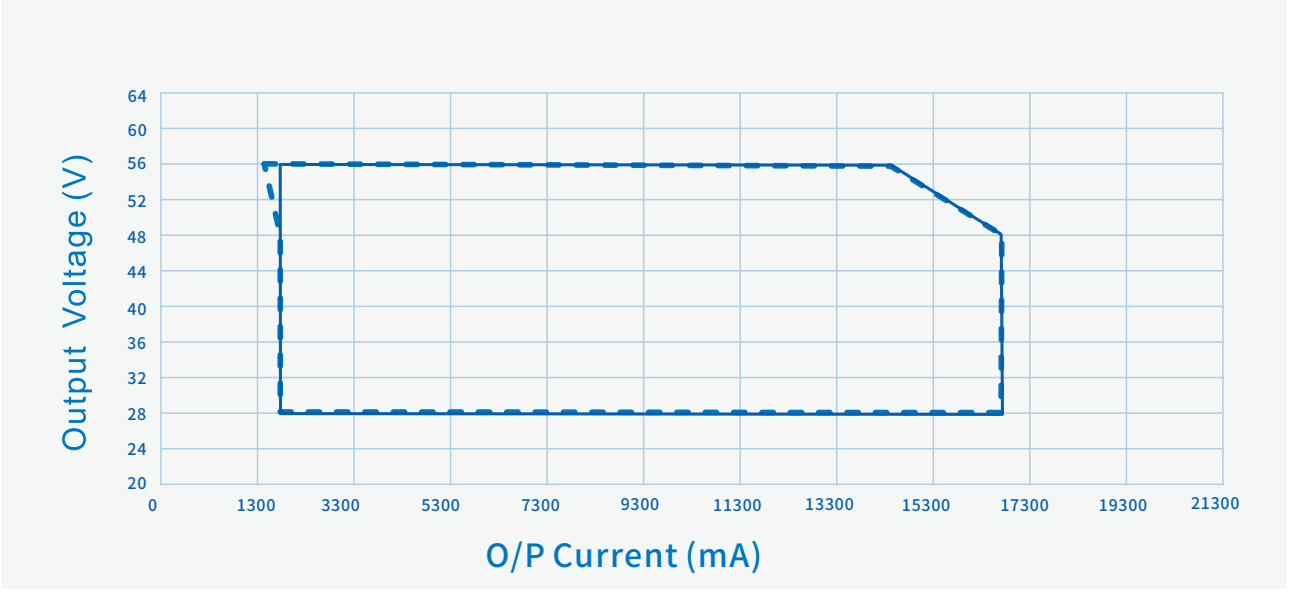
Performance Curves:

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



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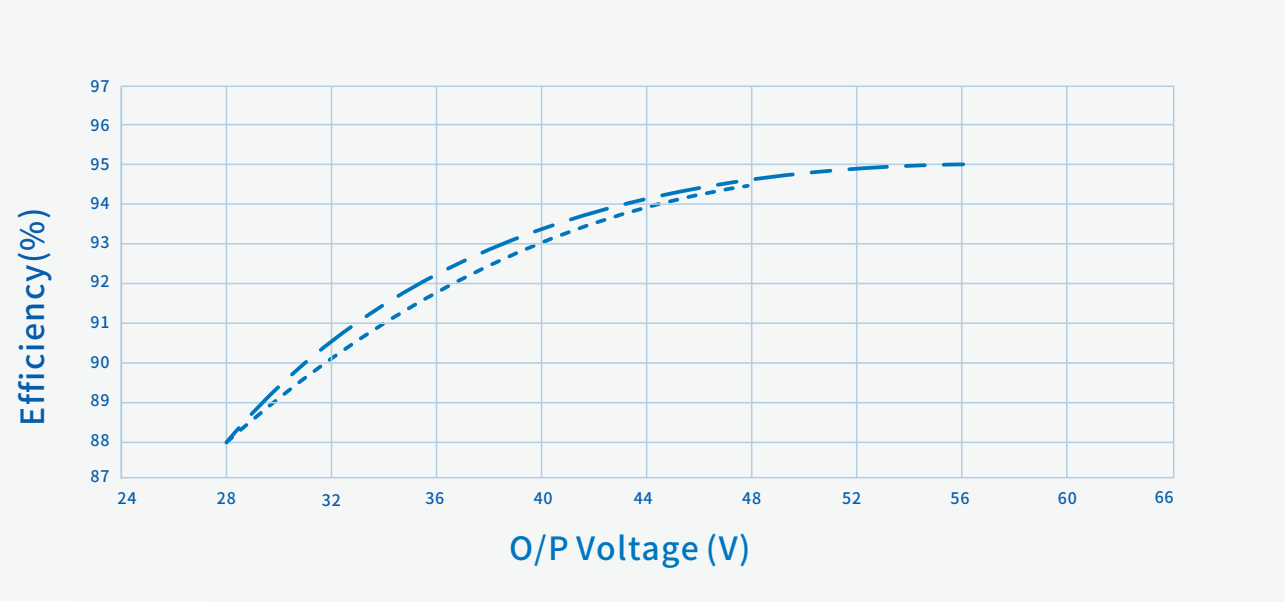
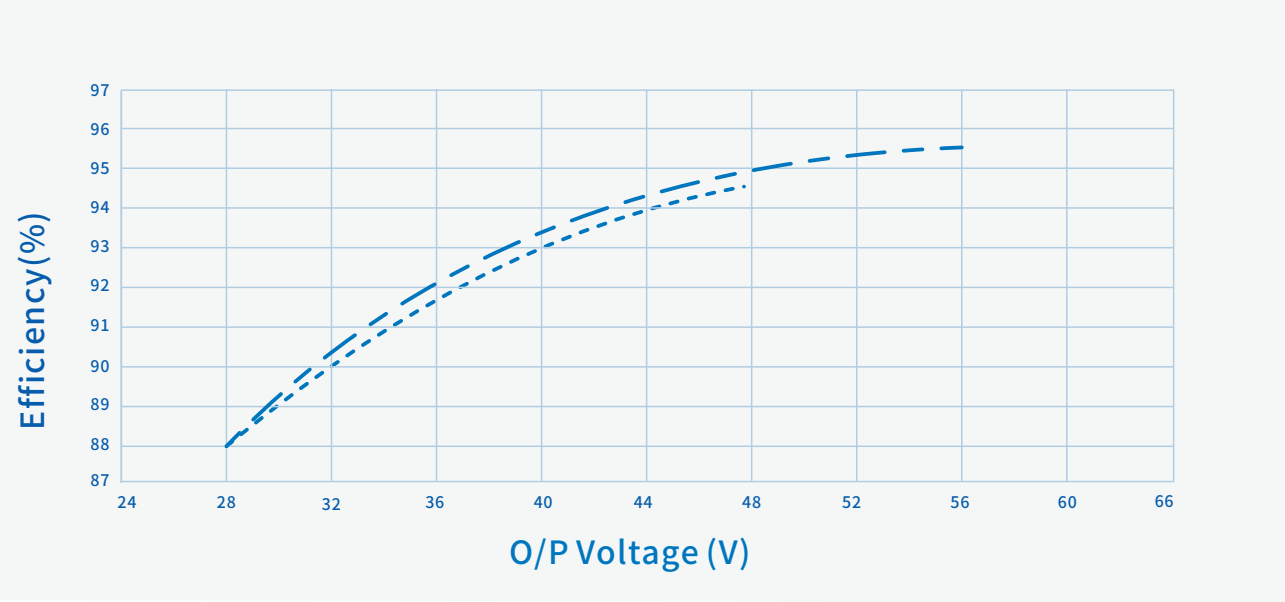
Performance Curves:

Efficiency Vs. O/P Voltage (Vin=220Vac)



------- Io=16700mA — — — Io=14300mA

Efficiency Vs. O/P Voltage (Vin=277Vac)



------- Io=16700mA — — — Io=14300mA

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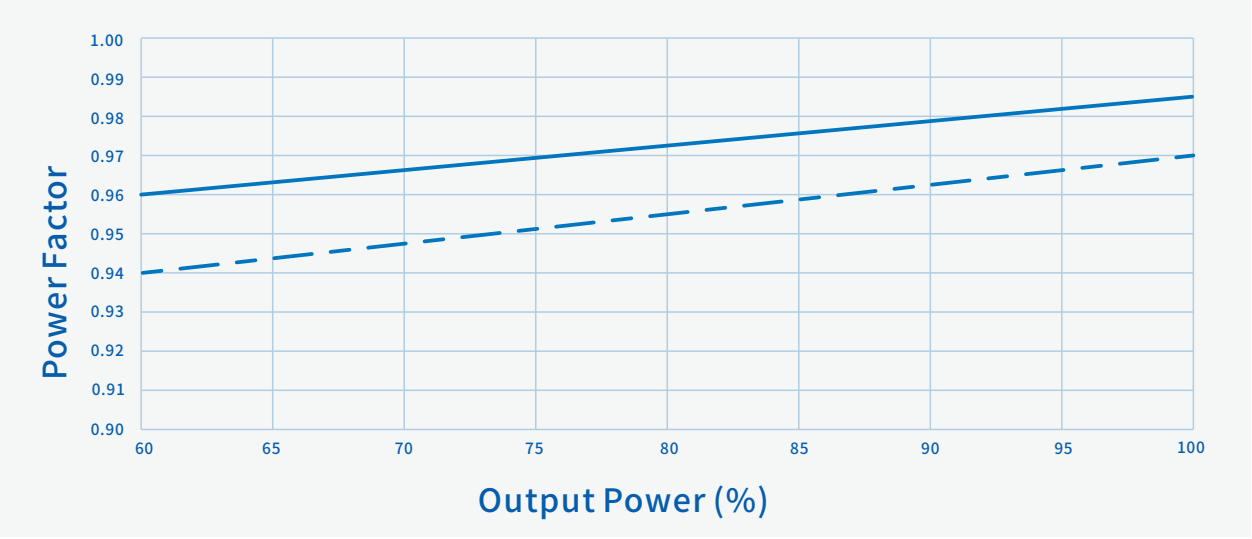
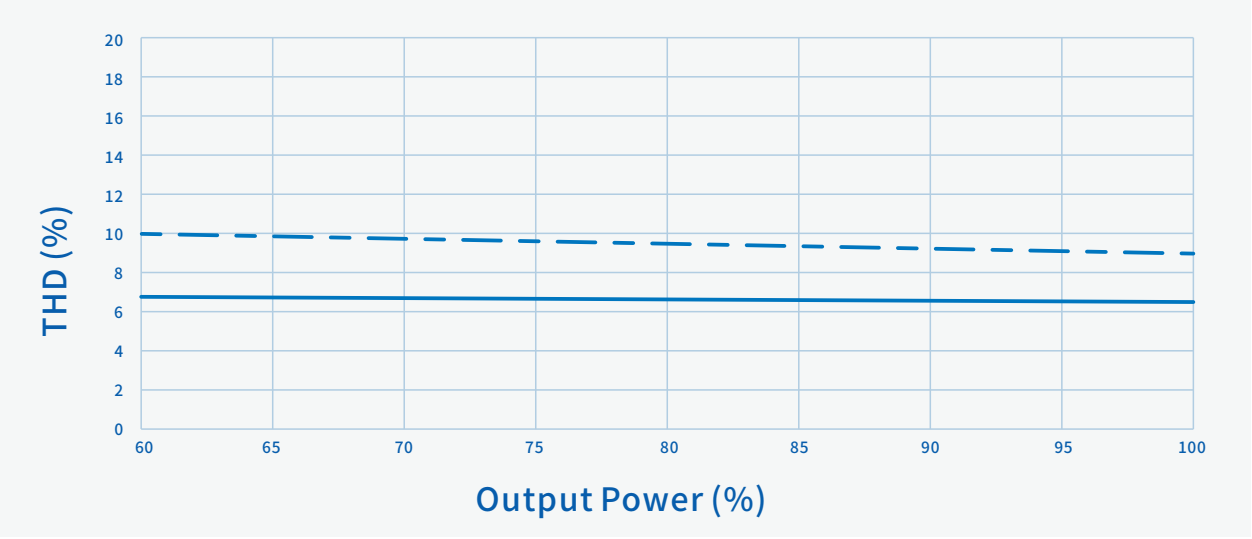
Performance Curves:

Power Factor Vs. O/P Power



THD Vs. O/P Power



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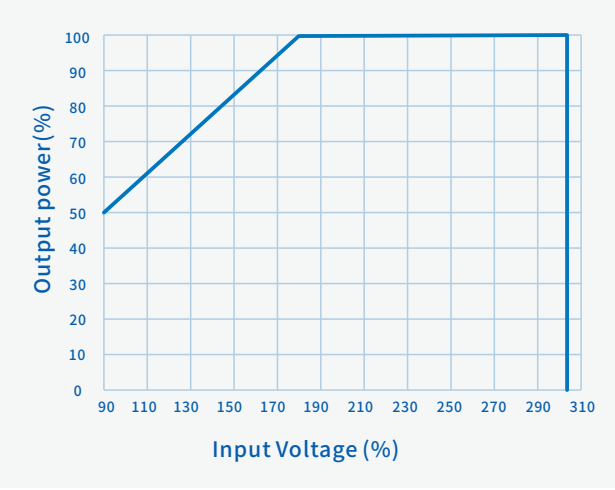
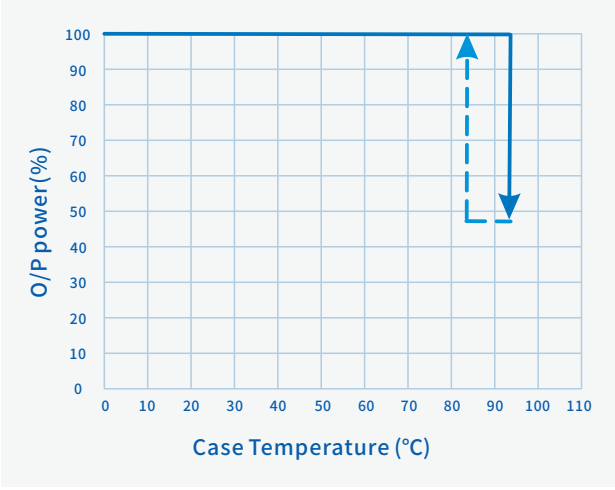
Performance Curves:

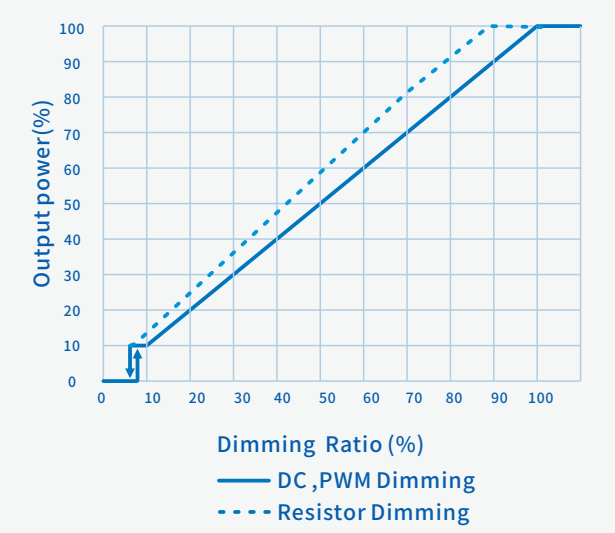
O/P Power Vs. Input Voltage (Automatic derate)



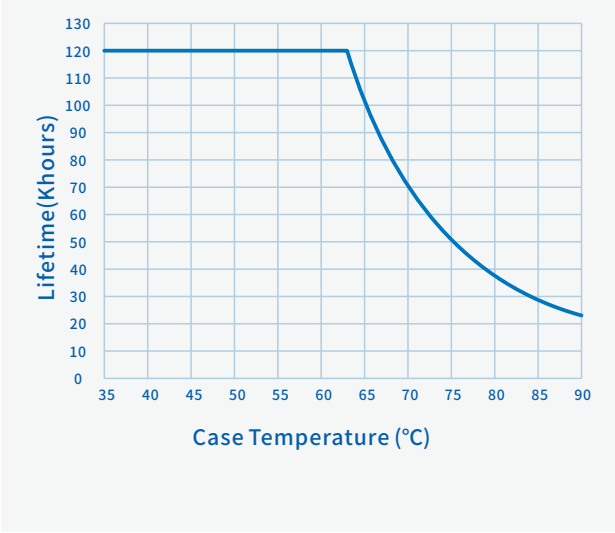
O/P Power Vs. Case Temperature



O/P Power Vs. Dimming



Life Time Vs. Case Temperature



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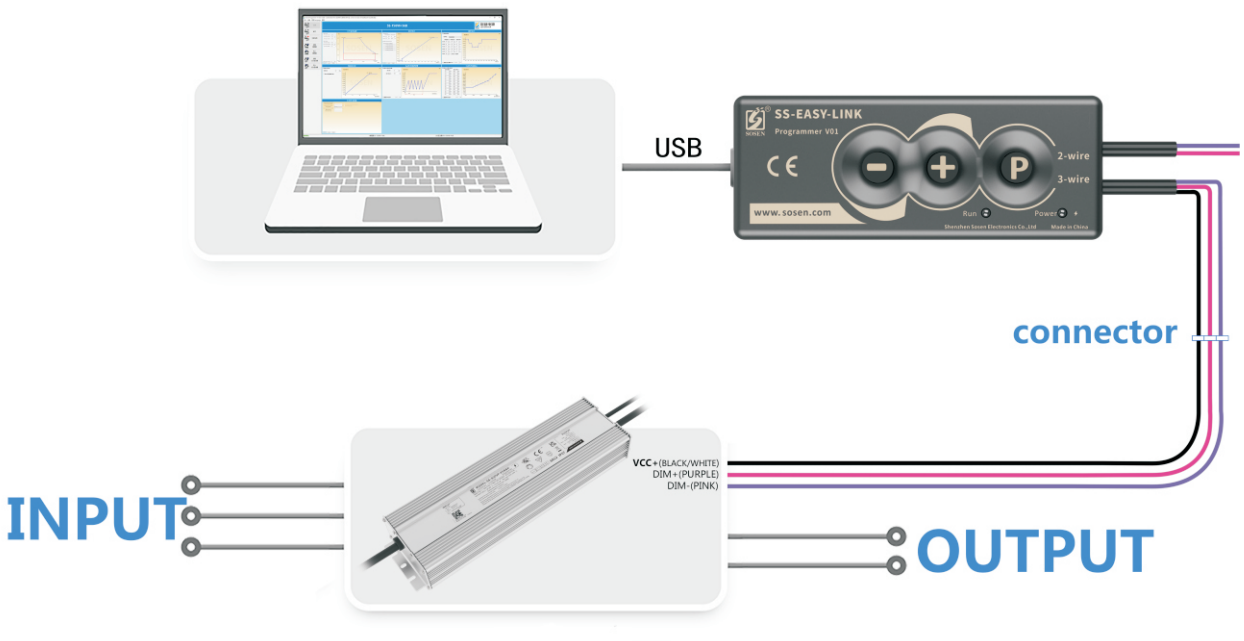
Programming Connection Diagram:

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.



Note:

Programming could be completed by off-line mode either without turn on the Driver nor without PC, other than the traditional on-line mode.

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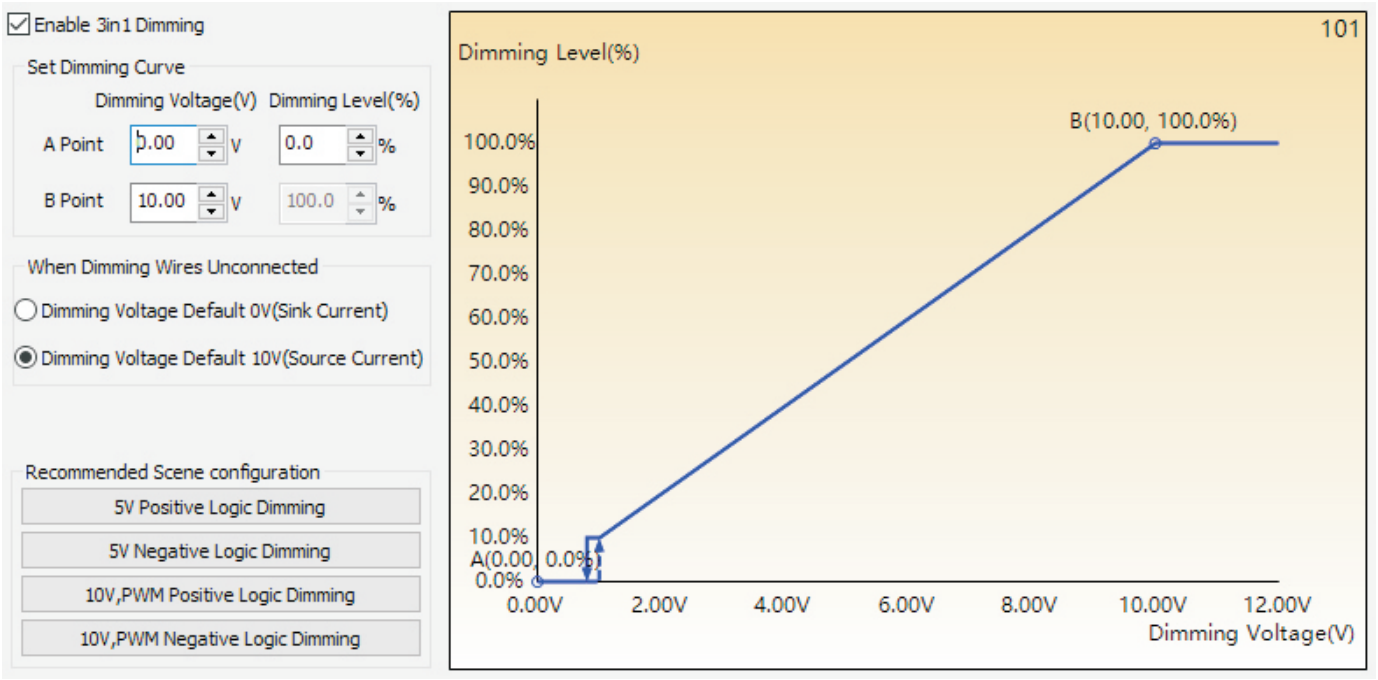
Parameter			Remark
Default setting	Positive logic dimming (0-10V)	Dimming voltage default 10V (source current)	
	Negative logic dimming (10-0V)	Dimming voltage default 0V (sink current)	
Dimming optional function	Positive logic dimming (0-10V)	Dimming voltage default 0V (sink current) Resistance dimming not available	When the dimming wire is not connected, the LED driver output is the minimum (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)

Note:
Select "Dimming voltage defaults to 10V (source current)" / "Dimming voltage defaults to 0V (sink current)", which needs to be set according to the dimmer used by the end user.

Settings Interface



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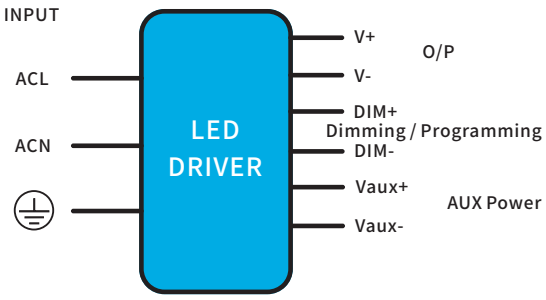
SS-800VP-G Series LED Driver

Mechanical Characteristics



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*16AWG,O.D: 8.5mm,Black:L,White:N,Green: ⏚
UL model: SJTW,3*18AWG,O.D: 7.5mm,Black:L,White:N,Green: ⏚

DC O/P Cable(Exposed Length 250±10mm):

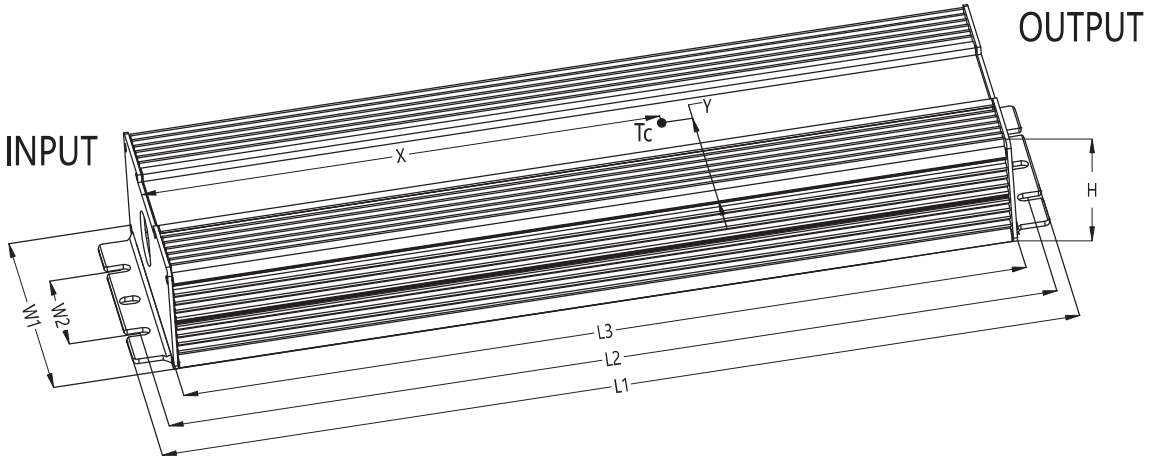
Global model: SJOW, 2*14AWG, O.D: 8.8mm, Brown: V+, Blue: V-
UL model: SJTW, 2*14AWG, O.D: 9.0mm, Red: V+, Black: V-

BHmodel DIM/AUX Power/Programming Cable (Exposed Length 220±10mm):

UL model: 21996, 4*22AWG , O.D: 5.6mm, Purple: DIM+, Pink: DIM-, Black/White: Vaux+, Blue/White: Vaux-

Name Description	Standard Code	mm(In.)
Overall Length	L1	325(12.79)
Mounting Hole Length	L2	312(12.28)
Case Length	L3	297(11.69)
Case Width	W1	89.5(3.52)
Mounting Hole Width	W2	40(1.57)
Case Height	H	44.5(1.75)
TC Point Position	X	85(3.34)
TC Point Position	Y	40(1.57)

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±2mm



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Assembly Tips

1. When the dimmer line is not in use, please seal the dimmer line connector with an insulating sleeve, so as not to string into the interfering signals resulting in damage to the dimmer line and affecting the normal operation of the power supply.

Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 5PCS/Carton;
- Net weight/Piece: 2.5kg;Gross weight/Carton: 13.5kg;
- 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	2024/11/20	
V01	Updating the number of packages	2025/02/20	

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