

SOSEN LED Driver, Your Smart Choice

Specifications

SS-1000VP-E Series LED Driver

Model: SS-1000VP-EXX

Description: 1000W LED Driver

Rev.: V00

Release Date: 2025-03-20

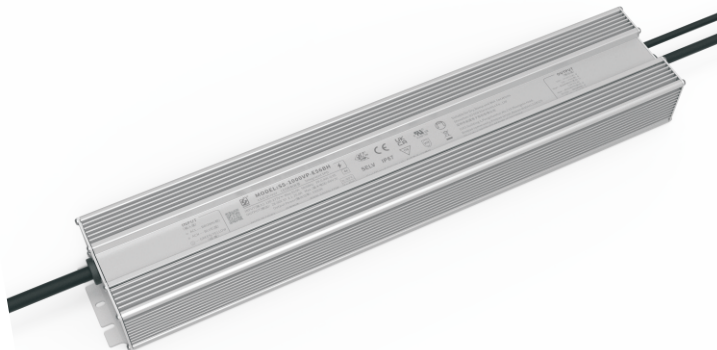
SS-1000VP-E Series LED Driver

SOSEN
LED DRIVER



LED DRIVER

VP-E Series



Features:

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



Description:

SS-1000VP-E series are 1000W 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:

Plant lighting, Stadium lighting, Square lighting, Fish lighting

Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vout Range	Iout	THD(Typ.)	PF(Typ.)	Eff.(Typ.)	Max.Tc
SS-1000VP-E56*	90-305Vac	1000W	28-56V	48-56V	2.1-20.8A	10%	0.95	95%	90°C

Note:

1.Default Tested: at 230Vac, 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;

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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	120Vac		277Vac	
AC Input Range	90Vac		305Vac	Reference Derating Curve
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			12A	120Vac, full load
Max Input Power			1200W	120Vac, full load
Max Inrush Current(120Vac)			60A	Cold Start
Max Inrush Current(230Vac)			80A	Cold Start
Max Inrush Current(277Vac)			110A	Cold Start
Standby Power			0.5W	230Vac/50Hz, Dim to off
Power Factor	0.95	0.97		230Vac/50Hz, full load
	0.90			120-277Vac/50Hz, 70-100% load
THD		8%	10%	230Vac/50Hz, full load
			20%	120-277Vac/50Hz, 70-100% load

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O/P Characteristics(SS-1000VP-E56*):

Parameter	Min.	Typ.	Max.	Remark
O/P Voltage Range	28V		56V	Power Derated @28-48V
Rated O/P Voltage	48V		56V	$P_o = V_o \cdot I_o = 1000W$, full load
Rated O/P Current	17.8A		20.8A	20.8A for 48V, 17.8A for 56V
Adj. O/P Current (AOC) Range	2.1A		20.8A	By Programming
No Load Voltage			60V	
Efficiency @120Vac	91.0%	92.5%		O/P 56V/17.8A
Efficiency @230Vac	93.0%	95.0%		O/P 56V/17.8A
Efficiency @277Vac	94.0%	95.5%		O/P 56V/17.8A
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	120Vac, Full load
			0.5S	230Vac, Full load
Line Regulation	-2%		+2%	Full load
Load Regulation	-2%		+2%	
Temperature Coefficient	-0.03%/°C		+0.03%/°C	Tc: 0°C~90°C
OTP	90°C	93°C	110°C	> Tc typ., Current Derating < Tc min., Operates Recovery
Short Circuit Protection				Driver not be damaged, Hiccup mode

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Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
AUX Power	O/P Voltage	10.8V	12V	13.8V	Peak Power:6W
	O/P Current	0mA	200mA		
0-10V Dimming Positive logic (Optional)	Dim Vcc	0V		12V	Negative dimming by programming Dimming prohibits reverse connection. DIM+ source current 110uA .
	Dim Range	10%loset		100%loset	
	Rec.Dim Range	0V		10V	
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	0Kohm		100Kohm	Negative dimming by programming
	Dim Range	10%		100%	DIM+ source current 110uA .
0-10V Dim to Off	Dim off Voltage	0.7V	0.8V	0.9V	By DC voltage, PWM, resistance dimming ratio
	Dim on Voltage	0.8V	0.9V	1.0V	By DC voltage, PWM, resistance dimming ratio
Life Time(Tc≤75°C)		50,000 hours			80% Load
MTBF		202,300 hours			230Vac,full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP67			
Tc		90°C			
Warranty		5 years			Tc: 75°C
Net Weight		3700g			
Dimension		461mm*89.5mm*49mm			L x W x H

NOTE: 1,All the parameters above are tested Ta 25°C 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.

SS-1000VP-E Series 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/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	230V
	FCC Part 15 Subpart B; ANSI C63.4:2014	120Vac:class A
Radiation Emission	EN55015:2013+A1:2015	230V
	FCC Part 15 Subpart B; ANSI C63.4:2014	120Vac: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
Ring Wave	IEC/EN 61000-4-12	DM: 6kV,CM: 6kV,Criterion B

SS-1000VP-E Series LED Driver

Safety Test Items:

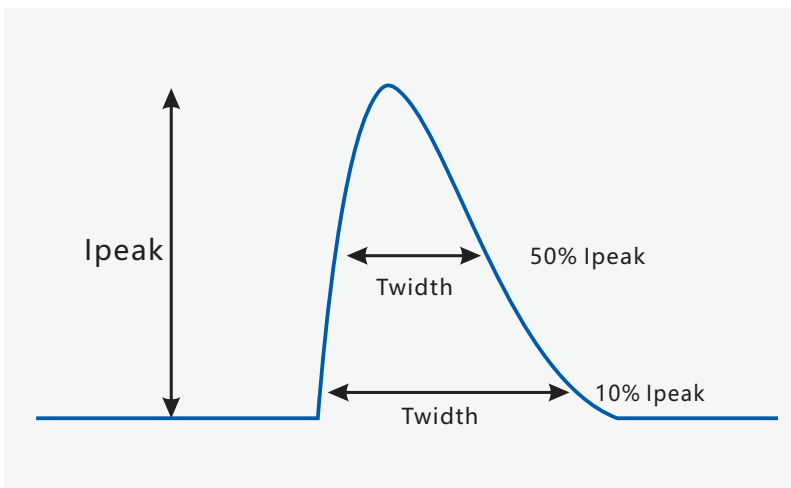
Safety Test Items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	ENEC Insulation Requirements	
Input-O/P	2U+1000Vac	4U+2000Vac	
Input-Case	2U+1000Vac	2U+1000Vac	
Input-Dim	2U+1000Vac	4U+2000Vac	
O/P-Dim	500Vac	500Vac	
O/P-Case	500Vac	500Vac	
Dim-Case	500Vac	500Vac	
Insulation Resistance	$\geq 10\text{M}\Omega$		Input-O/P, Test voltage: 500Vdc
Ground Resistance	$\leq 0.1\Omega$		25A/1min
Leakage Current	$\leq 0.75\text{mA}$		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

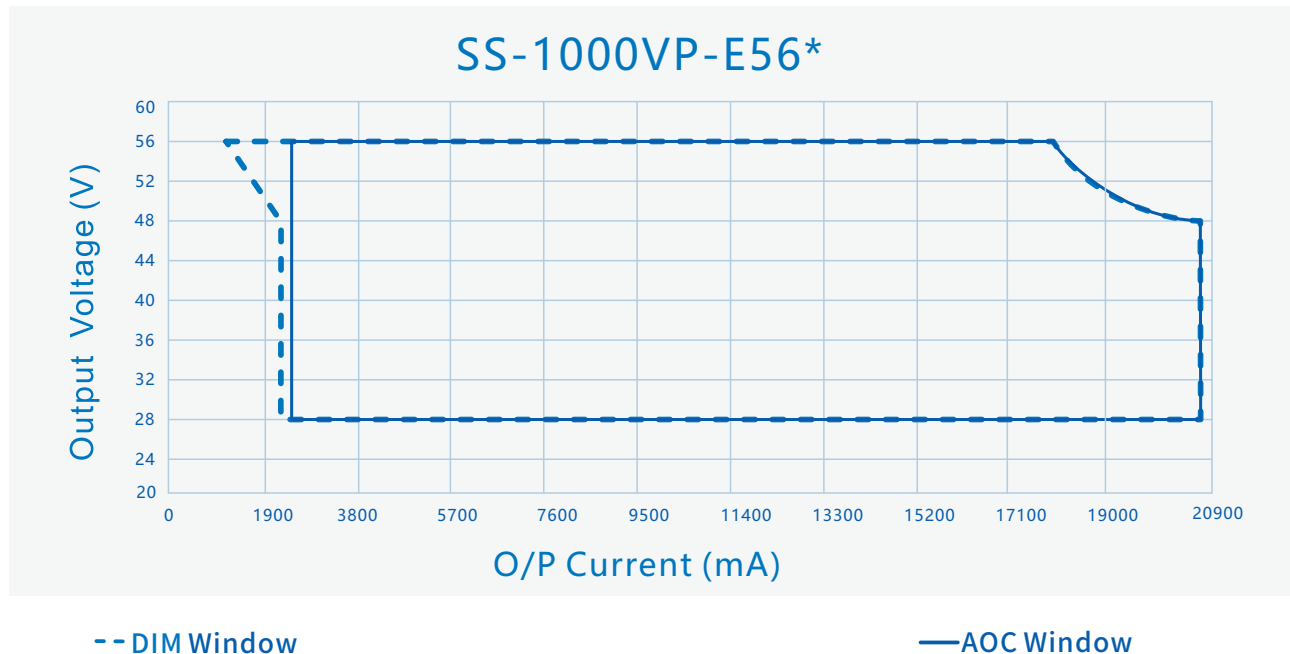


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
120Vac	60A	3500uS	1500uS
230Vac	80A	3500uS	1500uS
277Vac	110A	3300uS	1500uS

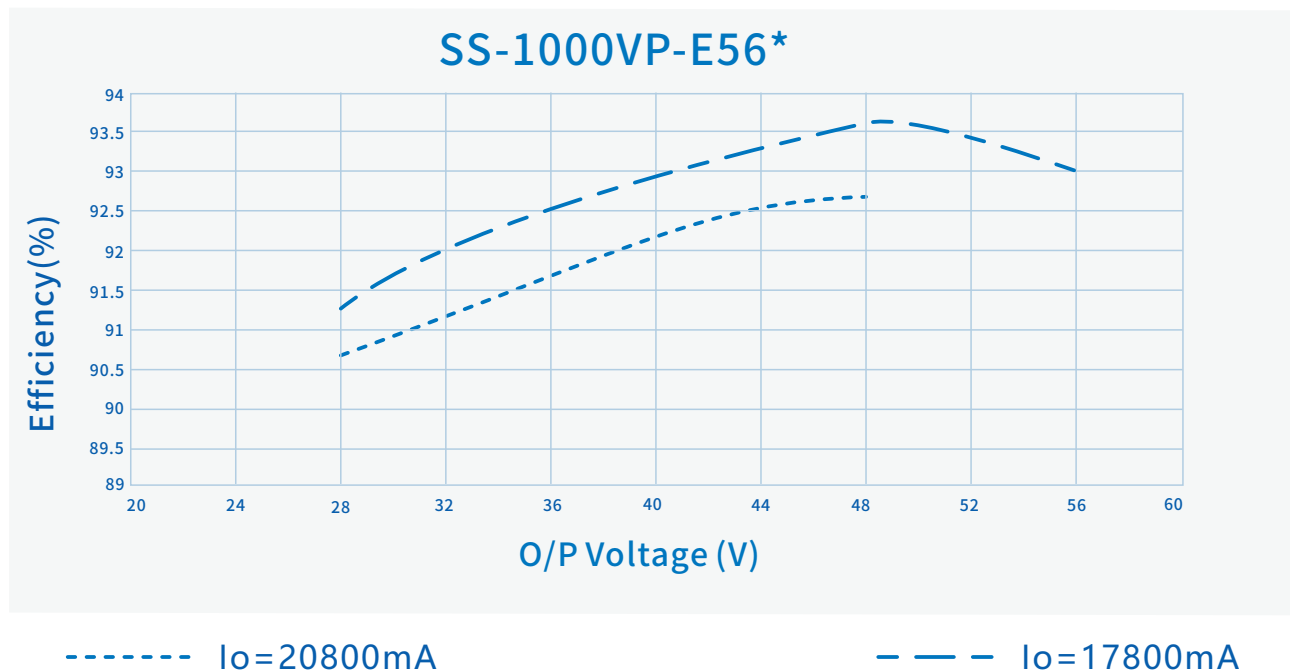
SS-1000VP-E Series LED Driver

Performance Curves:SS-1000VP-E56*

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



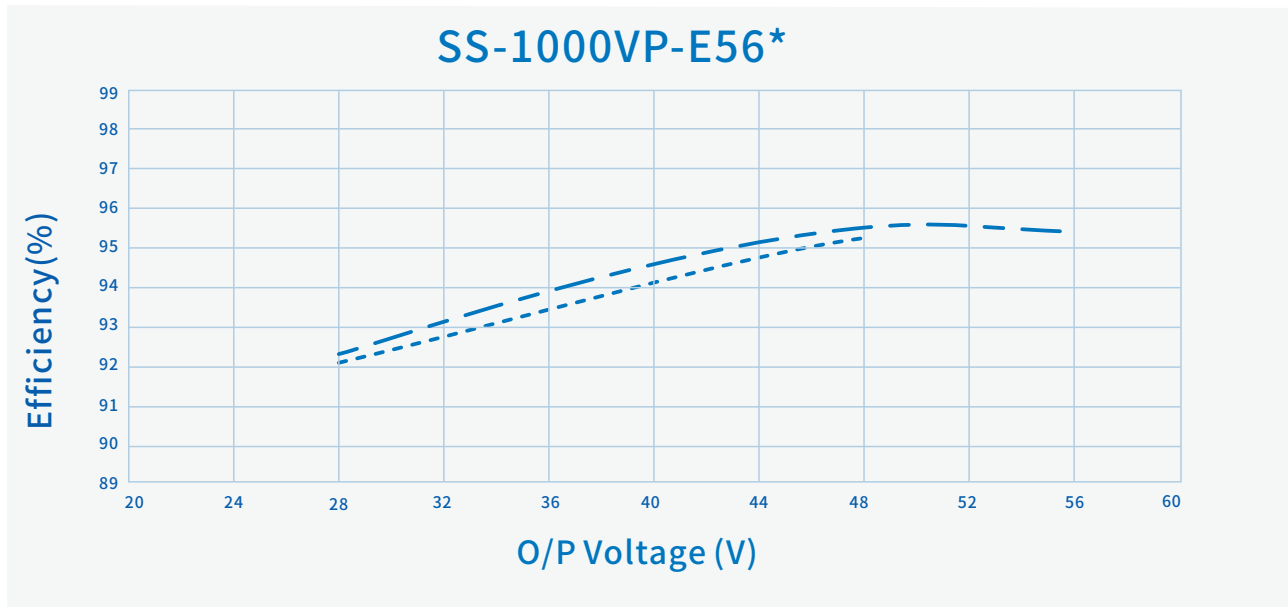
Efficiency Vs. O/P Voltage (Vin=120Vac)



SS-1000VP-E Series LED Driver

Performance Curves:SS-1000VP-E56*

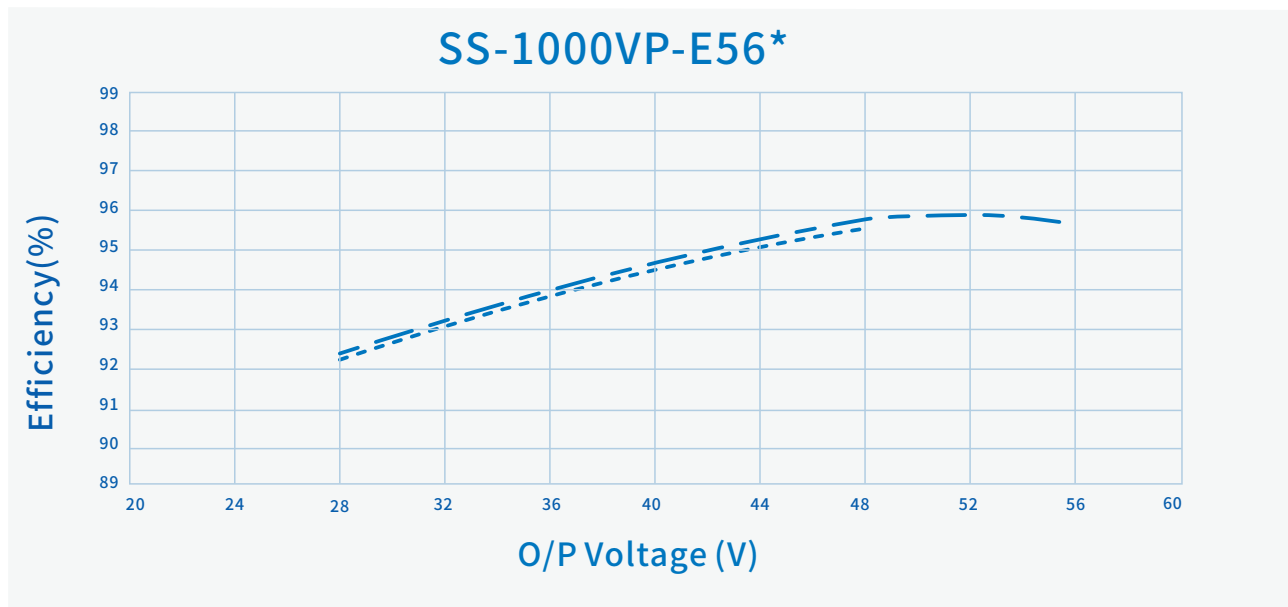
Efficiency Vs. O/P Voltage (Vin=230Vac)



----- Io=20800mA

- . - Io=17800mA

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



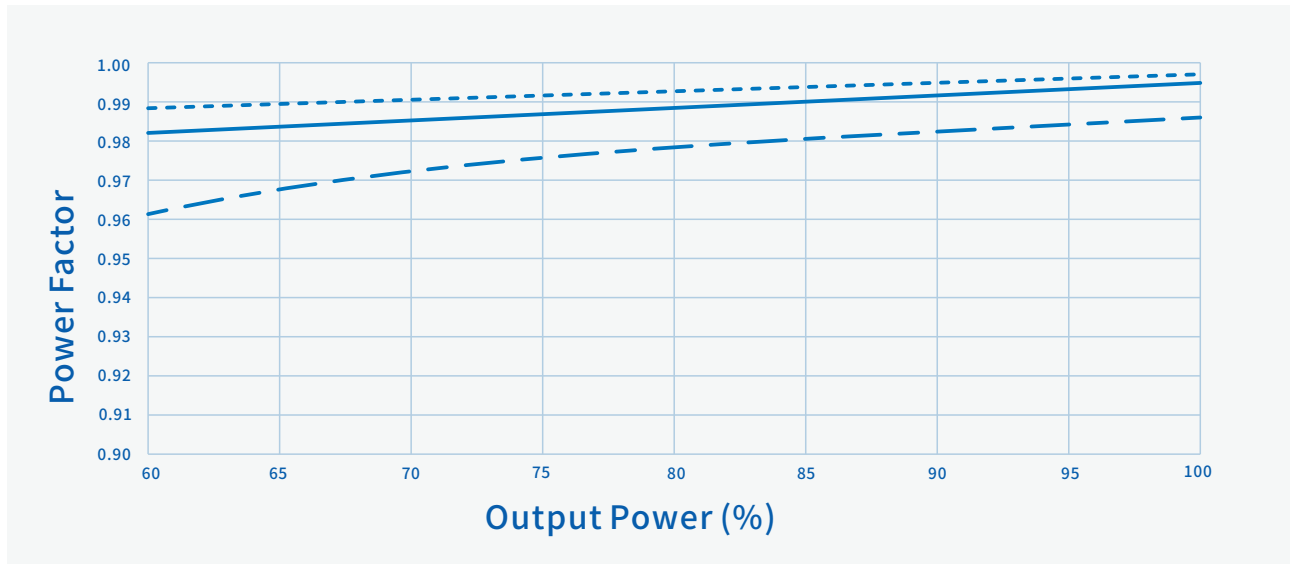
----- Io=20800mA

- . - Io=17800mA

SS-1000VP-E Series LED Driver

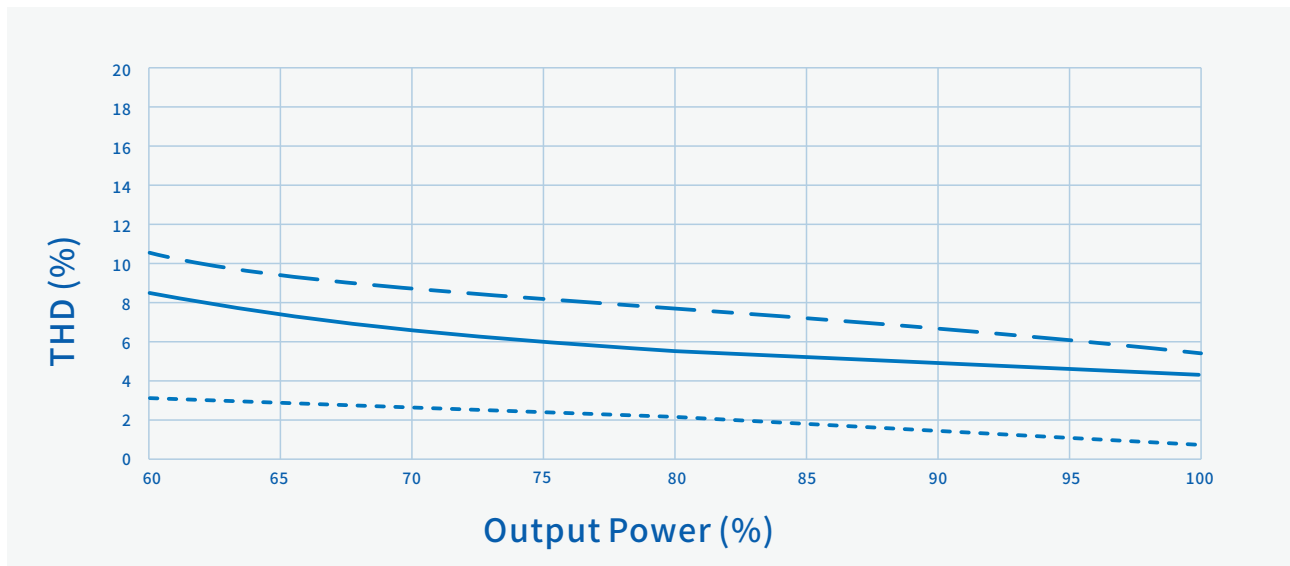
Performance Curves:SS-1000VP-E56*

Power Factor Vs. O/P Power



----- Vin=120Vac ————— Vin=230Vac - . - . Vin=277Vac

THD Vs. O/P Power

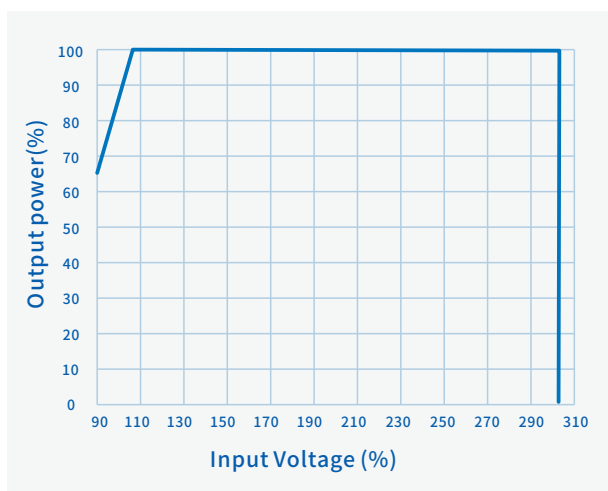


----- Vin=120Vac ————— Vin=230Vac - . - . Vin=277Vac

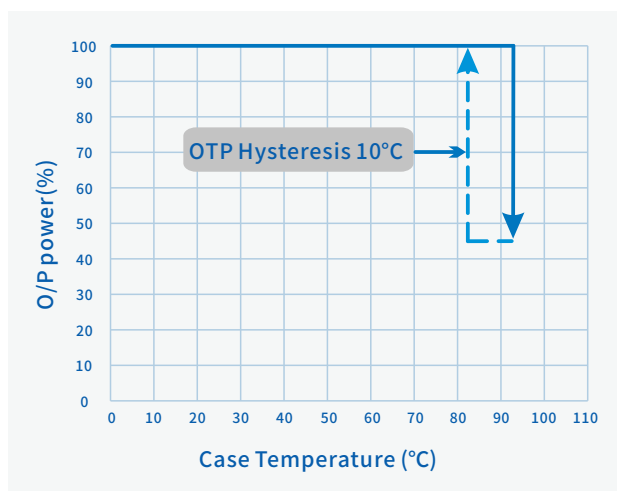
SS-1000VP-E Series LED Driver

Performance Curves:SS-1000VP-E56*

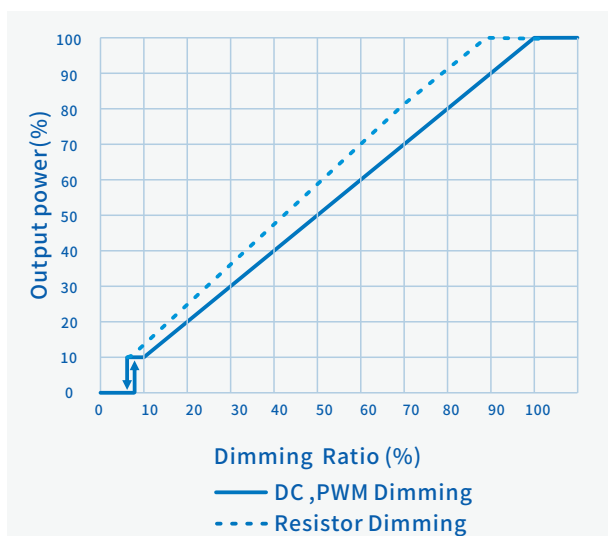
O/P Power Vs. Input Voltage
(Automatic Derating)



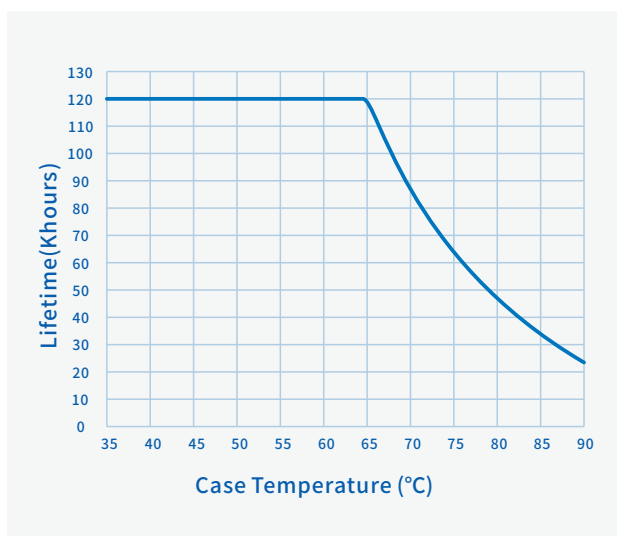
O/P Power Vs. Case Temperature



O/P Power Vs. Dimming



Life Time Vs. Case Temperature



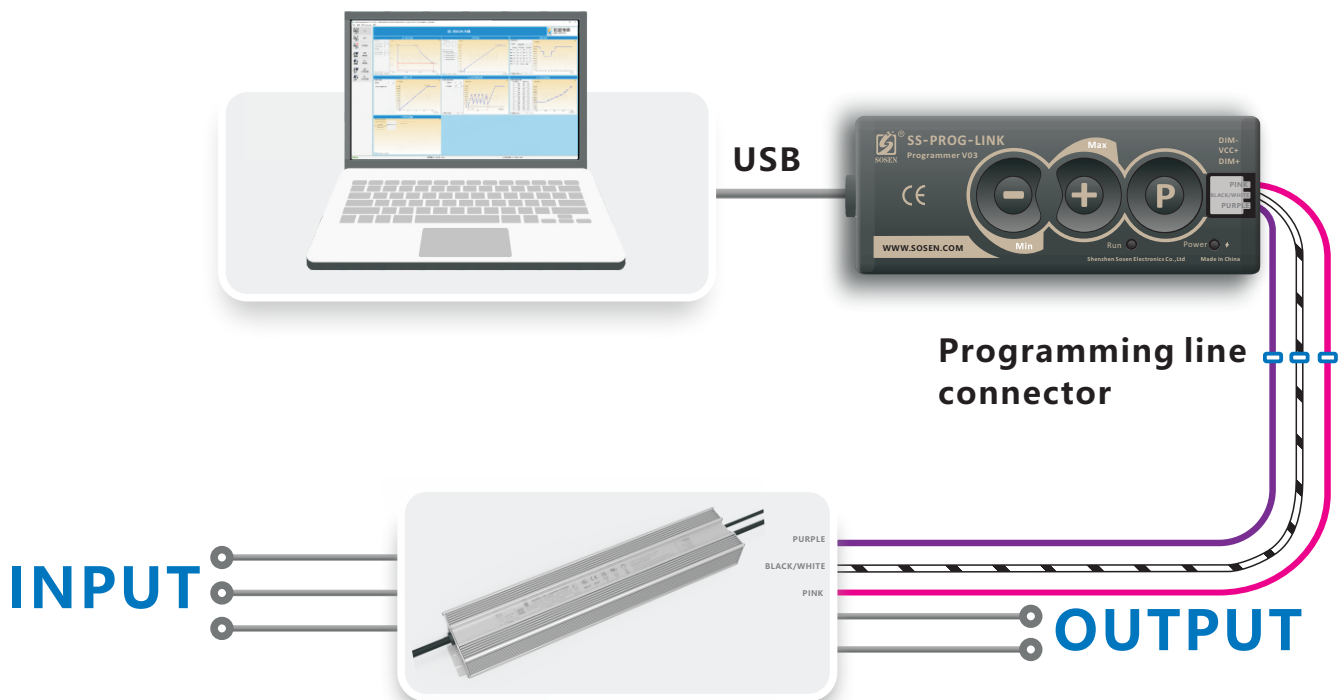
SS-1000VP-E Series LED Driver

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.



Constant Lumen Output(DH model)

Constant Lumen Output are design to maintain fixture's stable output lumen by increasing driver's output current within driver's life span to counteract LED lumen degradation.

SS-1000VP-E Series LED Driver

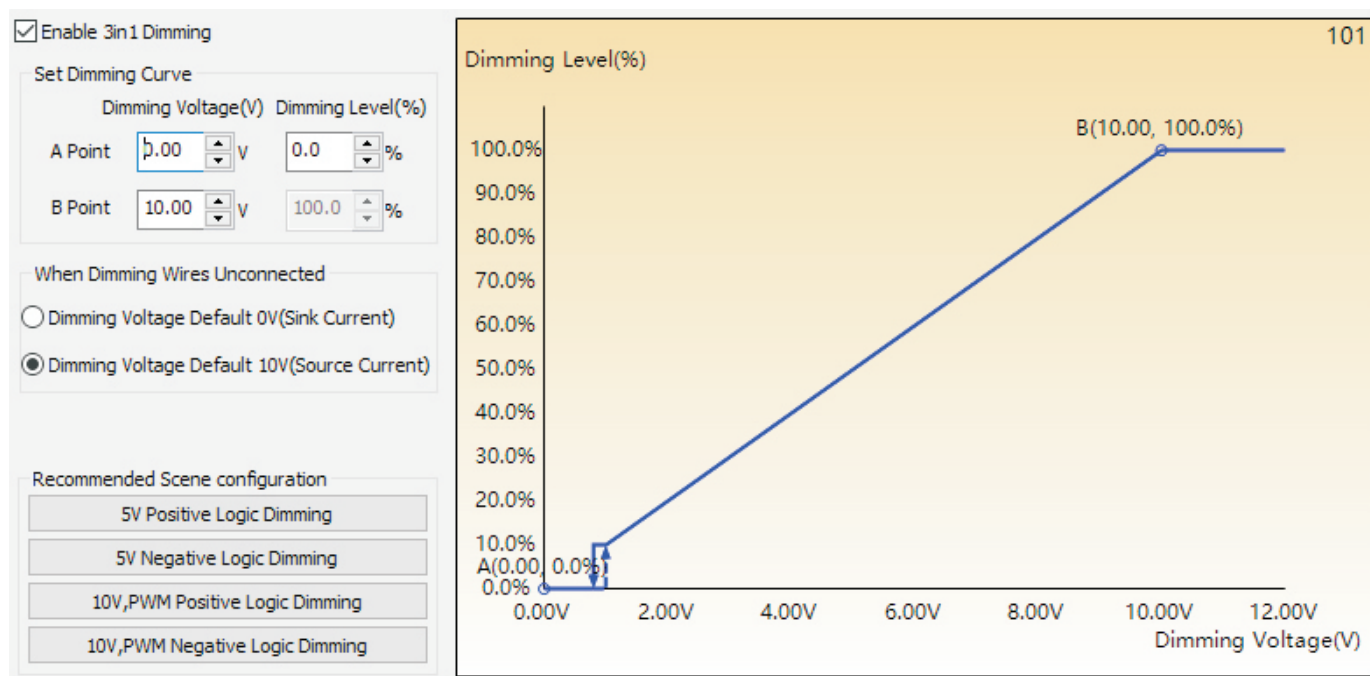
Dimming parameter settings

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)	When the dimming wire is not connected, the LED driver output is the minimum (to be noted in the order)
		Resistance dimming not available	For parallel dimming applications with multiple LED drivers, it is recommended to use the sink current mode (to be noted in the order)

Note:

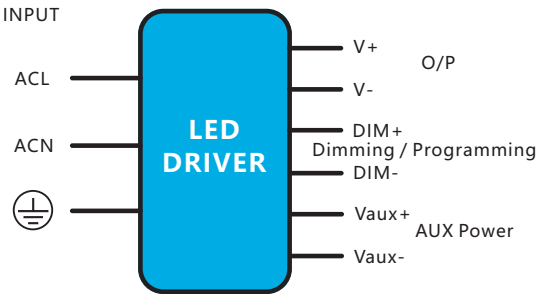
Select "Dimming voltage defaults to 10V (source current)" / "Dimming voltage defaults to 0V (sink current)", which needs to be set according to the dimmer used by the end user.

Settings Interface



SS-1000VP-E 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: ⊕

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

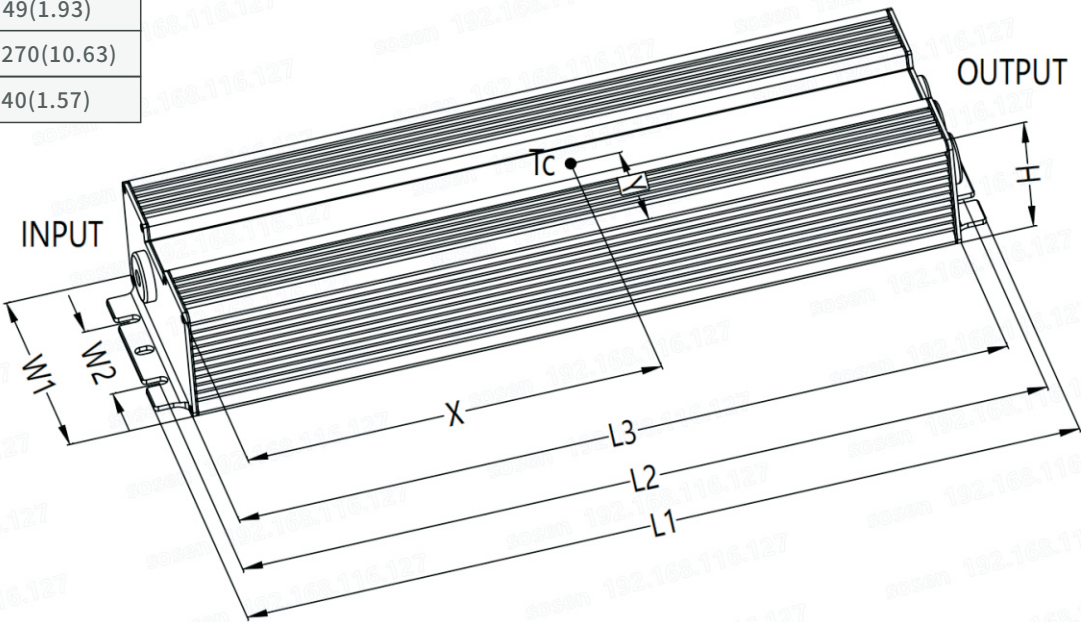
Global model: SJOW, 2*12AWG, O.D: 10.7mm, Black: V+, White: V-
UL model: SJTW, 2*12AWG, O.D: 9.2mm, Black: V+, White: V-

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	461(18.15)
Mounting Hole Length	L2	447(17.6)
Case Length	L3	436(17.16)
Case Width	W1	89.5(3.52)
Mounting Hole Width	W2	40(1.57)
Case Height	H	49(1.93)
TC Point Position	X	270(10.63)
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



SS-1000VP-E Series LED Driver



Assembly Tips

1. Please take isolation and waterproof measures if the dimming cable is not in use.

Package

- Outside carton dimension: $L \times W \times H = 577\text{mm} \times 385\text{mm} \times 162\text{mm}$;
- 5PCS/Carton;
- Net weight/Piece: 3.70kg; Gross weight/Carton: 20kg;
- 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	2025/03/20	