

# SOSEN LED Driver, Your Smart Choice

## Specifications

### SS-75VH Series LED Driver

Model: SS-75VH-XXX

Description: 75W LED Driver

Rev.: V07

Release Date: 2026-01-05

# SS-75VH Series LED Driver

**SOSEN**  
LED DRIVER



**LED DRIVER**

**VH Series**



## Features:

- Efficiency up to 91%
- Isolated dimming: 0-10V, PWM, Resistor
- Timing and Negative logic programmable
- Communication Function With PC
- IP67
- Protections: SCP/OTP/OVP/OPP
- Type HL, suitable for hazardous locations
- Surge protection: CM: 10kV, DM: 6kV
- Warranty: 8 years



**CE CB IP67 RoHS**

## Description:

VH series are constant current LED Driver with wide O/P voltage range and adjustable O/P current by program. LED luminaires manufactures can easily design luminaires and reduce cost.

### Applications:

High Pole lighting, High bay lighting, Stadium lighting, Plant lighting, Street lighting, Fish lighting, Stage lighting, Tunnel lighting

## Model List:

| Model       | AC Input Range | Max. Pout | Vout Range | Full Power Vo Range | Iout      | Default Current | THD(Typ.) | PF(Typ.) | Eff.(Typ.) | Max.Tc |
|-------------|----------------|-----------|------------|---------------------|-----------|-----------------|-----------|----------|------------|--------|
| SS-75VH-56B | 90-305Vac      | 75W       | 28-56V     | 36-56V              | 0.35-2.1A | 1.4A            | 8%        | 0.97     | 90%        | 90°C   |

Note:

1. Default Tested: at 220Vac, 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-75VH Series LED Driver

## Input Characteristics(SS-75VH-56B):

| Parameter                  | Min.   | Typ.    | Max.   | Remark                        |
|----------------------------|--------|---------|--------|-------------------------------|
| Rated AC Input Range       | 100Vac |         | 277Vac |                               |
| AC Input Range             | 90Vac  |         | 305Vac |                               |
| Input Frequency Range      | 47Hz   | 50/60Hz | 63Hz   |                               |
| Max Input Current          |        |         | 0.9A   | 100Vac, Full load             |
| Max Input Power            |        |         | 88W    | 100Vac, Full load             |
| Max Inrush Current(120Vac) |        |         | 70A    | Cold start                    |
| Max Inrush Current(220Vac) |        |         | 140A   | Cold start                    |
| Max Inrush Current(277Vac) |        |         | 185A   | Cold start                    |
| No Load Power              |        |         | 5W     | 220Vac/50Hz, No load          |
| Power Factor               | 0.95   | 0.97    |        | 220Vac/50Hz, Full load        |
|                            | 0.90   |         |        | 100-277Vac/50Hz, 70-100% load |
| THD                        |        | 8%      | 10%    | 220Vac/50Hz, Full load        |
|                            |        |         | 20%    | 100-277Vac/50Hz, 70-100% load |

# SS-75VH Series LED Driver

## O/P Characteristics(SS-75VH-56B):

| Parameter                    | Min.      | Typ.  | Max.      | Remark                                                   |
|------------------------------|-----------|-------|-----------|----------------------------------------------------------|
| O/P Voltage Range            | 28V       |       | 56V       | Power derated @28-36V                                    |
| Rated O/P Voltage            | 36V       |       | 56V       | $P_o = V_o \cdot I_o = 75W$ , Full load                  |
| Rated O/P Current            | 1.34A     |       | 2.1A      | 2.1A for 36V, 1.34A for 56V                              |
| Adj. O/P Current (AOC) Range | 0.35A     |       | 2.1A      | AOC by programming                                       |
| No Load Voltage              |           |       | 60V       |                                                          |
| Efficiency @120Vac           | 87.0%     | 89.0% |           | O/P 56V/1.34A                                            |
| Efficiency @220Vac           | 88.0%     | 90.0% |           | O/P 56V/1.34A                                            |
| Efficiency @277Vac           | 88.5%     | 90.5% |           | O/P 56V/1.34A                                            |
| 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      | 220Vac, 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      | 100°C | 110°C     | >Tc Typ., Current derating<br><Tc Min., Current recovery |
| Short Circuit Protection     |           |       | 10W       | Driver will not be damaged,<br>Hiccup mode               |

# SS-75VH Series LED Driver

## Other Characteristics:

| Parameter                             |               | Min.            | Typ.  | Max.      | Remark                                                                                                                                                                       |
|---------------------------------------|---------------|-----------------|-------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0-10V Positive Dimming (Configurable) | Dim Vmax      | 0V              |       | 12V       | DIM+ source current 110uA.<br>Dimming prohibits reverse connection<br>Configurable to 0-5V                                                                                   |
|                                       | Dim Range     | 10%Iomax        |       | 100%loset |                                                                                                                                                                              |
|                                       | Rec.Dim Range | 0V              |       | 10V       |                                                                                                                                                                              |
| 10-0V Negative Dimming (Configurable) | Rec.Dim Range | 0V              |       | 10V       | DIM+ sink current I <sub>max</sub> 40uA.<br>Dimming prohibits reverse connection<br>Configurable to 5-0V                                                                     |
| PWM Dimming (Optional)                | PWM High      | 9.8V            |       | 10.2V     | DIM+ source current 110uA.<br>Dimming prohibits reverse connection                                                                                                           |
|                                       | PWM Low       | 0V              |       | 0.3V      |                                                                                                                                                                              |
|                                       | Frequency     | 1KHz            |       | 2KHz      |                                                                                                                                                                              |
|                                       | PWM Duty      | 0%              |       | 100%      |                                                                                                                                                                              |
| Resistor Dimming (Optional)           | Resistance    | 0Kohm           |       | 100Kohm   | Not available with negative logic                                                                                                                                            |
|                                       | Dim Range     | 10%Iomax        |       | 100%loset | DIM+ source current 110uA .                                                                                                                                                  |
| 0-10V Dim to Off                      | Dim off       | 0.7V            | 0.8V  | 0.9V      | If the led is less than maximum rated output voltage of 75%,the luminaries may possibly have slight light when dim-to-off. Thus the whole lighting system needs to be tested |
|                                       | Dim on        | 0.8V            | 0.95V | 1.2V      |                                                                                                                                                                              |
| 10-0V Dim to Off                      | Dim off       | 8.9V            | 9.0V  | 9.3V      |                                                                                                                                                                              |
|                                       | Dim on        | 8.7V            | 8.9V  | 9.4V      |                                                                                                                                                                              |
| Timing Curve(Optional)                |               | By programming  |       |           | Set by program                                                                                                                                                               |
| Lifetime(Tc≤78°C)                     |               | ≥75,000 hours   |       |           | 80% load                                                                                                                                                                     |
| MTBF                                  |               | 201,000 hours   |       |           | 220Vac,Full load, Ta=25°C (MIL-HDBK-217F)                                                                                                                                    |
| IP                                    |               | IP67            |       |           |                                                                                                                                                                              |
| Tc                                    |               | 90°C            |       |           |                                                                                                                                                                              |
| Warranty                              |               | 8 years         |       |           | Tc: 78°C                                                                                                                                                                     |
| Net Weight                            |               | 620g            |       |           |                                                                                                                                                                              |
| Dimension                             |               | 145mm*66mm*35mm |       |           | L x W x H                                                                                                                                                                    |

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

# SS-75VH 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 |      | 95%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<br>EN 61347-2-13:2014<br>EN 61347-2-13:2014/A1:2017                                                                                       | ✓      |        |
| UKCA          | EN 61347-1:2015+A1:2021<br>EN 61347-2-13:2014+A1:2017<br>EN 62493:2015<br>BS EN 61347-1:2015+A1:2021<br>BS EN 61347-2-13:2014+A1:2017<br>BS EN 62493:2015 |        |        |
| EAC           | EN 61347-2-13:2014<br>EN61347-1:2008+A1:2011+A2:2013<br>TP TC 004/2011<br>TP TC 020/2011                                                                  |        |        |
| RCM           | AS/NZS61347.2.13                                                                                                                                          | ✓      |        |
| CCC           | GB 19510.14-2009                                                                                                                                          | ✓      |        |
| CE            | EN 61347-2-13:2014<br>EN61347-1:2008+A1:2011+A2:2013                                                                                                      | ✓      |        |

| EMI/EMS                    | Criterion                            | Remark                       |
|----------------------------|--------------------------------------|------------------------------|
| Conduction Emission        | EN IEC 55015:2019+A11:2020           |                              |
| Radiation Emission         | EN IEC 55015:2019+A11:2020           |                              |
| Harmonic Current Emissions | IEC/EN 61000-3-2:2019+A1:2021        | 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;ANSI/C82.77-5-2017 | DM: 6kV,CM: 6kV,Criterion B  |

# SS-75VH Series LED Driver

## Safety Test Items:

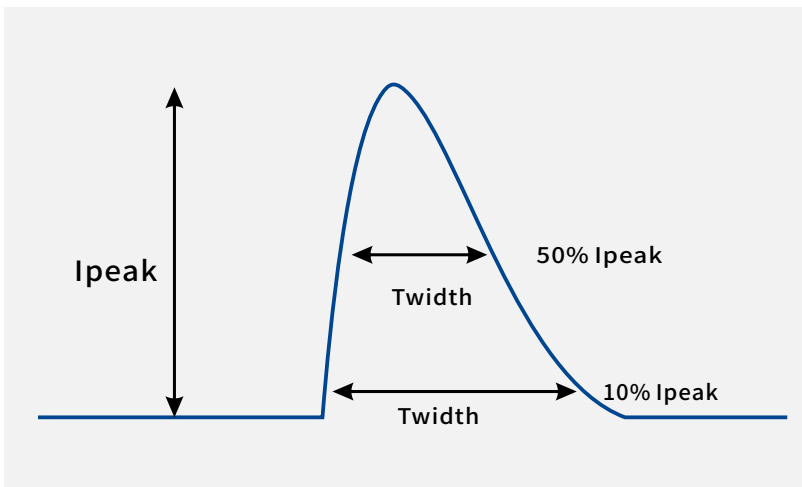
| Safety Test Items       | Technical Indicators       |                              |                             | Remark                             |
|-------------------------|----------------------------|------------------------------|-----------------------------|------------------------------------|
| Insulation Requirements | UL Insulation Requirements | ENEC Insulation Requirements | CCC Insulation Requirements |                                    |
| Input-Output            | 1600Vac                    | 3000Vac                      | 3750Vac                     | Reinforced insulation              |
| Input-Case              | 1600Vac                    | 1500Vac                      | 1875Vac                     | Basic insulation                   |
| Input-Dim               | 1600Vac                    | 3000Vac                      | 3750Vac                     | Reinforced insulation              |
| Output-Dim              | 1600Vac                    | 1000Vac                      | 1000Vac                     | Basic insulation                   |
| Output-Case             | 500Vac                     | 1000Vac                      | 1000Vac                     | Basic insulation                   |
| Dim-Case                | 500Vac                     | 250Vac                       | 500Vac                      | Basic insulation                   |
| Insulation Resistance   | $\geq 10\text{M}\Omega$    |                              |                             | Input-Output, 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 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

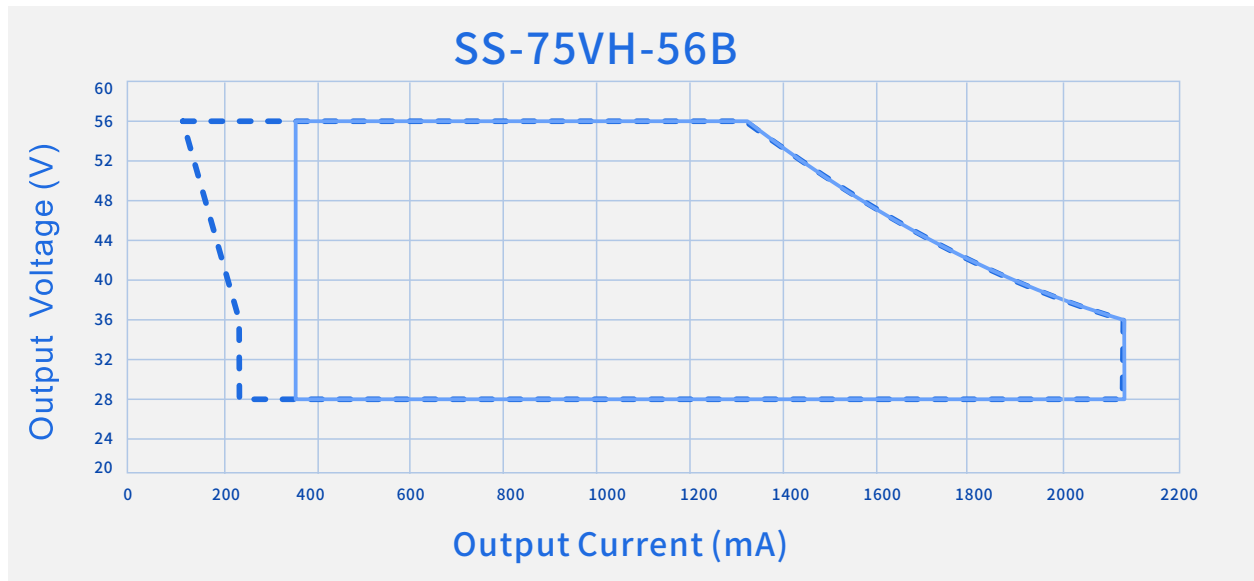


| $V_{in}$ | $I_{peak}$ | $T(@10\% \text{ of } I_{peak})$ | $T(@50\% \text{ of } I_{peak})$ |
|----------|------------|---------------------------------|---------------------------------|
| 120Vac   | 70A        | 210 $\mu$ S                     |                                 |
| 220Vac   | 140A       |                                 | 90 $\mu$ S                      |
| 277Vac   | 185A       | 100 $\mu$ S                     |                                 |

# SS-75VH Series LED Driver

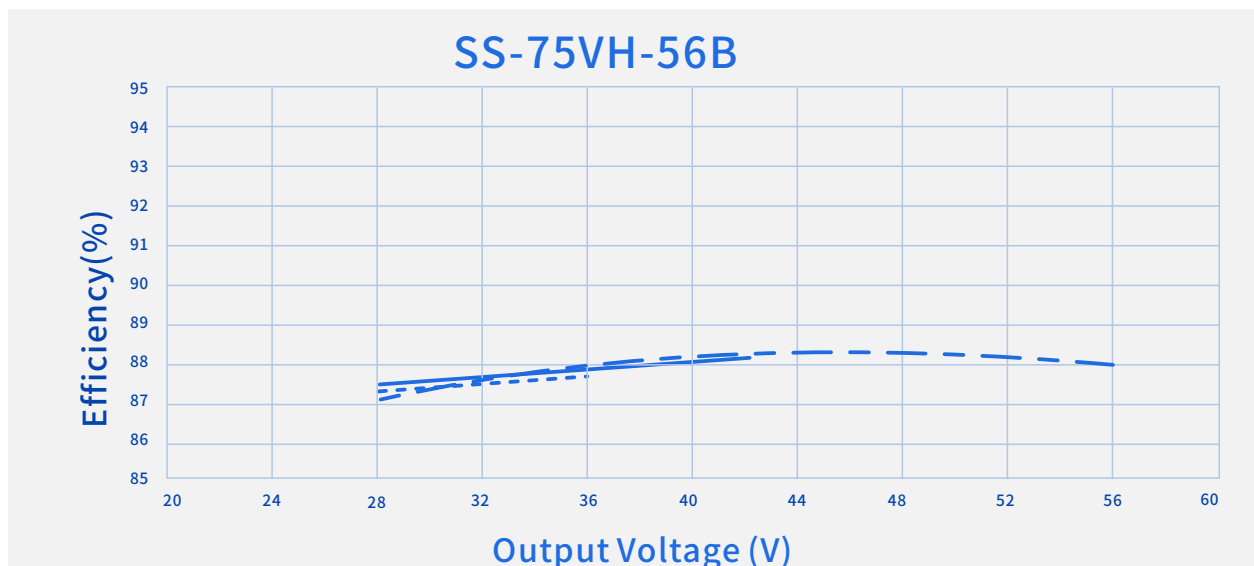
## Performance Curves:

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



----- Dimming Window      ————— AOC Window

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



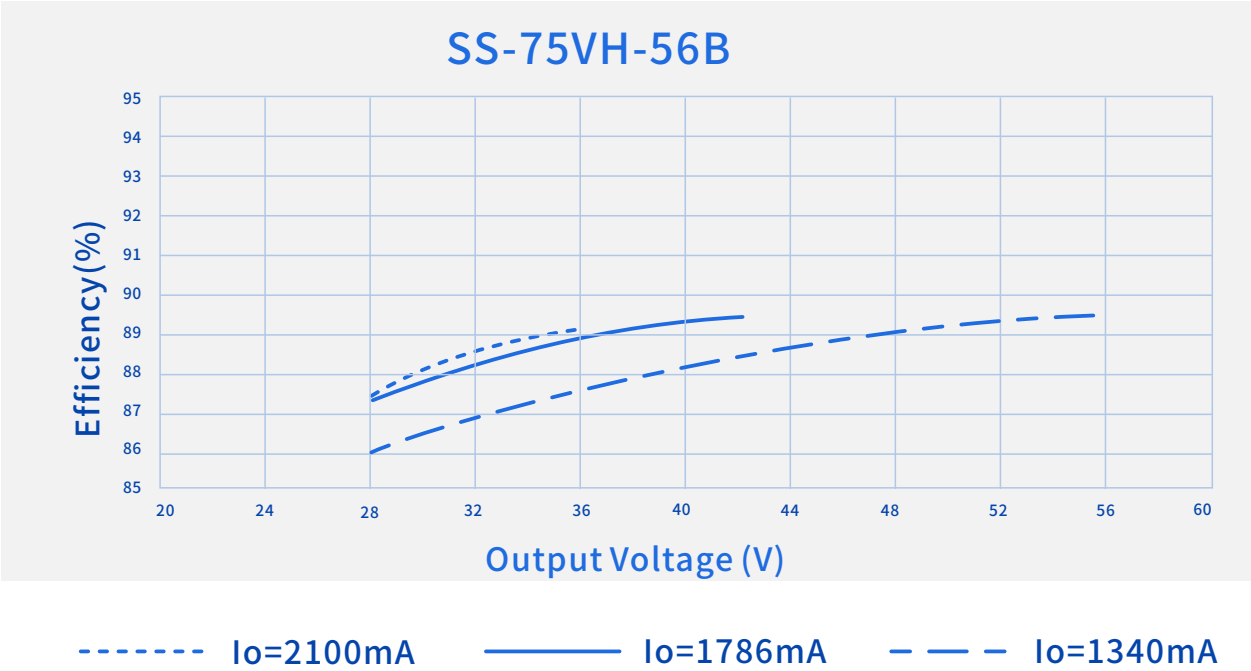
----- Io=2100mA      ————— Io=1786mA      - - - Io=1340mA



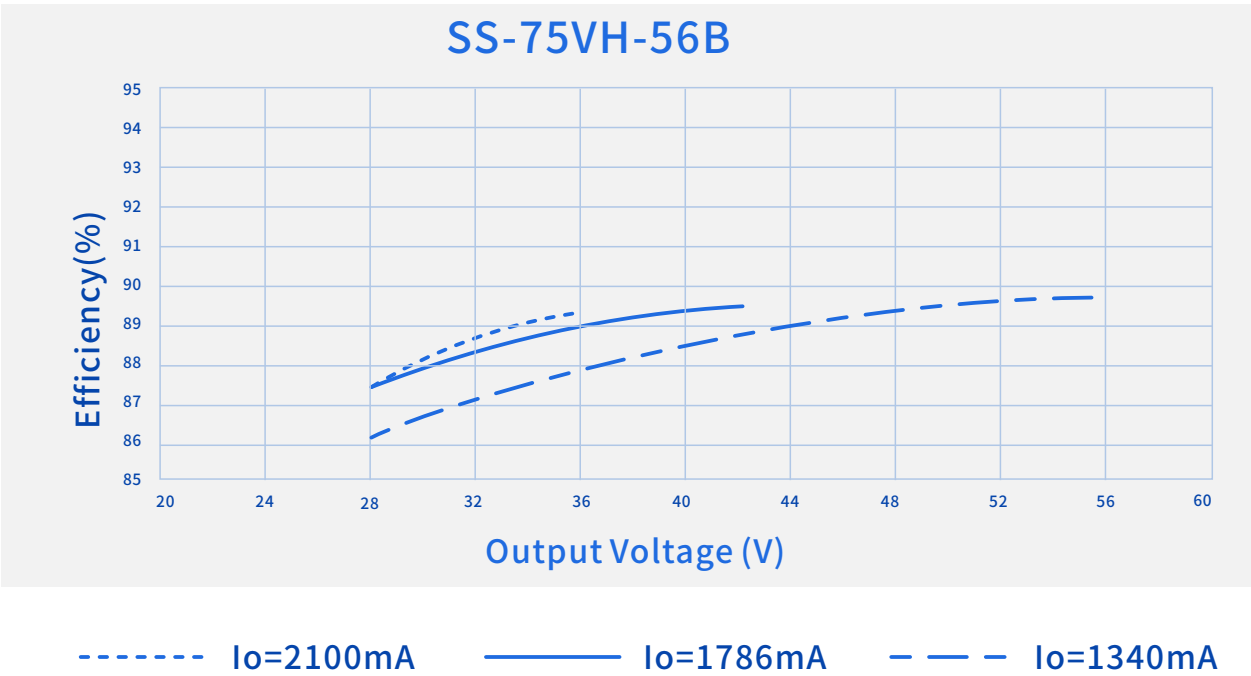
# SS-75VH Series LED Driver

## Performance Curves:

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



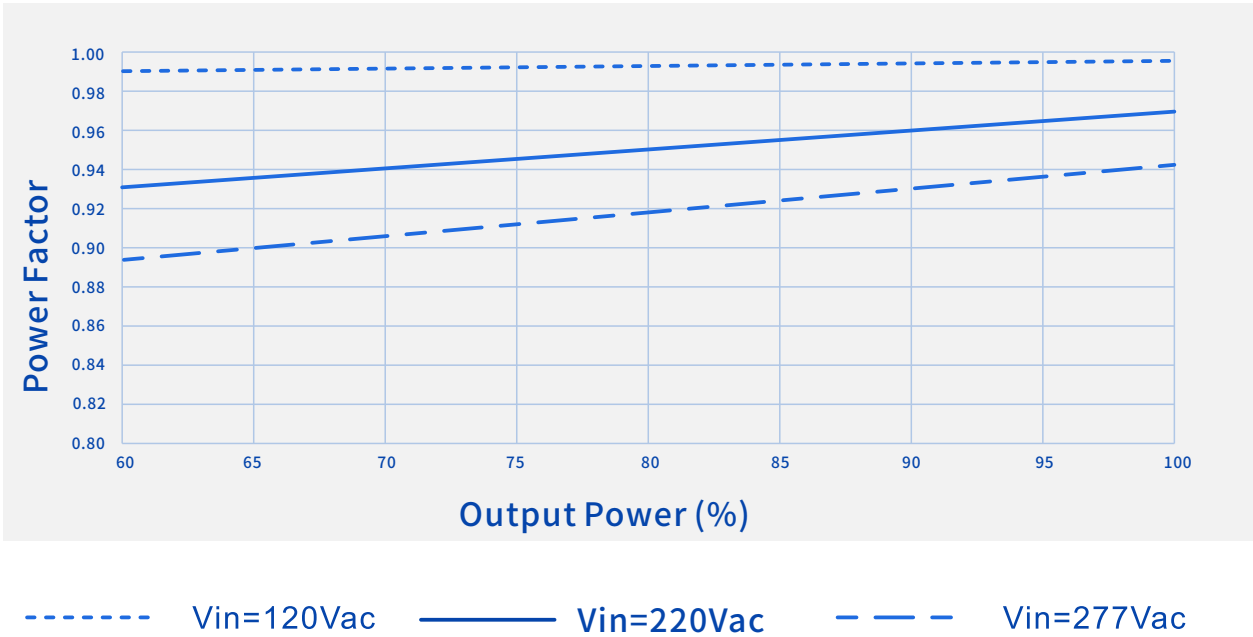
Efficiency Vs. O/P Voltage (Vin=277Vac)



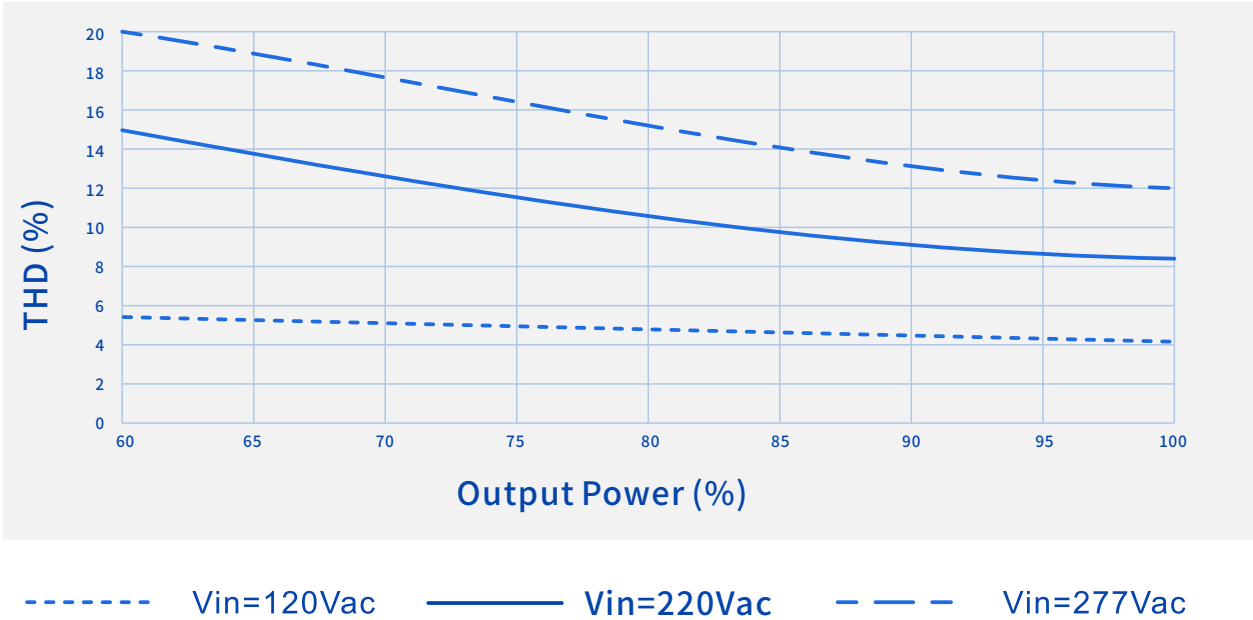
# SS-75VH Series LED Driver

## Performance Curves:

Power Factor Vs. O/P Power



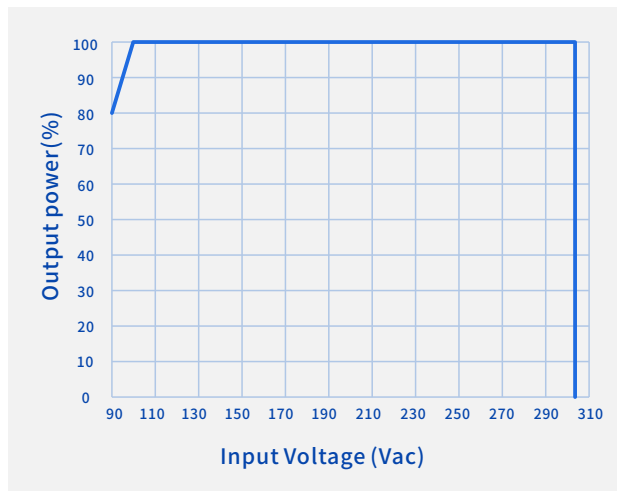
THD Vs. O/P Power



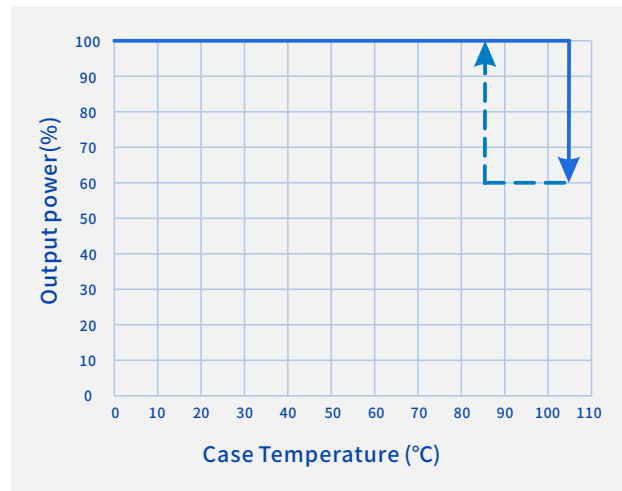
# SS-75VH Series LED Driver

## Performance Curves:

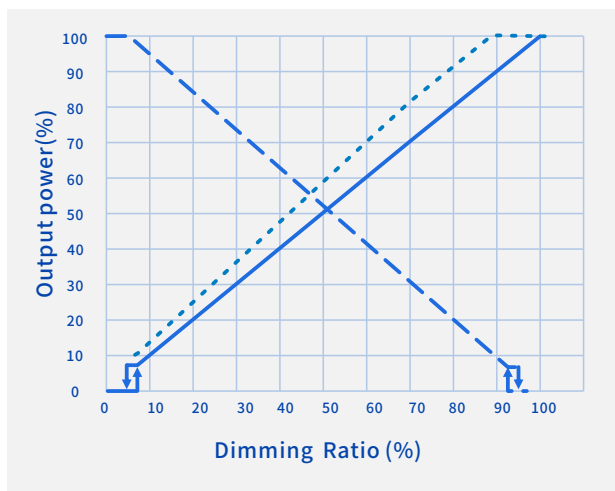
O/P power Vs. Input Voltage  
(Ta Max.55°C)



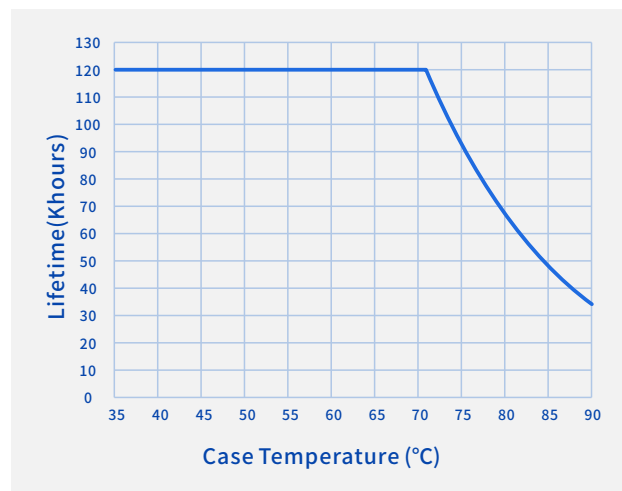
O/P power Vs. Case Temperature



O/P Power Vs. Dimming



Lifetime Vs. Case Temperature



- 0-10V, 0-5V, PWM
- - - 10-0V, 5-0V
- .... Resistor Dimming(100KΩ)

# SS-75VH Series LED Driver

## Constant Lumen Output

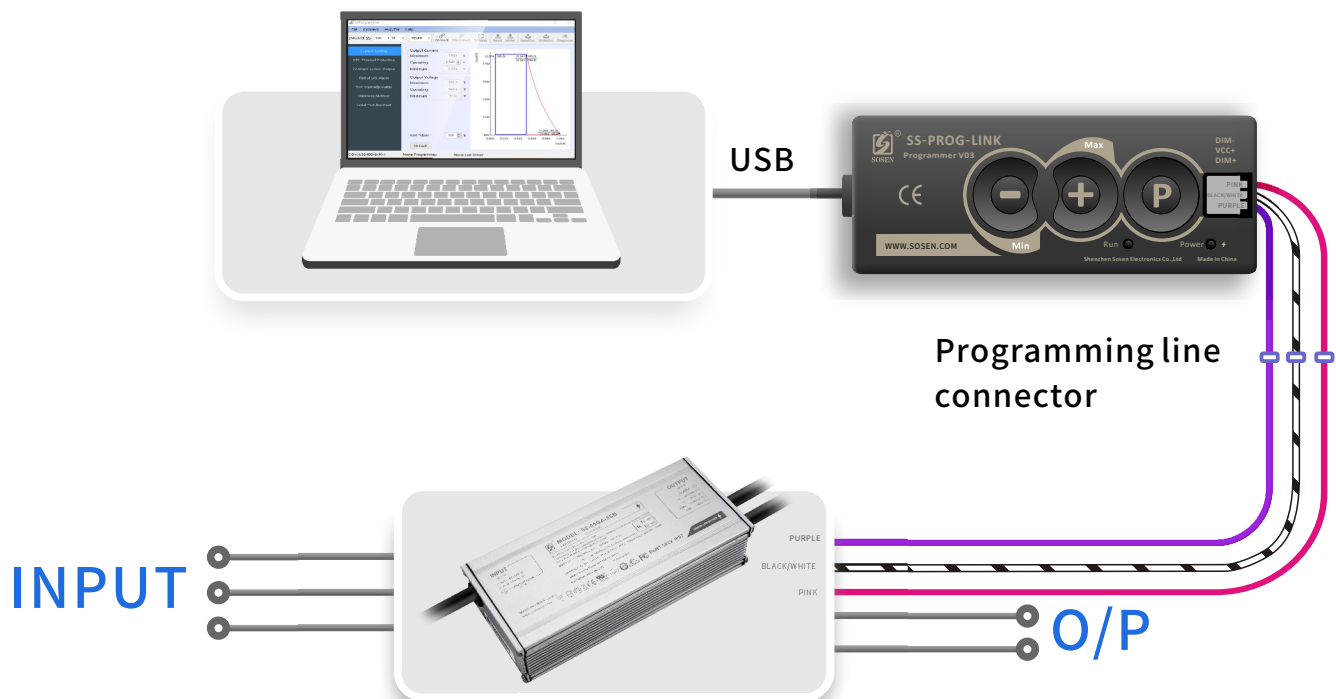
Constant Lumen Output are design to maintain fixture's stable output lumen by increasing driver's output current within driver's life span to counteract LED lumen degradation.

## 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.

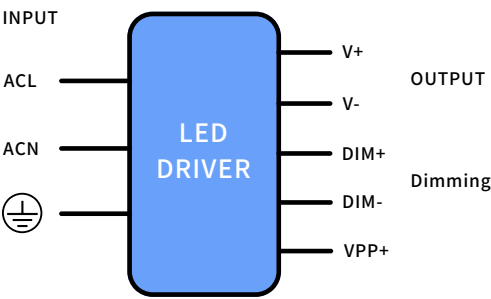


### Note:

For details, please refer to the Sosen SS-PROG-LINK Programmer Manual.

# SS-75VH Series LED Driver

## Mechanical Characteristics



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

UL model: SJTW,3\*18AWG,O.D: 7.8mm,Black:L,White:N,Green: ⊕  
Global model: SJOW,3\*17AWG,O.D: 8.0mm,Brown:L,Blue:N,Yellow/Green: ⊕

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

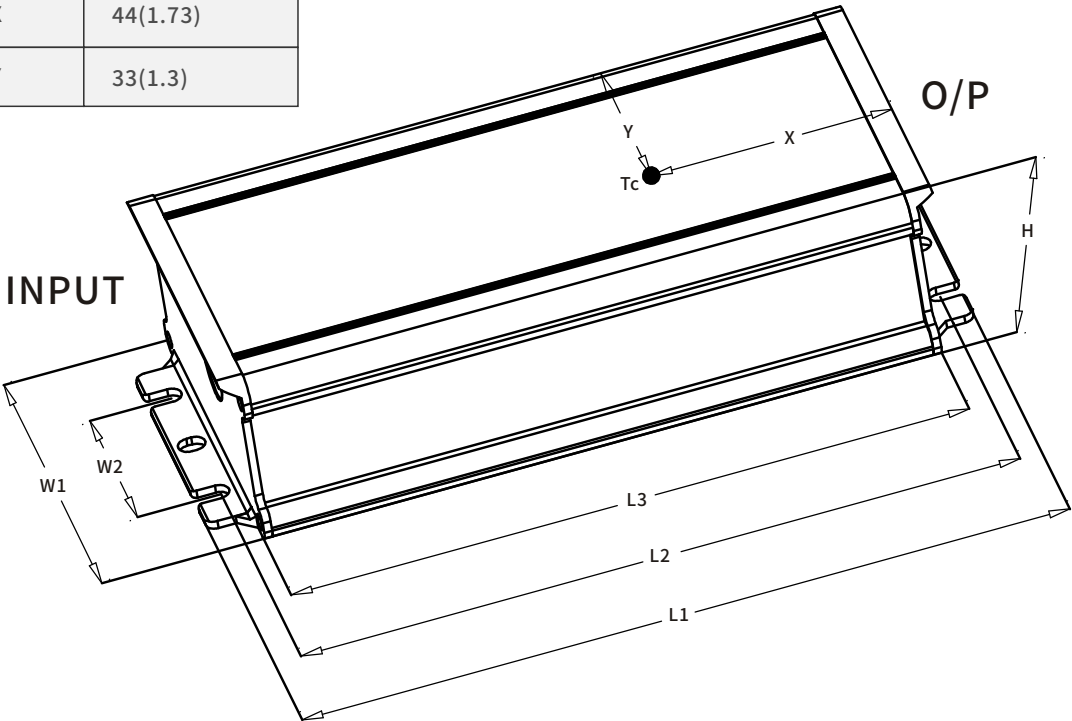
UL model: SJTW,2\*18AW,O.D: 7.3mm,Red:V+, Black:V-  
Global model: SJOW,2\*17AWG,O.D: 7.7mm,Brown:V+, Blue:V-

### DIM Cable(Exposed Length 220±10mm):

UL/EU model: STYLE 21996,3\*22AWG, O.D: 4.9mm, Purple: DIM+, Pink: DIM-, Black/White: VPP+

| Name Description     | Standard Code | mm(In.)   |
|----------------------|---------------|-----------|
| Case Length          | L3            | 128(5.04) |
| Case Width           | W1            | 66(2.6)   |
| Case Height          | H             | 35(1.38)  |
| Overall Length       | L1            | 145(5.71) |
| Mounting Hole Length | L2            | 136(5.35) |
| Mounting Hole Width  | W2            | 32(1.26)  |
| TC Point Position    | X             | 44(1.73)  |
| TC Point Position    | Y             | 33(1.3)   |

- 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-75VH Series LED Driver



## Assembly Tips

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

## Package

- Outside carton dimension:  $L \times W \times H = 495\text{mm} \times 385\text{mm} \times 162\text{mm}$ ;
- 16PCS/Carton;
- Net weight/Piece: 0.62kg; Gross weight/Carton: 11.44kg;
- 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                | 2020/09/01   |        |
| V01     | Update Certification            | 2020/12/23   |        |
| V02     | Update DIM Cable Color          | 2021/09/02   |        |
| V03     | Add Resistance Dimming Function | 2022/03/10   |        |
| V04     | Add SS-75VH-E108B model         | 2022/09/01   |        |
| V05     | Delete SS-75VH-E108B model      | 2022/12/12   |        |
| V06     | Add Page Number                 | 2023/02/01   |        |
| V07     | Update the number of packages   | 2026/01/05   |        |