SOSEN

# SPECIFICATIONS

# SS-150VH-E AUX CC DRIVER

Model: SS-150VH-E AUX

Power: 150W

Rev.: V02

Release date: 2026-09-20



# SS-150VH-E AUX LED DRIVER

## Features

- Efficiency up to 94%
- Output current adjustment method：Dimmer line programming
- Isolated dimming: 0-10V, PWM, Resistor
- AUX Power: 12V/0.2A
- Standby Power<0.5W
- TIM ELA CLO
- Suitable for Class I/II lamps
- Protections: SCP/OTP/OVP/OPP
- Surge protection: CM: 10kV, DM: 6kV
- IP66/IP67
- Warranty: 5 years










**Class P** **IP66** **IP67** **RoHS**

## Description

VH-E Auxiliary Power Series are 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.

Applications:

Street lighting, Tunnel lighting , High Pole lighting, High bay lighting, Stadium lighting, Plant lighting, Fish 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| SS-150VH-E56* | 90-305Vac | 150W | 18-56V | 36-56V | 0.35-4.2A | 3.15A | 8% | 0.97 | 93.5% | 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

| "*" | 0-10V/PWM /Resistor Or 10-0V (suffix:B) | Auxiliary power 12V(suffix:H) | Class I | Class II | Remark |
|---|---|---|---|---|---|
| BH | ✓ | ✓ | ✓ | | |
| BHE | ✓ | ✓ | | ✓ | |

## Input Characteristics

| Parameter | Min. | Typ. | Max. | Remark |
|---|---|---|---|---|
| AC Input Range | 90Vac | 100-277Vac | 305Vac | Reference Derating Curve |
| DC Input Range | 127Vdc | | 300Vdc | |
| Input Frequency Range | 47Hz | 50/60Hz | 63Hz | |
| Max Input Current | | | 1.9A | 100Vac, Full load |
| Max Input Power | | | 180W | 100Vac, Full load |
| Max Inrush Current(120Vac) | | | 34A | Cold start |
| Max Inrush Current(220Vac) | | | 73A | Cold start |
| Max Inrush Current(277Vac) | | | 88A | Cold start |
| 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 | | 56V | Power derated @18-36V |
| Rated O/P Voltage | 36V | | 56V | Po=Vo*Io=150W, Full load |
| Rated O/P Current | 2.7A | | 4.2A | 4.2A for 36V,2.7A for 56V |
| Adj. O/P Current (AOC) Range | 0.35A | | 4.2A | |
| No Load Voltage | | | 60V | |
| Efficiency @120Vac | 88.5% | 90.5% | | Output 48V/3.15A,Test after burn-in |
| Efficiency @220Vac | 91.5% | 93.5% | | Output 48V/3.15A,Test after burn-in |
| Efficiency @277Vac | 92.0% | 94.0% | | Output 48V/3.15A,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 | | | 0.5S | 120-277Vac,Full load |
| Line Regulation | -2% | | +2% | Full load |
| Load Regulation | -2% | | +2% | |
| Temperature Coefficient | | 0.03%/°C | | Tc:0°C~90°C |
| OTP | 90°C | 100°C | 110°C | Drop current when OTP, 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 | O/P Voltage | 10.8V | 12V | 13.2V | |
| | O/P Current | 0mA | | 200mA | |
| | Output Transient Peak Current | | | 500mA | 500mA peak for a maximum duration of 2.2 ms in a 6.0ms period during which time the average should not exceed 250mA. |
| 0-10V 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%Ioset | |
| | Rec.Dim Range | 0V | | 10V | |
| 10-0V Negative Dimming (Configurable) | Rec.Dim Range | 0V | | 10V | DIM+ sink current Imax 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 | DIM+ source current 110uA<br>Not available with negative logic. |
| | Dim Range | 10%Iomax | | 100%Ioset | |
| 0-10V Dim to Off | Dim off | 0.7V | 0.8V | 0.9V | According to the voltage,PWM, resistance dimming ratio. |
| | Dim on | 0.8V | 0.9V | 1.0V | |
| 10-0V Dim to Off | Dim off | 9.0V | 9.2V | 9.4V | |
| | Dim on | 8.8V | 9.0V | 9.2V | |
| Timing Curve(Optional) | | By programming | | | Set by program. |
| Lifetime(Tc≤80°C) | | ≥50,000 hours | | | Full load. |
| MTBF | | 256,000 hours | | | 220Vac,Full load, Ta=25°C (MIL-HDBK-217F) |
| Protection class | | IP66/IP67 | | | |
| Tc | | 90°C | | | |
| Warranty | | 5 years | | | Tc 80°C |
| Net Weight | | 850g | | | |
| Dimension | | 179mm*66mm*37mm | | | 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 | ✓ | Compatible only with the SS-150VH-E56BH |
| CUL | CAN/CSA C22.2 No.250.13 | ✓ | Compatible only with the SS-150VH-E56BH |
| ENEC | EN 61347-1<br>EN 61347-2-13<br>EN IEC 62384 | ✓ | |
| RCM | AS/NZS61347.2.13 | | |
| CCC | GB/T 19510.1<br>GB/T 19510.213 | | |
| CE | EN 61347-1<br>EN 61347-2-13<br>EN 62493 | ✓ | |
| | EN 301 489-1<br>EN 301 489-3<br>EN 300 330<br>EN 62479/EN 50663/EN 50665/EN 50364 | | |
| UKCA | EN 61347-1<br>EN 61347-2-13<br>EN 62493<br>BS EN 61347-1<br>BS EN 61347-2-13<br>BS EN 62493 | ✓ | |
| EAC | EN 61347-2-13<br>EN 61347-1<br>TP TC 004/2011<br>TP TC 020/2011 | ✓ | |

Note: To ensure protection against lightning surges, the housing of BHE models must be reliably grounded.



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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: 8kV,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 |



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## Safety Test Items(BH Model)

| Safety Test Items | Technical Indicators | | | Remark |
|---|---|---|---|---|
| Insulation Requirements | UL Insulation Requirements | ENEC Insulation Requirements | CCC Insulation Requirements | |
| Input-Output | 2U+1000Vac | 4U+2000Vac | 4U+2000Vac | UL Basic insulation, ENEC、CCC Reinforced Insulation |
| Input-Case | 2U+1000Vac | 2U+1000Vac | 2U+1000Vac | Basic insulation |
| Input-Dim | 2U+1000Vac | 4U+2000Vac | 4U+2000Vac | UL Basic insulation, ENEC、CCC Reinforced Insulation |
| Dim-Case | 500Vac | | | Basic insulation |
| Insulation Resistance | ≥10MΩ | | | Test voltage:500Vdc |
| Ground Resistance | ≤0.1Ω | | | 25A/1min |
| Leakage Current | ≤0.75mA | | | 277Vac |

## Safety Test Items(BHE Model)

| Safety Test Items | Technical Indicators | | Remark |
|---|---|---|---|
| Insulation Requirements | ENEC Insulation Requirements | CCC Insulation Requirements | |
| Input-Output | 4U+2000Vac | 4U+2000Vac | Reinforced Insulation |
| Input-Case | 4U+2000Vac | 4U+2000Vac | Reinforced Insulation |
| Input-Dim | 4U+2000Vac | 4U+2000Vac | Reinforced Insulation |
| Dim-Case | 500Vac | | Basic insulation |
| Insulation Resistance | ≥10MΩ | | Test voltage:500Vdc |
| Leakage Current | ≤0.75mA | | 277Vac |

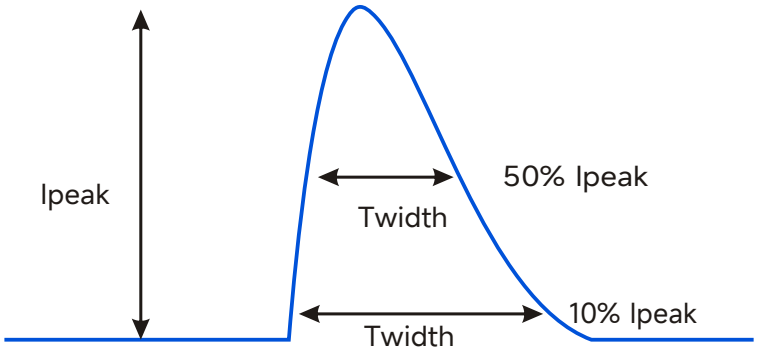
Note:
1. The power supply complies with the relevant EMC standards. The power supply, as part of the terminal equipment system, needs to be combined with the whole system to reconfirm EMC.
2. During voltage withstand test, please short-circuit between L/N, short-circuit between positive/negative output line, and short-circuit between positive/negative dimmer line and auxiliary power supply.



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## Performance Curves

### Input Inrush Current



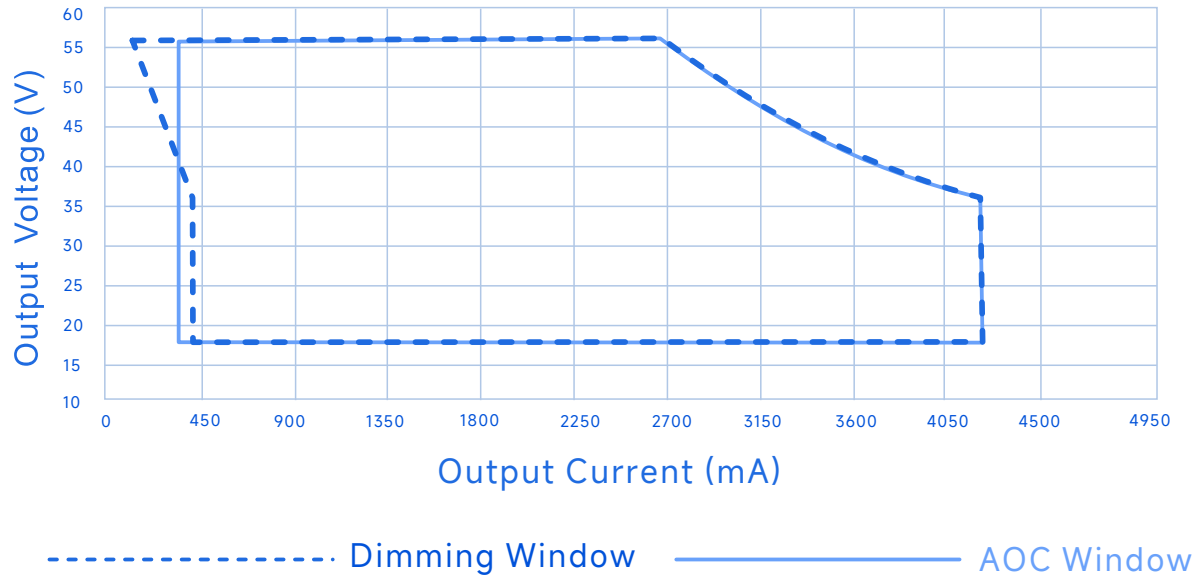

| Vin | Ipeak | T(@10% of Ipeak) | T(@50% of Ipeak) |
|---|---|---|---|
| 120Vac | 34A | 500uS | / |
| 220Vac | 73A | / | 300uS |
| 277Vac | 88A | 550uS | / |



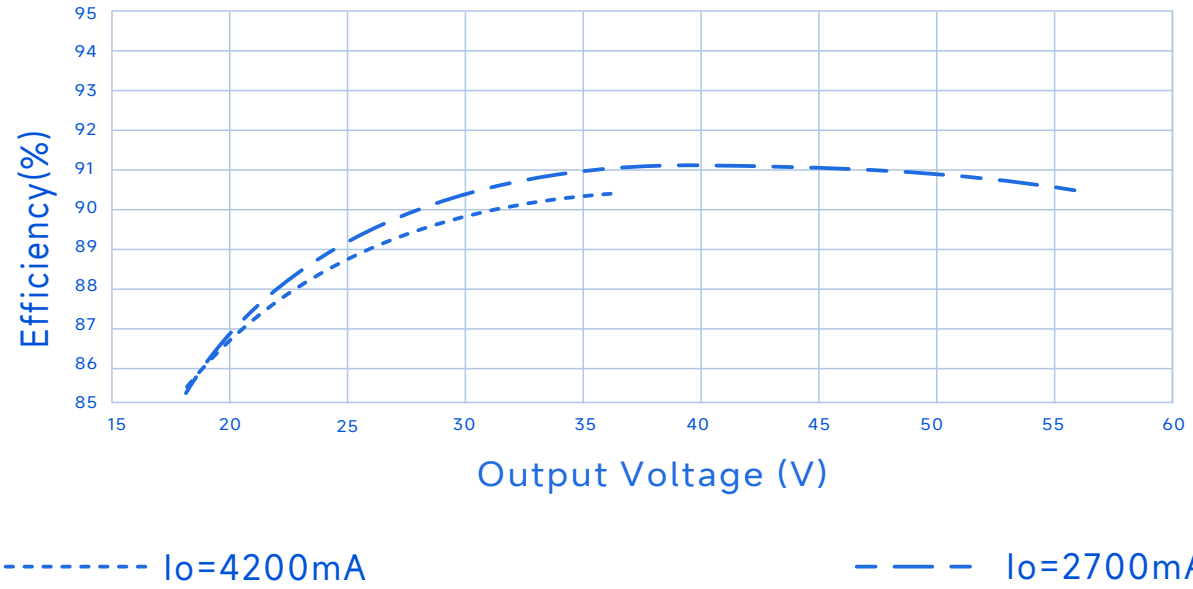
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## Performance Curves

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




### Efficiency Vs. Output Voltage(Vin=120Vac)

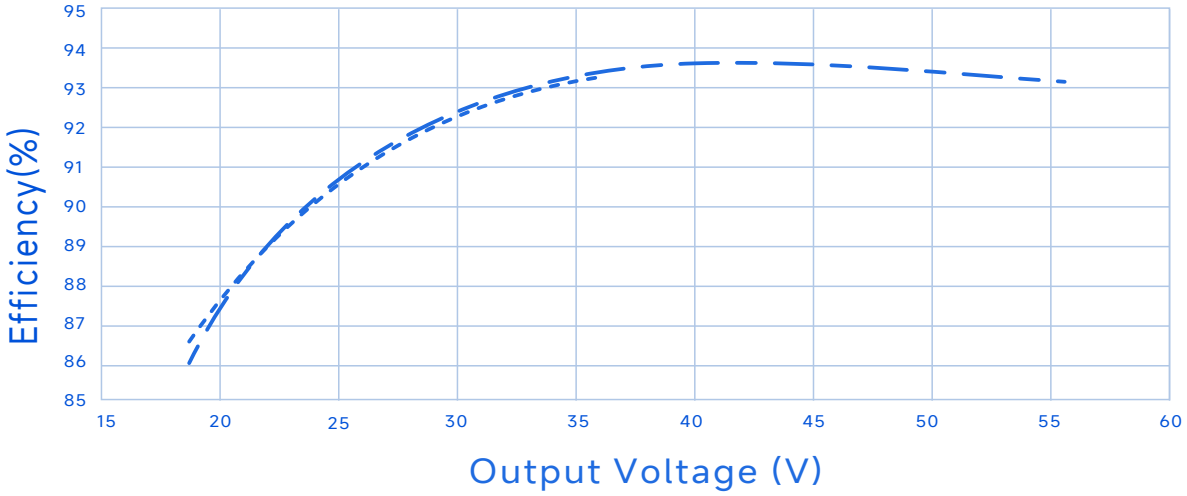





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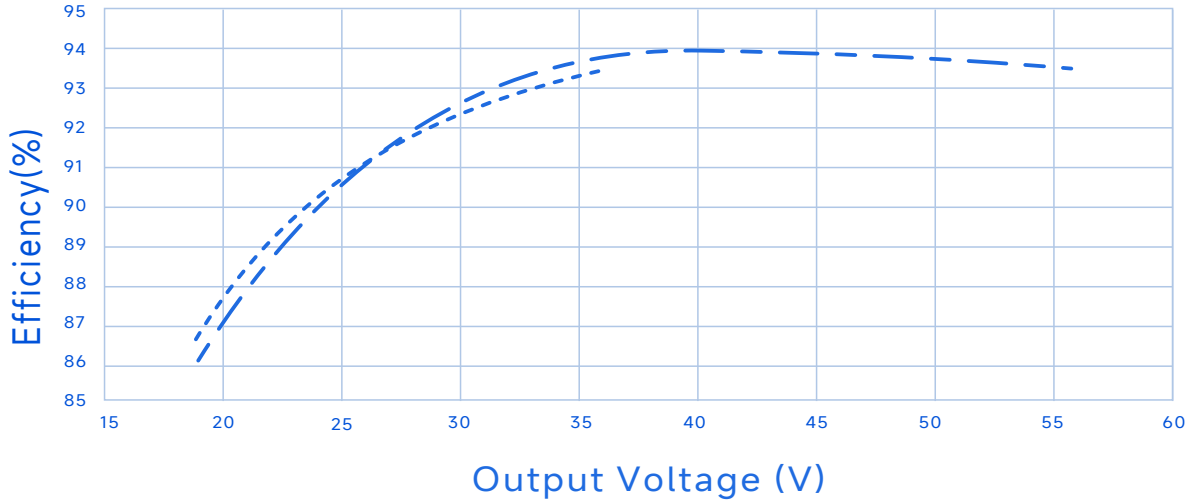
## Performance Curves

Efficiency Vs. Output Voltage (Vin=220Vac)




-------- Io=4200mA  — — — Io=2700mA

Efficiency Vs. Output Voltage(Vin=277Vac)



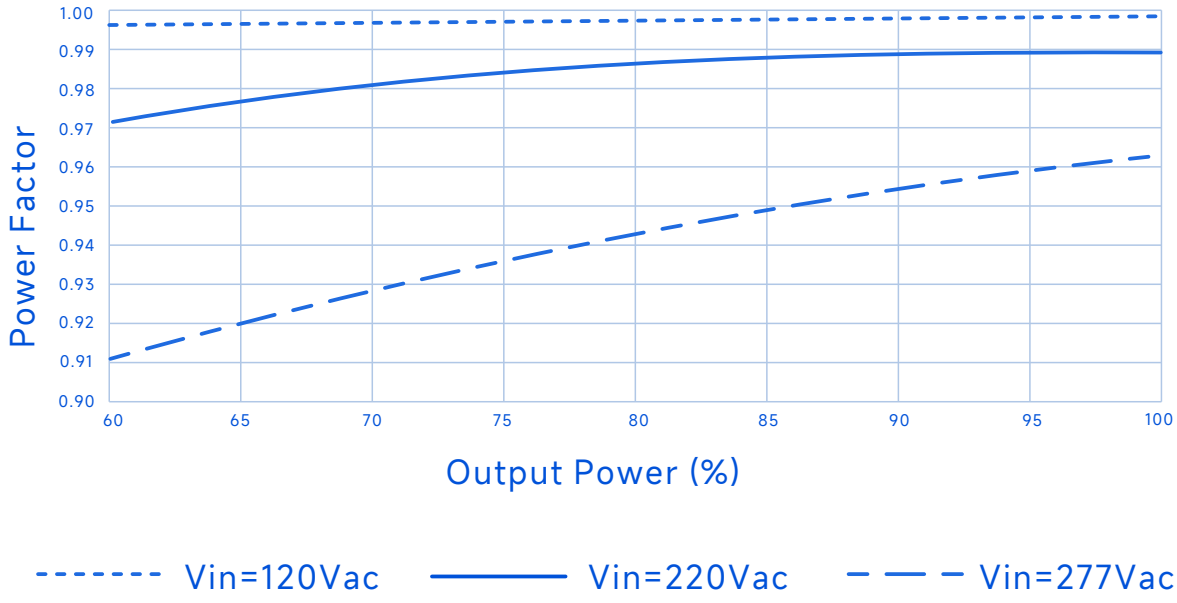

-------- Io=4200mA  — — — Io=2700mA



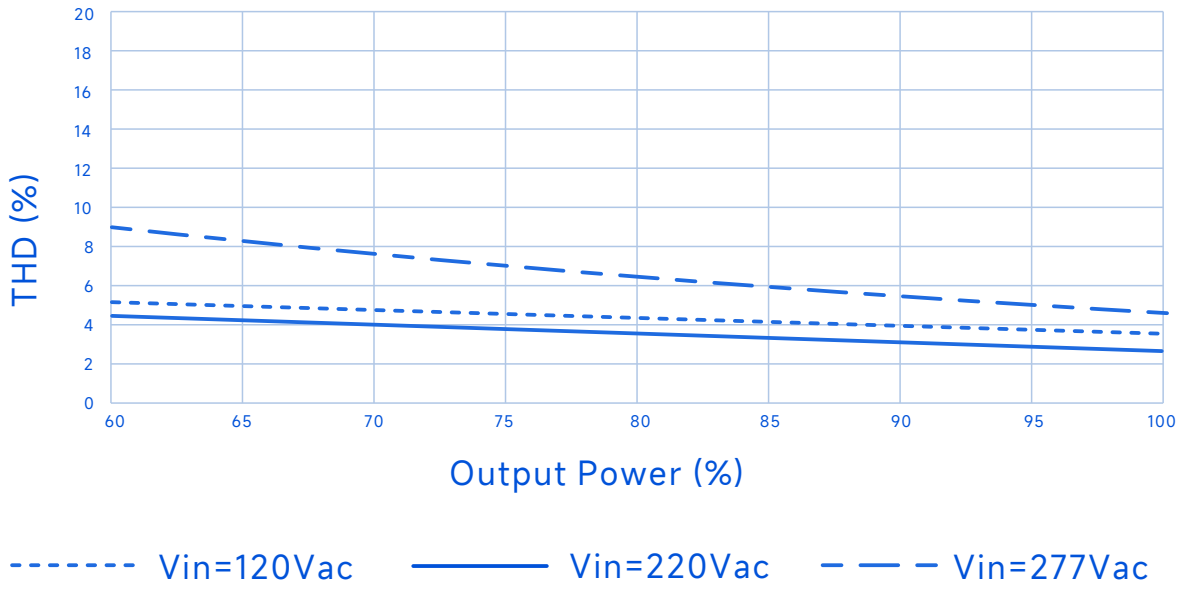
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## Performance Curves

### Power Factor Vs. Output Power




### THD Vs. Output Power

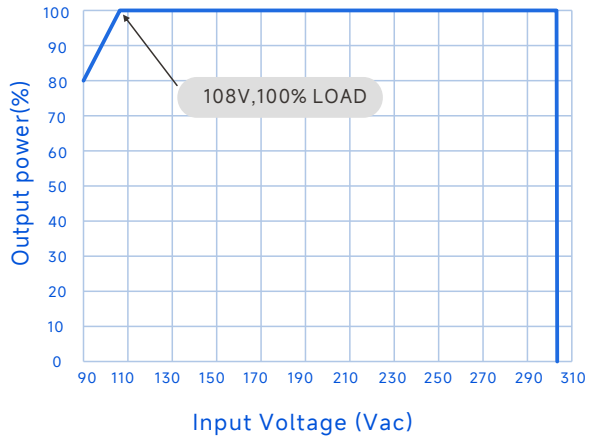




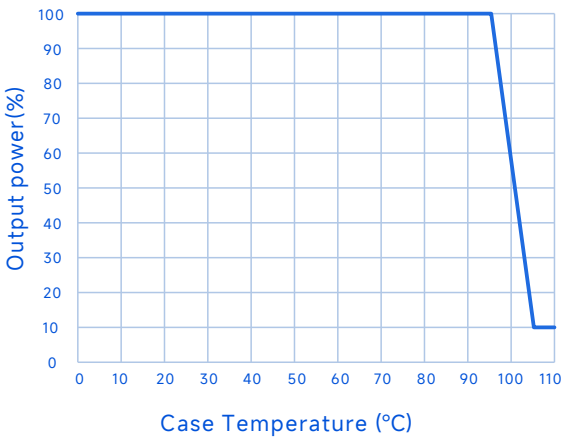

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## Performance Curves

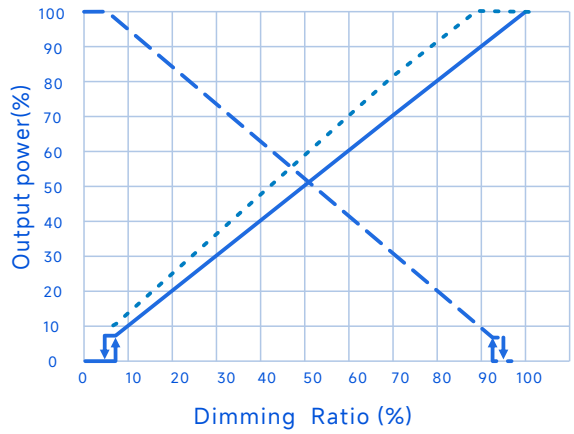
### Output Power Vs. Input Voltage




### Output Power Vs. Case Temperature




### Output Power Vs. Dimming

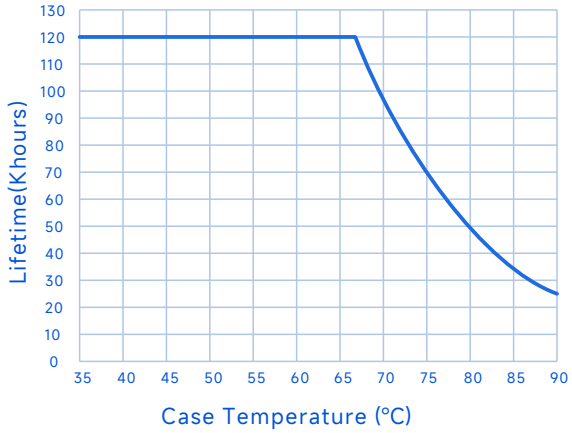



0-10V,0-5V,PWM

10-0V,5-0V

Resistor Dimming(100KΩ)

### Lifetime Vs. Case Temperature



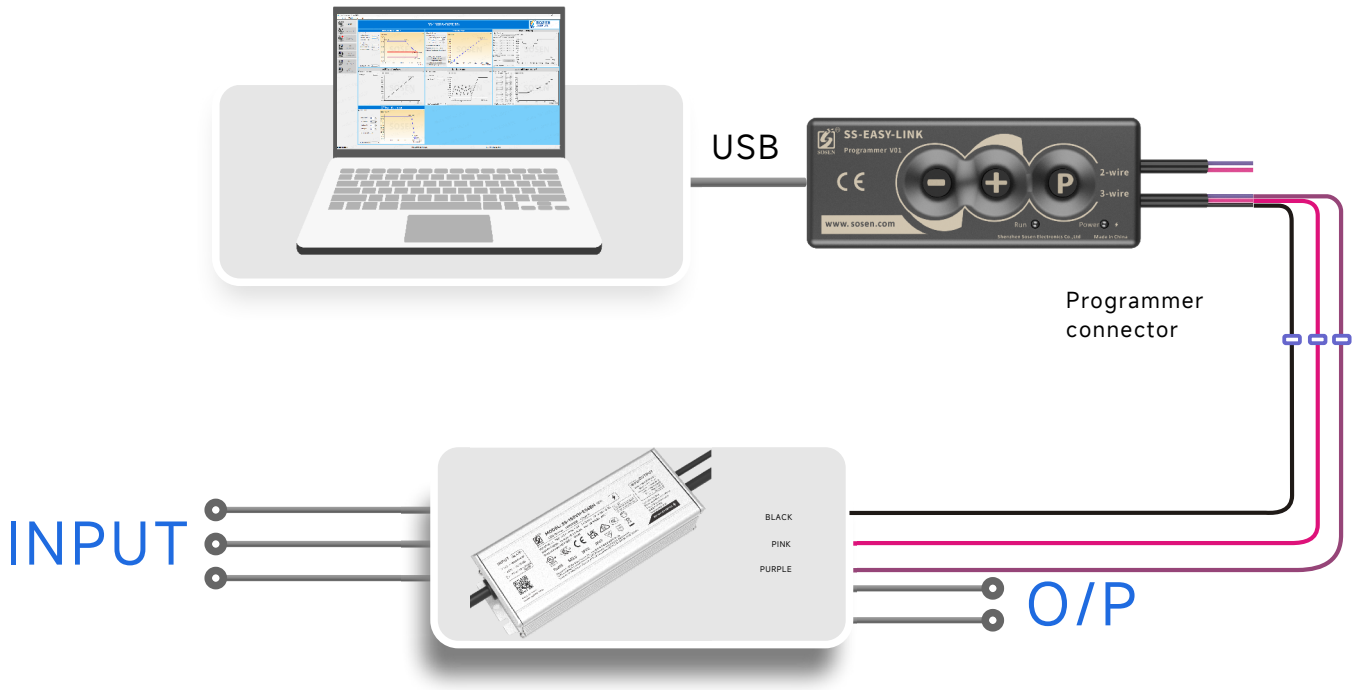



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## Programming connection diagram

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.



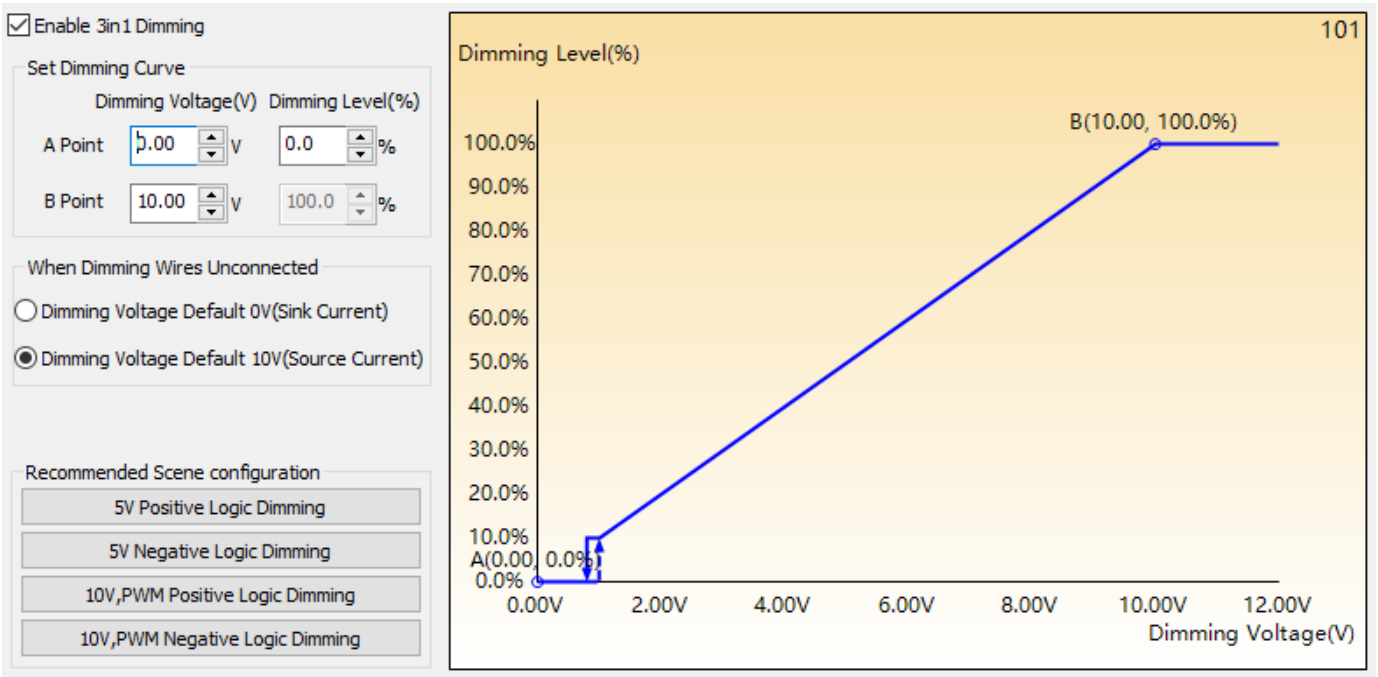



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## Dimming parameter settings

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

## Settings Interface



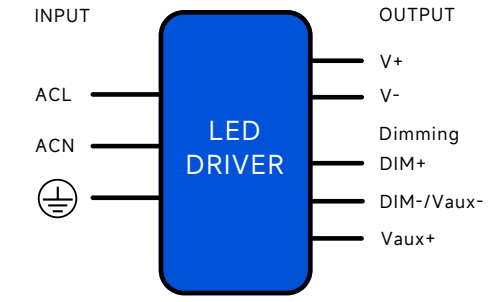



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# SS-150VH-E AUX LED DRIVER

## Mechanical Characteristic

### Wire gauge(BH Model)




**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:⏚

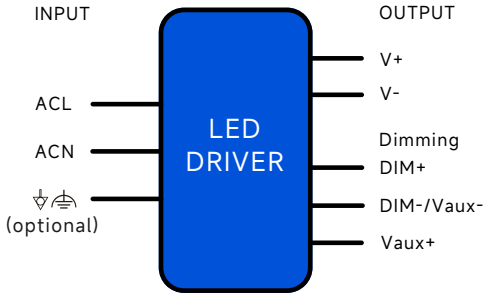
**DC Output Cable(Exposed Length 250±10mm):**

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-

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

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

### Wire gauge(BHE Model)




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

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

**DC Output Cable(Exposed Length 250±10mm):**

EU model: H05RN-F, 2×1.0 mm²,O.D:7.0 mm, Brown: V+, Blue: V-

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

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

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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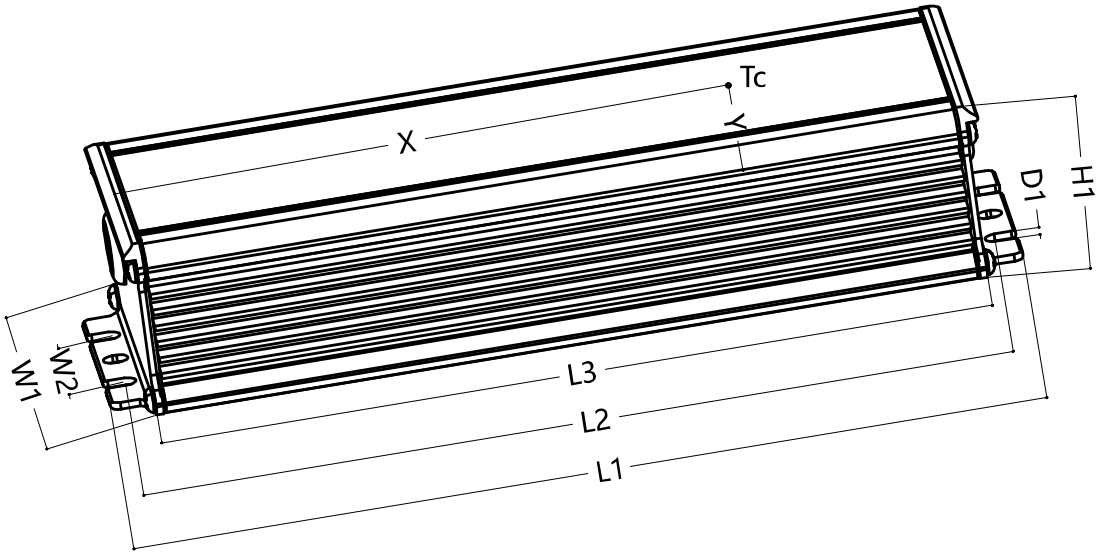
## Mechanical Characteristic

### Outline and mounting dimensions

| Name Description | Standard Code | mm(In.) |
|---|---|---|
| Overall Length | L1 | 179(7.04) |
| Mounting Hole Length | L2 | 170(6.69) |
| Case Length | L3 | 162(6.37) |
| Overall Width | W1 | 66(2.6) |
| Mounting Hole Width | W2 | 27(1.06) |
| Mounting Hole Width | H1 | 37(1.46) |
| Screw Hole Width | D1 | 4.2(0.16) |
| TC Point Position | X | 107.5(4.41) |
| TC Point Position | Y | 38.5(1.51) |

Note
Please follow the "LED Driver User Manual" obtained from SOSEN's official website for assembly.

INPUT OUTPUT






SHENZHEN SOSEN ELECTRONICS CO.,LTD.
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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: 0.85kg;Gross weight/Carton: 15.2kg;
- 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 | 2025/07/22 | |
| V01 | Update the number of packages | 2026/01/07 | |
| V02 | Add BHE Models | 2026/09/20 | |
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