

### ■ Features

- Power rating: 150W
- Input Voltage: 120-277Vac
- Constant voltage design
- Output Current (0mA-12500mA)
- Efficiency to 93%
- Protections: SCP, OTP, OCP, and OVP
- IP67
- Tc = 90°C
- 5-year warranty
- Surge Protection: L/N-PE: 6kV, L-N 4kV



\*Product images are for illustrative purposes only and may vary from actual design.

### ■ Application

- LED strips, LED signs, billboards, and landscaping lights

### ■ Model List

| Model Number   | Input Voltage Range | Output Power | Output Voltage | Output Current Min. | Output Current Max. | Efficiency | Certification |
|----------------|---------------------|--------------|----------------|---------------------|---------------------|------------|---------------|
| L3WV-150S012ST | 120-277Vac          | 150W         | 12V            | 0                   | 12500mA             | 91%        | UL/cUL/CE     |
| L3WV-150S024ST | 120-277Vac          | 150W         | 24V            | 0                   | 6250mA              | 93%        | UL/cUL/CE     |

### ■ Input Characteristics

| Parameter             | Min    | Typ. | Max    | Remarks                       |
|-----------------------|--------|------|--------|-------------------------------|
| Rated AC input range  | 120Vac |      | 277Vac |                               |
| AC input range        | 90Vac  |      | 305Vac |                               |
| Input frequency range | 47Hz   |      | 63Hz   |                               |
| Max input current     |        |      | 2.1A   | 90Vac, full load              |
| Inrush current        |        |      | 70A    | 230Vac/50Hz, cold start       |
| No load power         |        | 0.8W | 1W     | 277Vac/50Hz, No load          |
| Power factor          | 0.95   | 0.96 |        | 230Vac/50Hz, full load        |
|                       | 0.9    | 0.92 |        | 100-277Vac/50Hz, 75-100% Load |
| THD                   |        | 8%   | 10%    | 230Vac/50Hz, full load        |
|                       |        |      | 20%    | 100-277Vac/50Hz, 75-100% Load |

■ **Output Characteristics**

| Parameter                     |                     | Min   | Typ. | Max   | Remarks                  |
|-------------------------------|---------------------|-------|------|-------|--------------------------|
| Output current range          | L3WV-150S012ST      |       |      | 12.5A |                          |
|                               | L3WV-150S024ST      |       |      | 6.25A |                          |
| Output voltage range          | L3WV-150S012ST      | 11.4V | 12V  | 12.6V |                          |
|                               | L3WV-150S024ST      | 22.8V | 24V  | 25.2V |                          |
| Efficiency@230Vac             | L3WV-150S012ST      | 89%   | 91%  |       |                          |
|                               | L3WV-150S024ST      | 91%   | 93%  |       |                          |
| Output voltage tolerance      |                     | -5%   |      | +5%   |                          |
| Output voltage ripple (pk-pk) |                     |       | 1%   | 3%    | full load                |
|                               |                     |       | 1%   | 3%    | full load                |
| Start-up current overshoot    |                     | 10%   |      | 10%   |                          |
| Start-up time                 |                     |       | 0.5S | 0.75S | 115Vac                   |
|                               |                     |       | 0.3S | 0.5S  | 230Vac                   |
| Start-up current overshoot    |                     | 10%   |      | 10%   |                          |
| Line regulation               |                     | -1%   |      | +1%   | Full load                |
| Load regulation               |                     | -3%   |      | +3%   |                          |
| Transient response            | Overshoot amplitude | -5%   |      | +5%   | di/dt=1A/μs, 25%-50%-25% |
|                               | Recover time        |       |      | 10ms  |                          |

■ **Environmental Requirements**

| Parameter             | Min         | Typ. | Max    | Remarks |
|-----------------------|-------------|------|--------|---------|
| Operating Temperature | -40C°       | 25C° | +60C°  |         |
| Storage Temperature   | -40C°       | 25C° | +85C°  |         |
| Operation Humidity    | 10%RH       |      | 90%RH  |         |
| Storage Humidity      | 5%RH        |      | 95%RH  |         |
| Altitude              | -65m        |      | 4,000m |         |
| Cooling method        | Air Cooling |      |        |         |

L3WV-150S012ST  
L3WV-150S024ST

■ **Safety Compliance**

| Certification              | Standard   | Status   | Remark                  |
|----------------------------|--|--|-------------------------|
| UL/cUL                     | UL8750   | √  |                         |
| CE                         | EN 61347-2-13:2014<br>EN61347-1:2008+A1:2011+A2:2013 | √  |                         |
| Item                       | Standard   | Remark   |                         |
| Insulation Strength        | Input-output   | 3750Vac/10mA Max/60s                             | Reinforced insulation   |
|                            | Primary-Earth  | 18750Vac/10mA Max/60s                            | Basic insulation        |
|                            | Sec.- Earth  | 1000Vac/10mA Max/60s                             | Function insulation     |
| Insulation Resistance      | Input-output   | ≥10 MΩ   | Testing Voltage: 500Vdc |
|                            | Ground Resistor                                      | ≤0.1Ω  | 25A/1min                |
| Leakage Current            | ≤0.75mA  | 277Vac   |                         |
| Item                       | Criterion  | Remark   |                         |
| Conduction Emission        | EN55015:2013+A1:2015                                 |  |                         |
| Radiation Emission         | EN55015:2013+A1:2015                                 |  |                         |
| Harmonic Current Emissions | IEC/EN 61000-3-2                                     | Class C  |                         |
| Surge                      | IEC/EN61000-4-5                                      | Difference mode 4kV, Common mode 6kV Criterion B |                         |

**Disclaimer:**

Autec Power Systems' (Autec) LED Drivers are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the LED Driver into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.

■ Other Characteristics

| Parameter               | Min                         | Typ.   | Max                               | Remarks  |
|-------------------------|-----------------------------|--|-----------------------------------|--|
| Protection              | OCP                         | 115%lo   | 130%lo                            |  |
|                         | OTP                         | 100°C  | 110 °C                            | 120 °C<br>Shut down, when temperature is decreased, it will auto recover |
|                         | Short Circuit Protection    | Driver will not damage with short circuit power <10W |                                   | Hiccup mode  |
|                         | OVP                         | 105%lo   | 180%Vo                            | The output voltage will be limited at the design range                   |
| Life Time               | 55,000hrs                   |  | 230Vac full load, Tc 75°C         |  |
| MTBF                    | 200,000hrs                  |  | 230Vac full load, (MIL-HDBK-217F) |  |
| Temperature Coefficient | -0.03%/°C                   | +0.03%/°C  |                                   | Tc: 0°C~90°C   |
| Tc                      |                             |  | 90°C                              |  |
| Warranty                | 5 years                     |  | Tc 75°C                           |  |
| Net Weight              | 950g                        |  |                                   |  |
| Dimension               | 200x63x40mm                 |  | LxWxH                             |  |
| Packaging               | 0.95kg /unit; 14pcs/carton, |  |                                   |  |

\*Note: All the parameters above are tested at 25°C, unless specified

■ Performance Curves

Fig. 1 Output Power VS Input Voltage

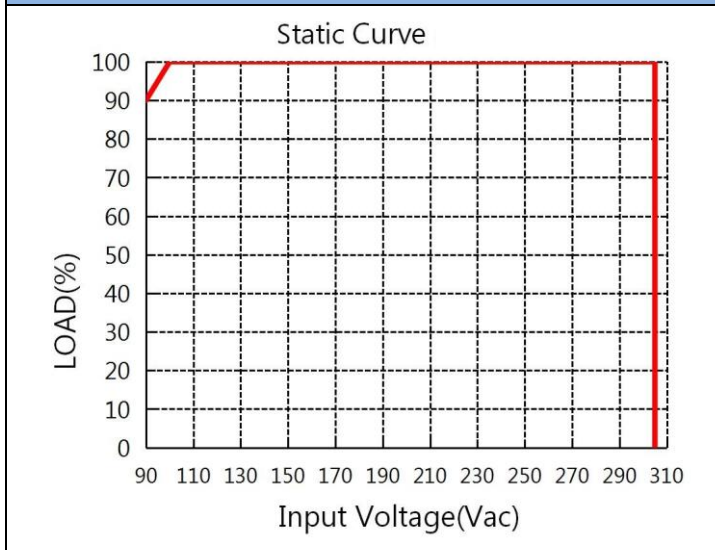


Fig. 2 O/P Power VS Ambient Temperature

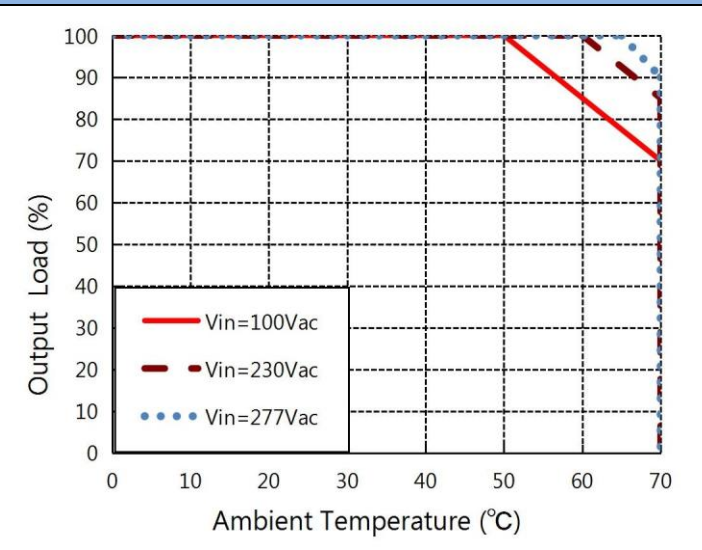


Fig. 3 Power Factor VS Output Power

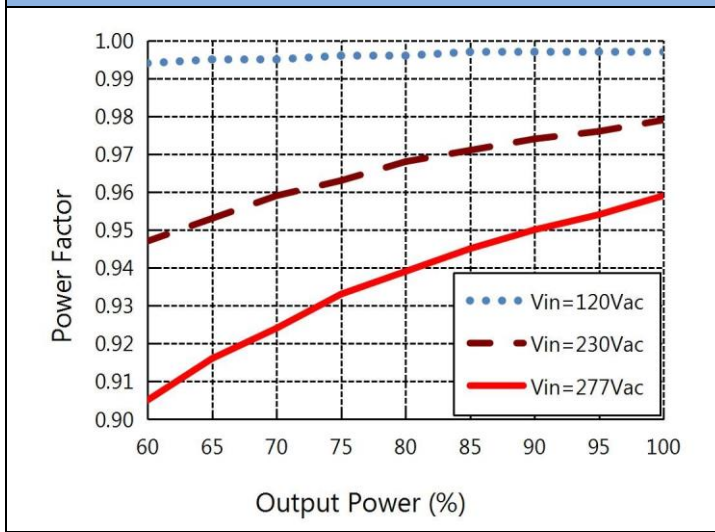
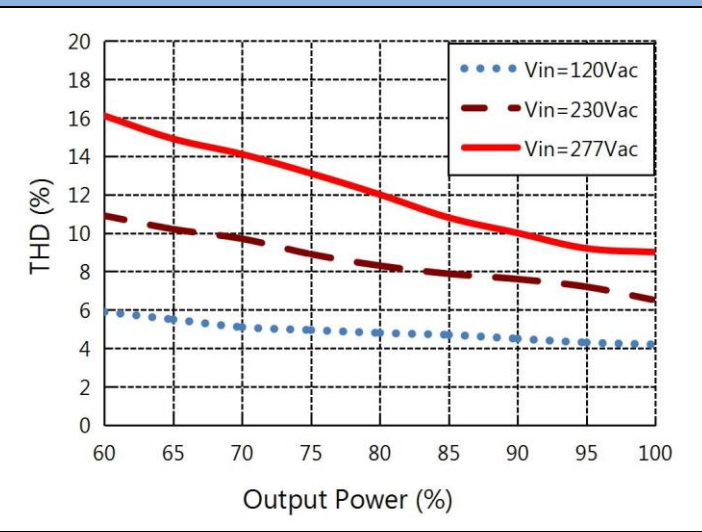
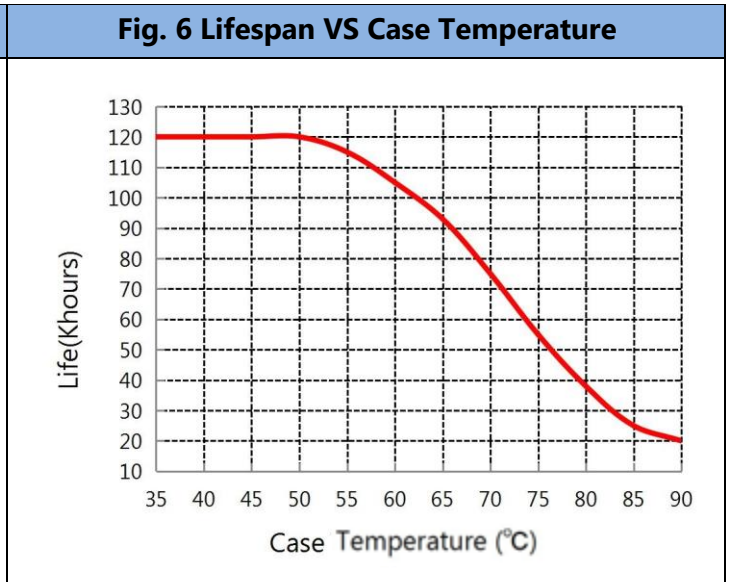
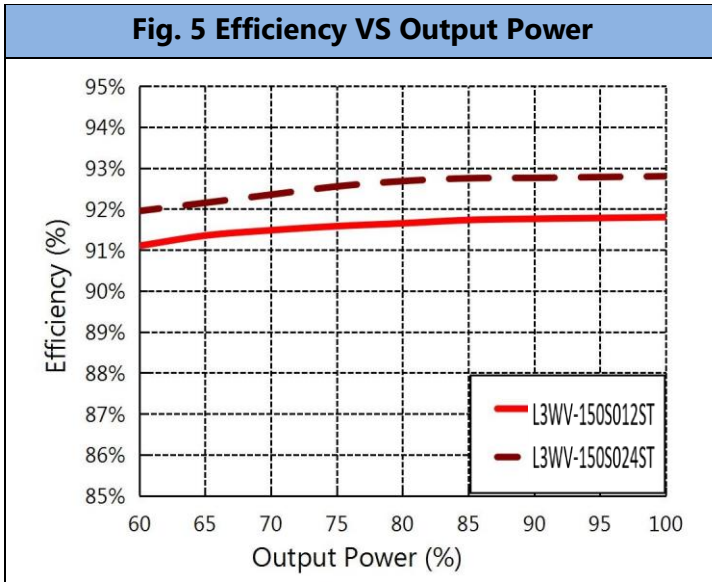


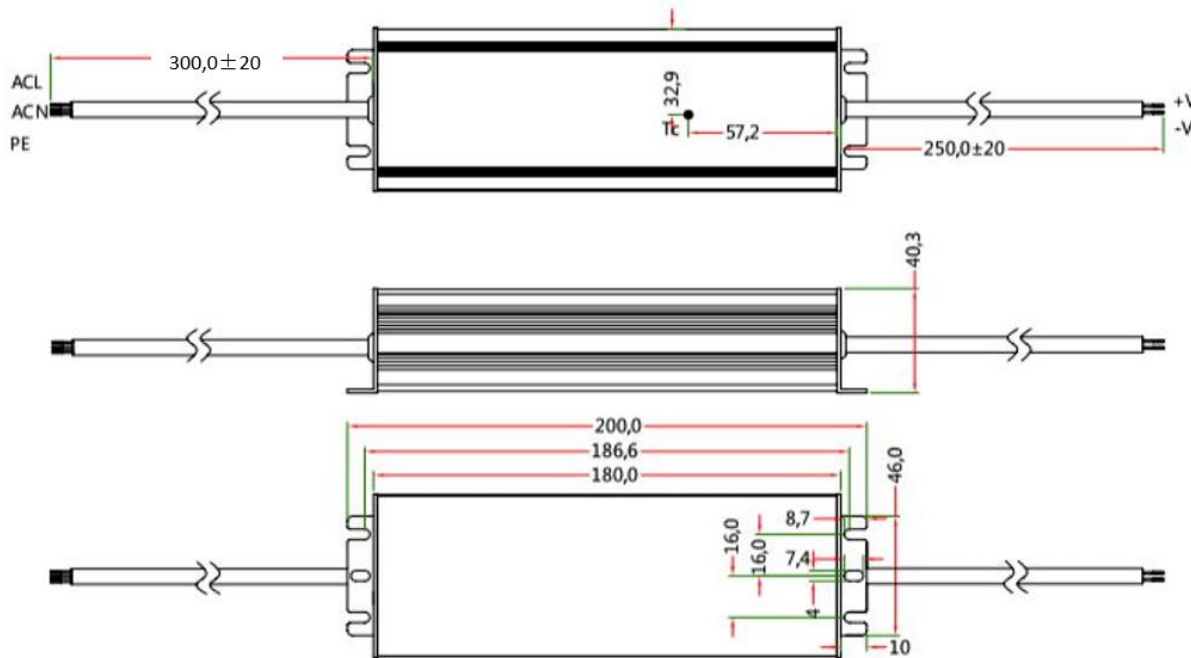
Fig. 4 THD VS Output Power



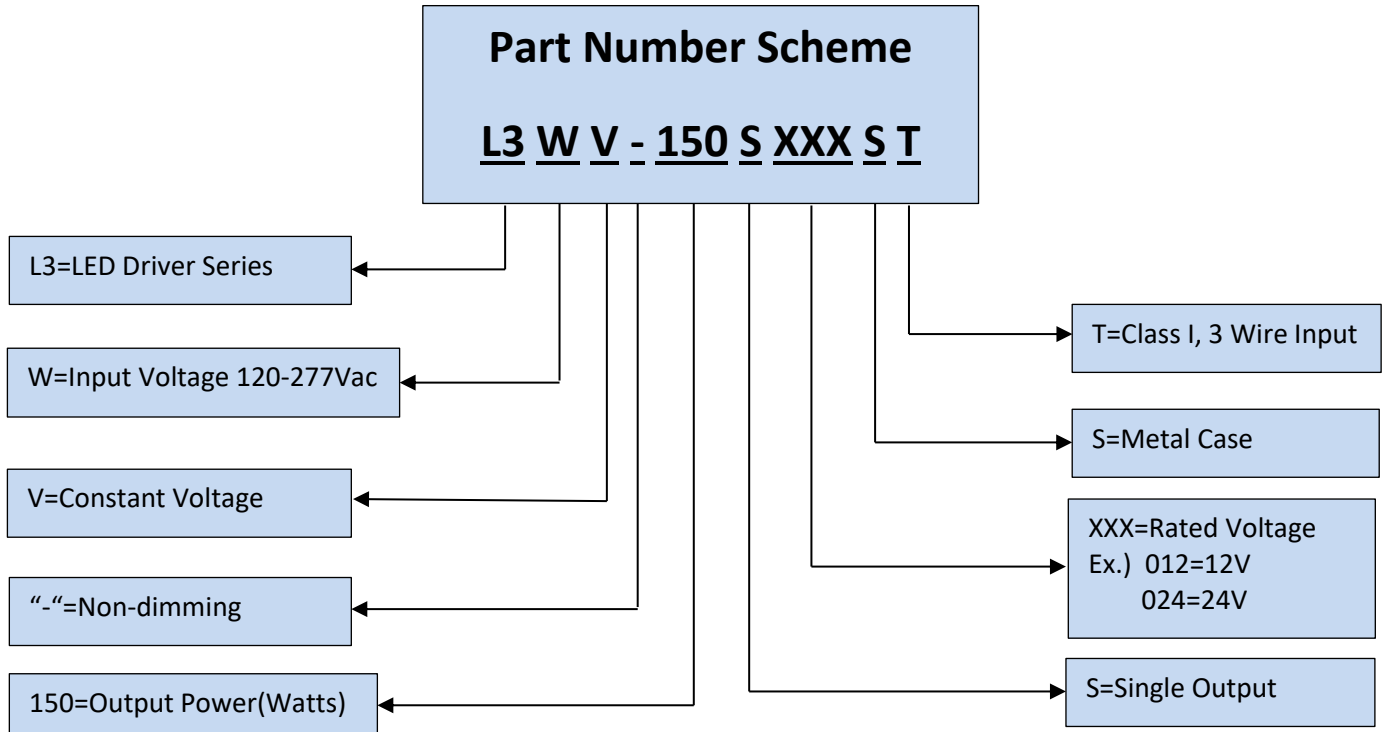
■ Performance Curves(cont.)



■ Mechanical Diagram



| Wire Specifications |  |
|---------------------|--|
| Input               | UL SJTW #18AWG 3*0.824 mm <sup>2</sup> , O.D: 7.8mm, GREEN: PE, BLACK: L, WHITE: N |
| Output              | UL SJTW #14AWG 2*2.08 mm <sup>2</sup> , O.D: 9.0mm, RED: V+, BLACK: V-             |



**\*Product images are for illustrative purposes only and may vary from actual design.**

**\*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**

**Technical Sales / Customer Service:** +1-818-338-7788 • Email: [sales@autec.com](mailto:sales@autec.com)

31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • [www.autec.com](http://www.autec.com)

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