RoHS Compliant

## Features

- Power Rating: 120W
- Input Voltage: 100-277Vac
- Constant current design
- Output current(1200mA-3750mA)
- Selectable output through POT switch
- Efficiency up to 91%
- 3-1 Dimming, 0-10V/PWM/Resistor
- Isolated Dimming(Contact Autec Sales)
- Major World Safeties all in one Driver: UL/CCC/TUV/BIS/SAA/CE
- Protections: SCP, OTP, OVP
- IP65
- 5-year warranty
- Surge Protection: L/N-PE: 4KV, L-N: 4KV

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

## Application

- High bay light
- Dry, damp and wet locations

## Model List*(See part number scheme for model number details)

| Model Number | Input Voltage Range | Output Power | Output Voltage | Output Current Min. | Output Current Max. | Efficiency | Certification |
|---|---|---|---|---|---|---|---|
| L3WCD120S375STR | 100-277Vac | 120W | 24-40V | 2000mA | 3750mA | 90% | UL/CCC/TUV BIS/SAA/CE |
| L3WCD120S285STR | 100-277Vac | 120W | 27-54V | 1500mA | 2850mA | 91% | UL/CCC/TUV BIS/SAA/CE |
| L3WCD120S215STR | 100-277Vac | 120W | 40-68V | 1200mA | 2150mA | 91% | UL/CCC/TUV BIS/SAA/CE |

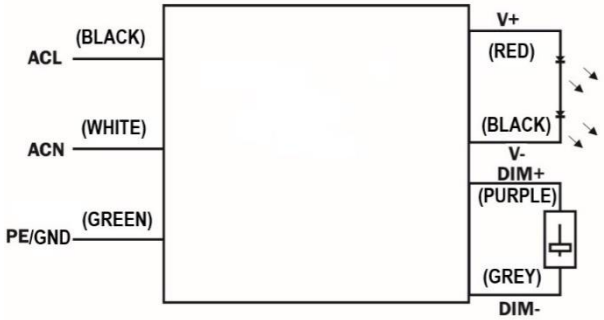
*Timer dimming option available, contact Autec Sales.

Autec power supplies are designed to meet and comply with the safety standards listed above. Contact Autec Sales to confirm available safety approvals for your specific power supply application.

**Notes:**

1. Output current selectable by POT switch
2. Torque: 0.98 to 19.6mN-m (10 to 200gf·cm) max.
3. Stop strength: 49.0mN·m (500gf·cm) min

## Wiring Diagram / Dimming



## ■ Input Characteristics

| Parameter | Min | Typ. | Max | Remarks |
|---|---|---|---|---|
| Rated AC input range | 100Vac | | 277Vac | |
| AC input range | 90Vac | | 305Vac | |
| Input frequency range | 47Hz | | 63Hz | |
| Max input current | | | 1.6A | 90Vac, full load |
| Inrush current | | | 60A | 230Vac/50Hz, cold start |
| No load power | | 1W | 2W | 277Vac/50Hz, No load |
| Power factor | 0.95 | 0.98 | | 230Vac/50Hz, full load |
| | 0.90 | | | 100-277Vac/50Hz, 70-100% Load |
| THD | | 7% | 10% | 230Vac/50Hz, full load |
| | | | 20% | 100-277Vac/50Hz, 70-100% Load |

## ■ Output Characteristics

| Parameter | | Min | Typ. | Max. | Remarks |
|---|---|---|---|---|---|
| Output voltage range | L3WCD120S375STR | 24V | | 40V | Power derated@24-32Vdc |
| | L3WCD120S285STR | 27V | | 54V | Power derated@27-42Vdc |
| | L3WCD120S215STR | 40V | | 68V | Power derated@40-56Vdc |
| Rated Output Voltage | L3WCD120S375STR | 32V | | 40V | Po=Vo*Io=120W, full load |
| | L3WCD120S285STR | 42V | | 54V | |
| | L3WCD120S215STR | 56V | | 68V | |
| Rated Output Current | L3WCD120S375STR | 3A | | 3.75A | 3A for 40V, 3.75A for 32V |
| | L3WCD120S285STR | 2.25A | | 2.85A | 2.25A for 54V, 2.85A for 42V |
| | L3WCD120S215STR | 1.75A | | 2.15A | 2.25A for 54V, 2.85A for 42V |
| Current Adjustable range | L3WCD120S375STR | 2A | | 3.75A | Rated Io 70%-100% adjustable |
| | L3WCD120S285STR | 1.5A | | 2.85A | |
| | L3WCD120S215STR | 1.2A | | 2.15A | |
| No load Voltage | L3WCD120S375STR | 40.5V | 42V | 43.5V | |
| | L3WCD120S285STR | 54.5V | 56V | 57.5V | |
| | L3WCD120S215STR | 68.5V | 70V | 71.5V | |
| Efficiency@230Vac | L3WCD120S375STR | 88% | 90% | | Output 40V/3A |
| | L3WCD120S285STR | 89% | 91% | | Output 54V/2.25A |
| | L3WCD120S215STR | 89% | 91% | | Output 68V/1.75A |
| Output current tolerance | | -5% | | +5% | |
| Output Voltage Ripple (pk-pk) | | | 1% | 2% | Full load |
| Output Current Ripple (pk-pk) | | | 5% | 10% | Full load |
| Start-up Current Overshoot | | | | 10% | |
| Start-up Time | | | 1S | 2S | 230Vac |
| Line Regulation | | -1% | | +1% | Full load |
| Load Regulation | | -2% | | +2% | |

## ■ Safety Compliance

| Certification | | Standard | Status | Remark |
|---|---|---|---|---|
| UL/cUL | | UL8750 | √ | |
| CE | | EN 61347-2-13:2014<br>EN61347-1:2008+A1:2011+A2:2013<br>EN62493:2015 | √ | |
| SAA | | AS/NZS61347.2.13 | √ | |
| CCC | | GB 19510.14-2009 | √ | |
| BIS | | IS15885:2012 Part 2 Sec 13 | √ | Only for 3-in-1 Dimming |
| CE | | EN61347-2-13:2014<br>EN61347-1:2008+A1:2011+A2:2013 | √ | |
| **Item** | | **Standard** | | **Remark** |
| Insulation Strength | Input-output | 3200Vac/5mA Max/60s | | Reinforced insulation |
| | Primary-Earth | 1600Vac/5mA Max/60s | | Basic insulation |
| | Sec.- Earth | 1000Vac/5mA 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 4kV 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.**

## ■ Environmental Data

| Parameter | Min | Typ. | Max | Remarks |
|---|---|---|---|---|
| Operating Temperature | -40˚C | 25˚C | +60˚C | |
| Storage Temperature | -40˚C | 25˚C | +85˚C | |
| Operation Humidity | 10%RH | | 90%RH | |
| Storage Humidity | 5%RH | | 95%RH | |
| Altitude | -65m | | 4,000m | |
| Cooling Method | Air Cooling | | | |
| Packing | 10pcs/carton, Carton Dimensions: 500mmx390mmx170mm | | | |

## ■ Other Characteristics

| Parameter | | Min | Typ. | Max | Remarks |
|---|---|---|---|---|---|
| 0-10V Dimming (optional) | Dim Vmax | -20V | | 14V | 3 in 1 Dimming; 0-5V Dimming optional; Negative Logic Dim Optional |
| | Dim Range | 10% Io max | | 100% Io set | |
| | Voltage | 1V | | 10V | |
| | OFF | 0.3V | 0.5V | 0.7V | Dim-off value |
| | On | 0.5V | 0.7V | 0.9V | |
| PWM Dimming (Optional) | High | 5V | | 10V | |
| | Low | -0.3V | | -0.6V | |
| | Frequency | 200Hz | | 2KHz | |
| | PWM Duty | 1% | | 99% | |
| Resistor Dimming (optional) | Resistance | 10K Ohm | | 100K Ohm | |
| | Dimming | 10% Io max | | 100% Io Set | |
| Timing Curve (optional) | IC Control | By Programming | | | Typically, 3-4 sections |
| | Timing | 5H/6H/7H/8H per section | | | DefaultMode:24 Hour/Circle with 50% load |
| Protection | OTP | 80˚C | 85˚C | 90˚C | Shut down o/p voltage, re-power on to recovery |
| | Short Circuit Protection | Driver will not be damage with Short-circuit power <10W | | | Hiccup mode |
| Life Time | | | 55,000hrs | | 230Vac full load, Tc 75˚C |
| MTBF | | | 200,000hrs | | 230Vac full load, Ta=25˚C, (MIL-HDBK-217F) |
| Temperature Coefficient | | -0.03%/˚C | | +0.03%/˚C | 0˚C~90˚C |
| Tc | | | | 85˚C | |
| Warranty | | | 5 years | | Tc75˚C |
| Net Weight | | | 1200g | | |
| Dimension | | | ϕ132mm*71mm | | D x H |

## ■ Performance Curve

**Fig. 1 O/P Voltage VS Output Current**

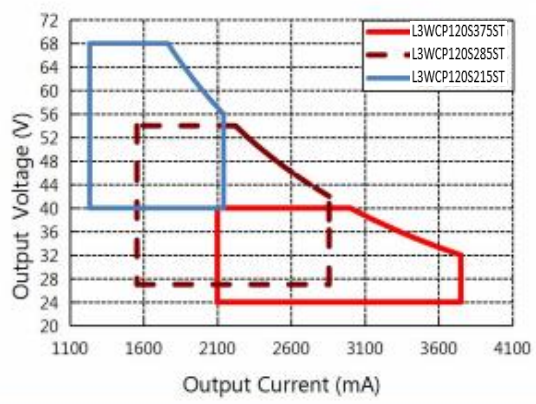



**Fig. 2 O/P Power VS Ambient Temperature**

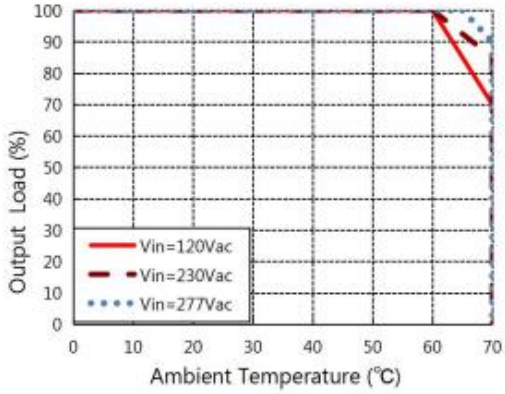



**Fig. 3 Power Factor VS Output Power**

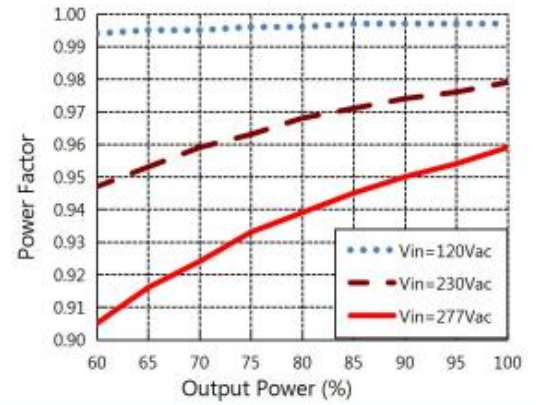



**Fig. 4 THD VS Output Power**

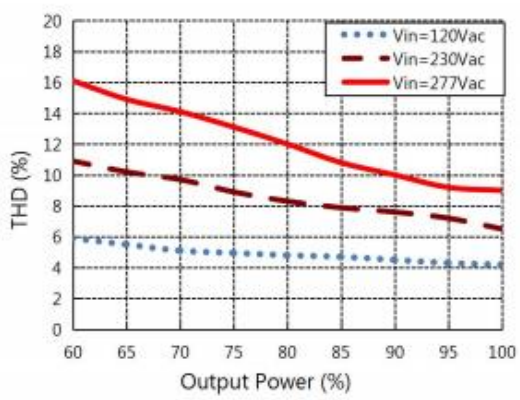



**Fig. 5 Efficiency VS Output Power**

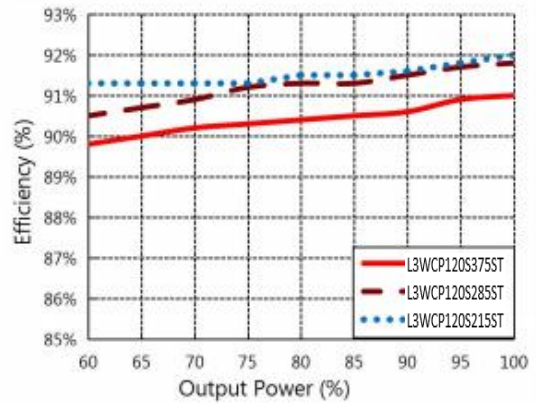
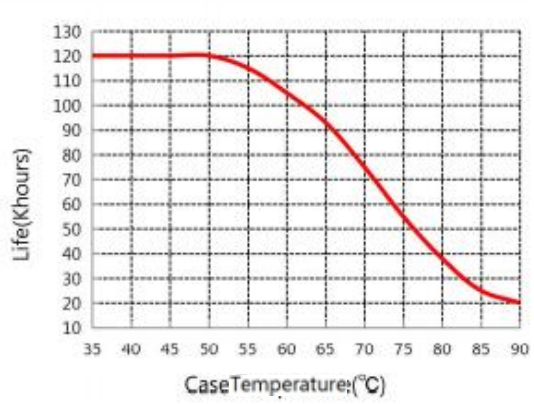
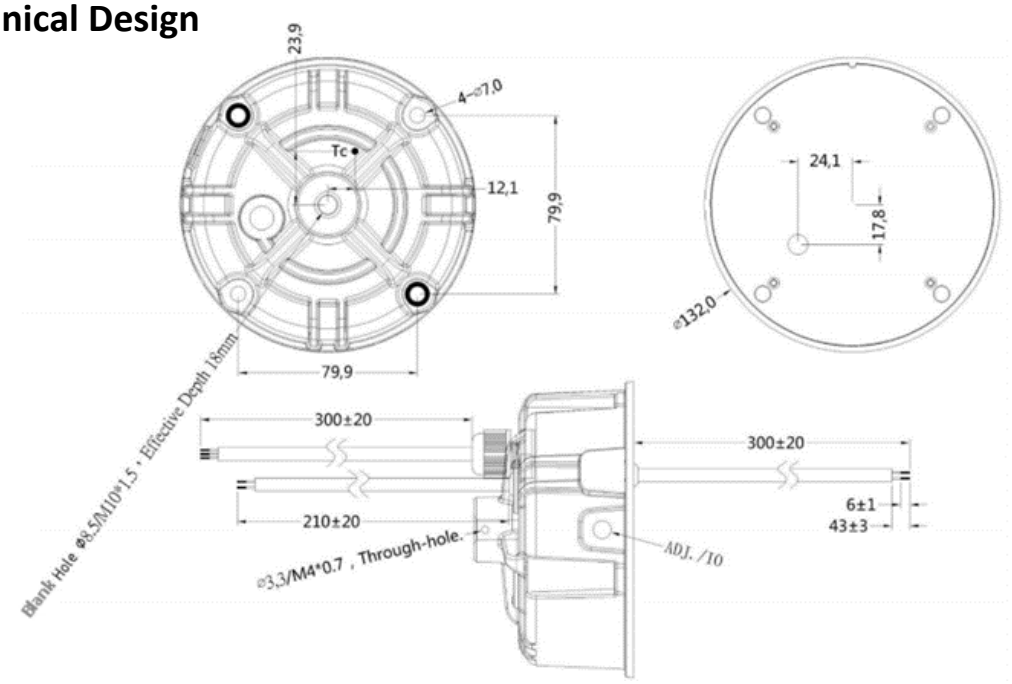



**Fig. 6 Lifespan VS Case Temperature**



## ■ Mechanical Design




AC Input

Dimming Wire

DC Output

| Wire Specifications | |
|---|---|
| Input Wire | UL STW #18AWG, 3 X 0.824mm², O.D. 7.8mm, GREEN: PE, BLACK: L, WHITE: N |
| Output Wire | UL SJTW #18AWG 2X0.824mm², O.D. 7.8mm, RED: V+, BLACK: V- |
| Dim Wire | STYLE 2733, #22AWG O.D. 5.8mm, PURPLE: DIM+, GREY: DIM- |

## ■ Dimming

### 0-10V Dimming (Typ.)

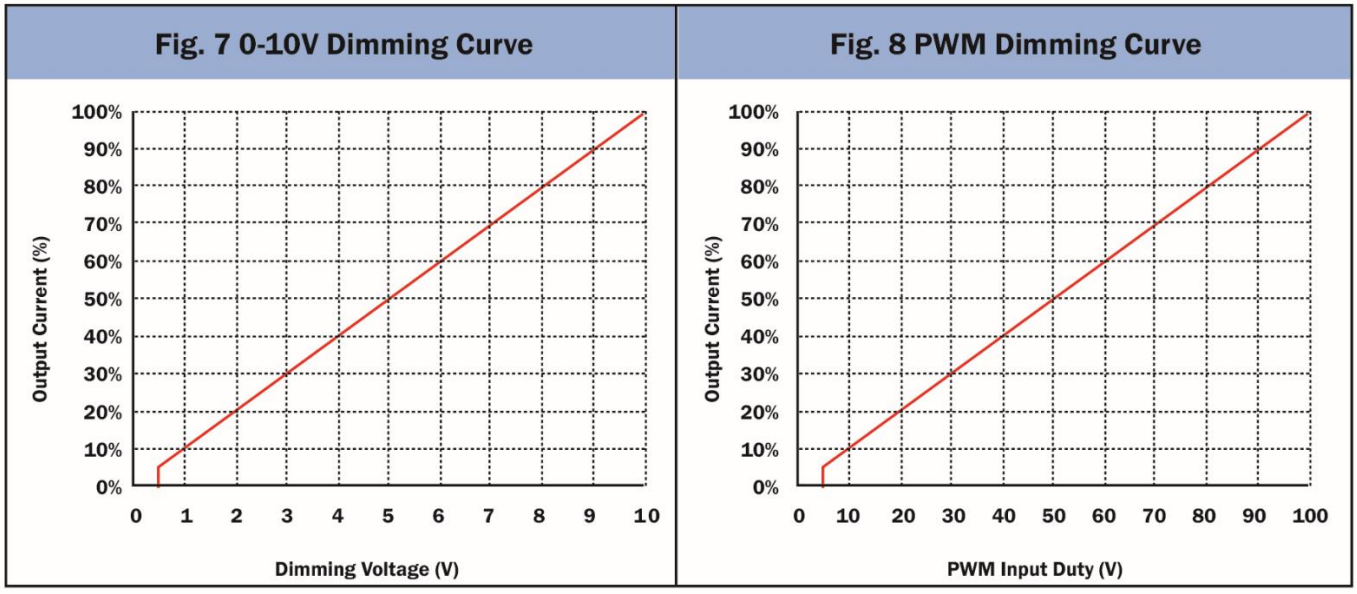
| Voltage Range | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | Open |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Current Percentage | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95-108% |

| PWM Duty | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | Open |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Current Percentage | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95-108% |

### Resistor(Typ.)

| Resistor | 10KΩ | 20KΩ | 30KΩ | 40KΩ | 50KΩ | 60KΩ | 70KΩ | 80KΩ | 90KΩ | 100 KΩ | Open |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Current Percentage | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95-108% |

## ■ Dimming Curve




## Part Number Scheme

**L3 W C D 120 S XXX S T R**

- L3=LED Driver Series
- W=Input Voltage 100-277Vac
- C=Constant Current
- D=Dimming
- 120=Output Power(Watts)
- R=Saucer Type
- T=Class I, 3 Wire Input
- S=Metal Case
- XXX=Rated Current
  Ex.) 375=3750mA
  215=2150mA
- S=Single Output

***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.**