



Thomas Research Products

SSL Solutions Faster Than The Speed Of Light™

**LED-30W Series— Fixed Output and Dimmable
Switch Mode LED Drivers
Constant Current & Constant Voltage with Isolation
Black Magic Thermal Advantage™ Plastic Housing**

**Total Power: 30 Watts
Input Voltage: 90-305 Vac
Outputs: Single from 4-85 Vdc
Indoor or Outdoor Applications
High Power Factor
UL8750 and Class 2 Compliant, as noted
IP66 Compliant**

Electrical Specifications

| | |
|----------------------|--|
| Input Voltage Range: | 100-277 Vac Nom. (90-305 V Min/Max) |
| Frequency: | 50/60 Hz Nom. (47-63 Hz Min/Max) |
| Power Factor: | >0.90 @ full load, 100V through 277V |
| Inrush Current: | <15.0 Amps max @ 230 Vac, cold start 25°C |
| Input Current: | 0.32 Amps max |
| Maximum Power: | 30W |
| Current Accuracy: | ± 1% Over input line variation |
| Load Regulation: | ± 3% |
| THD: | ≤ 20% @ full load |
| Leakage Current: | 400 µA Typical |
| Hold Up Time: | Half Cycle |
| Protection: | Output Over-Voltage, Output Over-Current, and Output Short Circuit Protection with Auto Recovery |

Environmental Specifications

| | |
|------------------------|--|
| Operating Temperature: | -30°C to +60°C |
| Maximum Case Temp. | 90°C |
| Storage Temperature: | -40°C to +85°C |
| Humidity: | 5% to 95% |
| Cooling: | Convection |
| Vibration Frequency: | 5 to 55 Hz/2g, 30 minutes |
| Sound Rating: | Class A |
| MTBF: | 484,000 Hours at full load and 40°C ambient conditions per MIL-217F Notice 2 |
| EMC: | FCC 47CFR Part 15 Class B compliant |



Constant Current - Product Specifications

| Model Number | Output voltage range | Output constant current | Current accuracy | Output power | Max. efficiency |
|--------------------|----------------------|-------------------------|------------------|--------------|-----------------|
| LED30W-85-C0350-XX | 28-85 VDC | 350 mA | ±3% | 30W | 88% |
| LED30W-75-C0400-XX | 25-75 VDC | 400 mA | ±3% | 30W | 87% |
| LED30W-66-C0450-XX | 22-66 VDC | 450 mA | ±3% | 30W | 87% |
| LED30W-42-C0700-XX | 14-42 VDC | 700 mA | ±3% | 30W | 87% |
| LED30W-36-C0830-XX | 12-36 VDC | 830 mA | ±3% | 30W | 87% |
| LED30W-24-C1250-XX | 8-24 VDC | 1250 mA | ±3% | 30W | 86% |
| LED30W-18-C1660-XX | 6-18 VDC | 1660 mA | ±3% | 30W | 85% |
| LED30W-12-C2500-XX | 4-12 VDC | 2500 mA | ±3% | 30W | 85% |

-XX indicates dimming options are available. See options at left. Blank = fixed current output

Constant Voltage - Product Specifications

| Model Number | Output constant voltage | Output current range | Voltage accuracy | Output power | Max. efficiency |
|--------------|-------------------------|----------------------|------------------|--------------|-----------------|
| LED30W-85 | 85 VDC | 88-350 mA | ±5% | 30W | 88% |
| LED30W-75 | 75 VDC | 100-400 mA | ±5% | 30W | 87% |
| LED30W-66 | 66 VDC | 113-450 mA | ±5% | 30W | 87% |
| LED30W-42 | 42 VDC | 175-700 mA | ±5% | 30W | 87% |
| LED30W-36 | 36 VDC | 208-830 mA | ±5% | 30W | 86% |
| LED30W-24 | 24 VDC | 313-1250 mA | ±5% | 30W | 85% |
| LED30W-18 | 18 VDC | 415-1660 mA | ±5% | 30W | 85% |
| LED30W-12 | 12 VDC | 625-2500 mA | ±5% | 30W | 84% |

Class 2: US/Canada US Only



Ordering Options:

- D: 0-10V & Resistance dimmable version comes with an extra two wires +Purple/-Gray on the output side. -D 0-10V Dimming is compatible with most quality 0-10V wall dimmers and direct 0-10V analog signal. See page 3 for additional specifications.
- PD: PWM Dimmable version comes with an extra two wires +Purple/-Gray on the output side. PD PWM version is PWM Dimmable via a positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4 for additional specifications.

Specifications subject to change without notice.

3-06-13



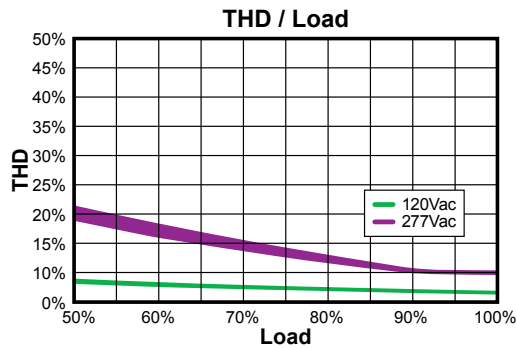
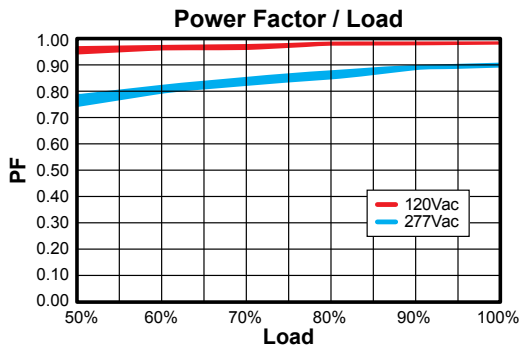
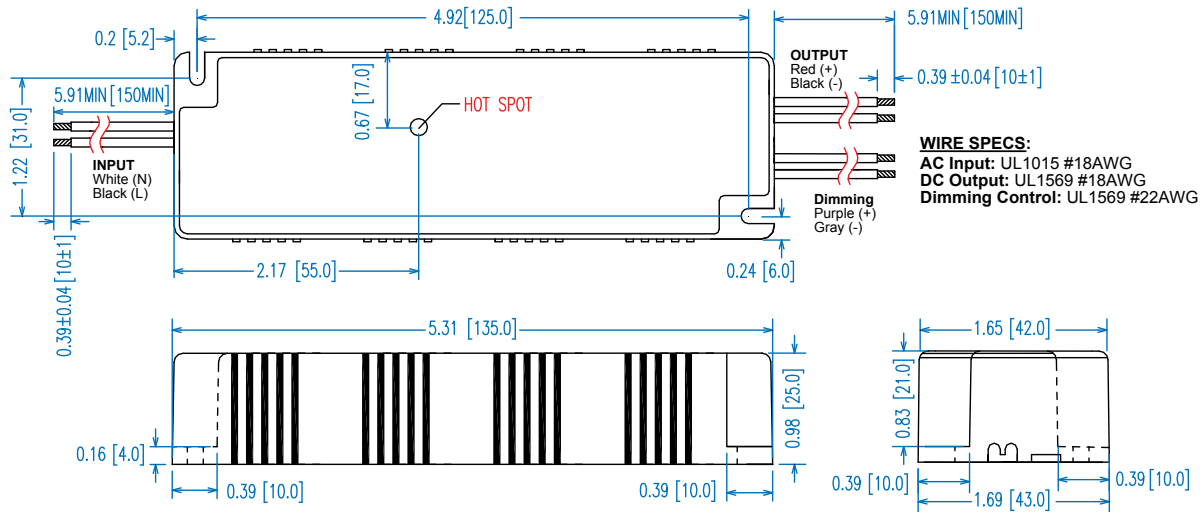
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LED30W

Pg 2 of 4

Dimensions - Inches (mm)



UL Conditions of Acceptability

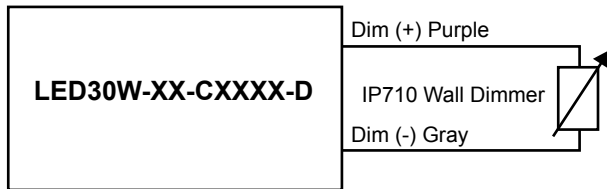
See website for additional information



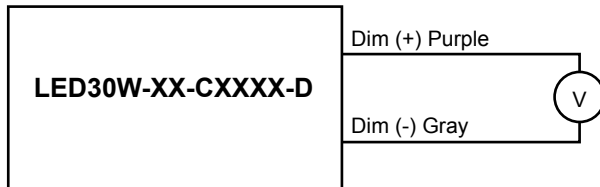
“-D” Option: 0-10VDC and Resistance Dimming

| Parameters | Minimum | Typical | Maximum |
|---|---------|---------|---------|
| Source Current out of 0-10V Purple Wire | 0 mA | — | 10 mA |
| Absolute Voltage Range on 0-10V (+) Purple Wire | -2.0 V | — | +15 V |
| Sink Current into 0-10V Purple Wire | 0 mA | — | 1.2 mA |

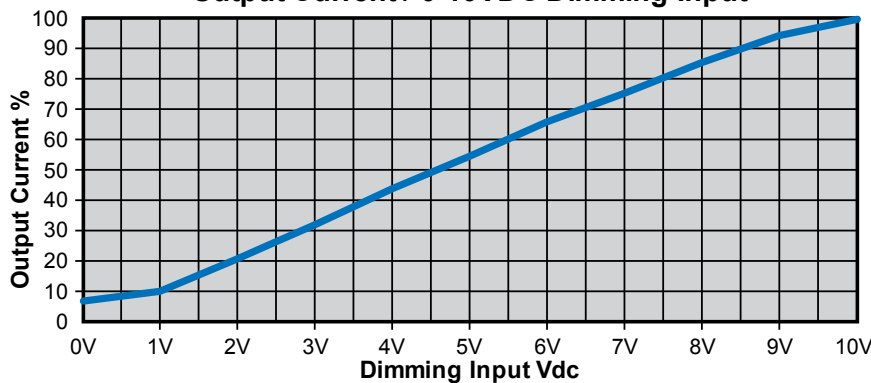
Resistance Dimming Typical Circuit



0-10V Analog Dimming Typical Circuit



Output Current / 0-10VDC Dimming Input



Notes:

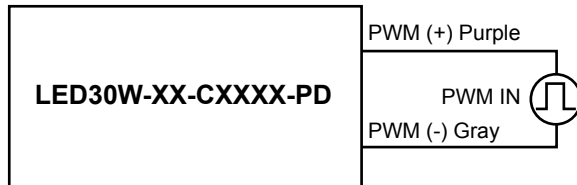
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V
4. 0-10V dimmable version output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.



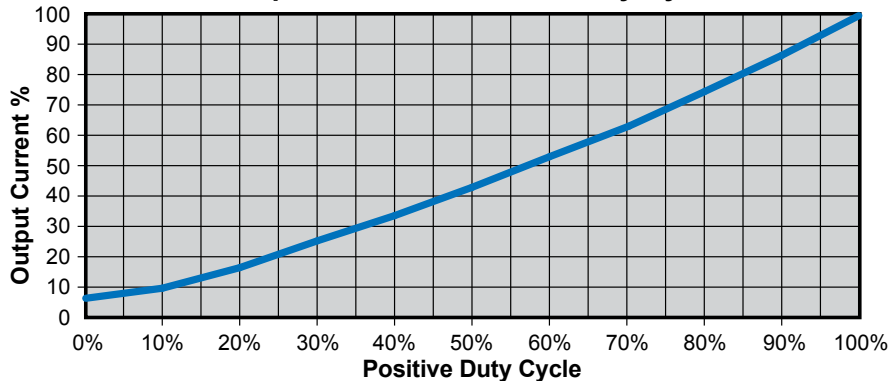
“-PD” Option: PWM Dimming

| Parameters | Minimum | Typical | Maximum |
|---|---------|---------|---------|
| Absolute Maximum Voltage Range on PWM Input (Purple Wire) | -2.0V | 10V | +28V |
| Input LOW Level Voltage Range (Purple Wire) | -2.0 | 0V | +7.5V |
| Input HIGH Level Voltage Range (Purple Wire) | +9.0 | 10V | 28V |
| Sink Current into PWM Input (Purple Wire) | 0mA | — | 1.2mA |
| PWM Input Signal Frequency | 200Hz | — | 1000Hz |
| PWM Input Signal Positive Duty Cycle | 0% | 10-90% | 100% |

PWM Positive Dimming Typical Circuit



Output Current / Positive Duty Cycle



Notes:

1. PWM Dimmable version comes with an extra 2 wires +Purple/-Gray on the output side.
2. Below 10% Duty cycle proper dimming operation is not assured. Unit is not intended to turn off at <10% Duty Cycle.
3. PWM dimmable version output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.