



LED-90W Series— Fixed Output and Dimmable Switch Mode LED Drivers Constant Current & Constant Voltage with Isolation Black Magic Thermal Advantage™ Aluminum Housing

Electrical Specifications

| | |
|----------------------|---|
| Input Voltage Range: | 100-277 Vac Nom. (90-305 V Min/Max) |
| Input Over-Voltage: | Can endure 320Vac for 48 Hrs, 350Vac for 2 Hrs |
| Frequency: | 50/60 Hz Nom. (47-63 Hz Min/Max) |
| Power Factor: | >0.90 @ full load, 100V through 277V |
| Inrush Current: | <30.0 Amps max @ 230 Vac, cold start 25°C |
| Input Current: | 1.2 Amps max |
| Maximum Power: | 90W |
| 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 reset by power cycling |

Electrical Specifications

| | |
|------------------------|---|
| Minimum Starting Temp: | -30°C |
| Maximum Case Temp. | 90°C |
| UL Type TL Rating: | Class 2: 90/69°C; Non-Class 2: 90/69°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: | 418,000 Hours at full load and 40°C ambient conditions per MIL-217F Notice 2 |
| EMC: | FCC 47CFR Part 15 Class B compliant |

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. 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.



- Total Power: 90 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66
- High Power Factor
- UL Type HL Rated for Hazardous Locations

Constant Current - Product Specifications

| Model Number | Output Current (mA ±3%) | Output Voltage Range (Vdc) | Max. Output Power (W) | Typical Efficiency |
|---------------------|----------------------------|-------------------------------|--------------------------|-----------------------|
| LED90W-257-C0350-XX | 350 | 85-257 | 90 | 92% |
| LED90W-200-C0450-XX | 450 | 66-200 | 90 | 92% |
| LED90W-128-C0700-XX | 700 | 42-128 | 90 | 92% |
| LED90W-085-C1050-XX | 1050 | 28-85 | 90 | 91% |
| LED90W-064-C1400-XX | 1400 | 21-64 | 90 | 91% |
| LED90W-056-C1600-XX | 1600 | 18-56 | 90 | 91% |
| LED90W-048-C1875-XX | 1875 | 16-48 | 90 | 91% |
| LED90W-036-C2500-XX | 2500 | 12-36 | 90 | 90% |
| LED90W-030-C3000-XX | 3000 | 10-30 | 90 | 90% |
| LED90W-027-C3330-XX | 3330 | 9-27 | 90 | 89% |
| LED90W-025-C3500-XX | 3500 | 8-25 | 90 | 89% |
| LED90W-022-C4090-XX | 4090 | 7-22 | 90 | 89% |
| LED90W-020-C4500-XX | 4500 | 7-20 | 90 | 88% |
| LED90W-018-C5000-XX | 5000 | 6-18 | 90 | 87% |
| LED90W-015-C6000-XX | 6000 | 5-15 | 90 | 87% |

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

Constant Voltage - Product Specifications

| Model Number | Output Voltage (Vdc ±5%) | Output Current Range (mA) | Max. Output Power (W) | Typical Efficiency |
|--------------|-----------------------------|------------------------------|--------------------------|-----------------------|
| LED90W-015 | 15 | 1500-6000 | 90 | 87% |
| LED90W-018 | 18 | 1250-5000 | 90 | 87% |
| LED90W-020 | 20 | 1125-4500 | 90 | 88% |
| LED90W-022 | 22 | 1023-4090 | 90 | 89% |
| LED90W-025 | 25 | 875-3500 | 90 | 89% |
| LED90W-027 | 27 | 833-3330 | 90 | 89% |
| LED90W-030 | 30 | 750-3000 | 90 | 90% |
| LED90W-036 | 36 | 625-2500 | 90 | 90% |
| LED90W-048 | 48 | 469-1875 | 90 | 91% |
| LED90W-056 | 56 | 400-1600 | 90 | 91% |
| LED90W-064 | 64 | 350-1400 | 90 | 91% |
| LED90W-085 | 85 | 263-1050 | 90 | 91% |
| LED90W-128 | 128 | 175-700 | 90 | 92% |
| LED90W-200 | 200 | 113-450 | 90 | 92% |
| LED90W-257 | 257 | 88-350 | 90 | 92% |

Class 2: US/Canada

Rev 6-30-16



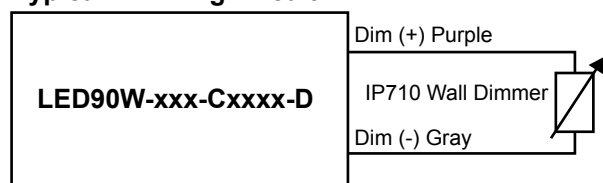
Note:
LED drivers are designed and intended to operate LED loads only.
Non-LED loading may be outside the specified design limits of our
LED drivers, and therefore cannot be covered by any warranty.
If you desire to use our LED drivers to operate non-LED loads
please contact us to discuss compatibility.

Specifications subject to change without notice.

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

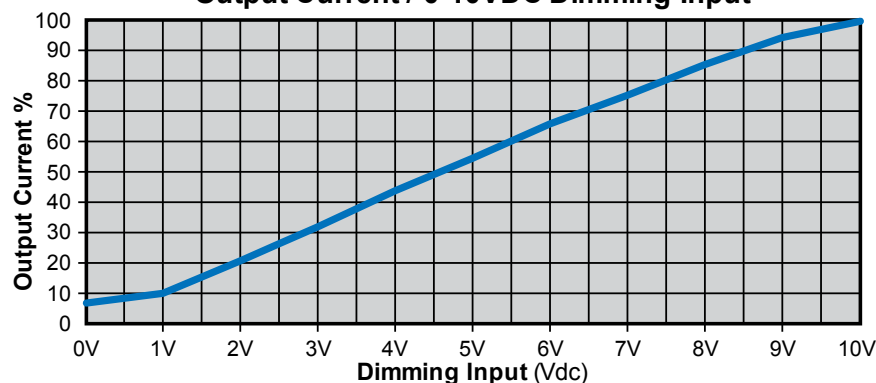
| Parameters | Minimum | Typical | Maximum |
|---|---------|---------|---------|
| Source Current out of 0-10V Purple Wire | 0 mA | — | 2 mA |
| Absolute Voltage Range on 0-10V (+) Purple Wire | -2.0 V | — | +15 V |

Typical Dimming Circuit



(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input



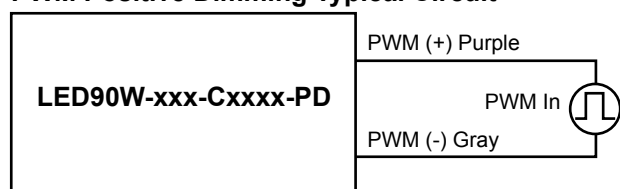
Notes:

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.

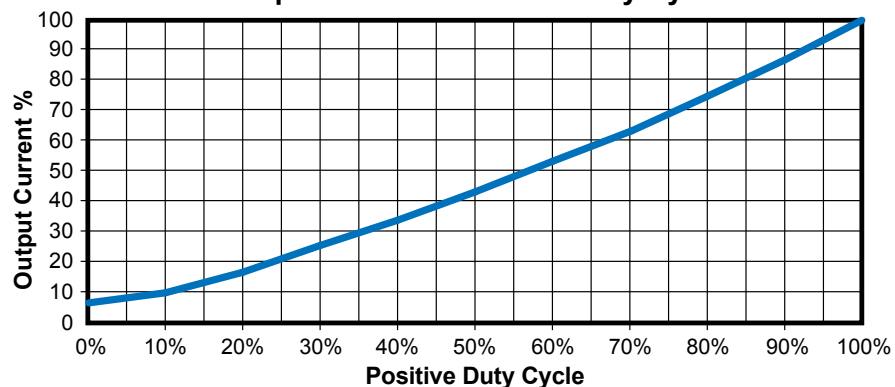
“-PD” Option: PWM Dimming

| 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.