

150 Watt - LDAD150W Series

CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING



150W
LDAD150W Series
DIMMING

Model: LDAD150W Series

- Drive Mode: Constant Current or Constant Voltage
- Technology: PFC Corrected 2-Stage Switch Mode
- Output Power: 150W Max.
- Input Voltage: 90 to 305VAC, 50/60Hz, 108-250VDC
- Number of Outputs: One
- Output Voltages: 8VDC - 428VDC
- Output Currents: 350mA - 6250mA
- Optional 0-10V or PWM Positive Dimming 10% ~ 100%

Environmental

1. Operating temperature: Tc 90C Maximum. Reference -30 to +60°C ambient
2. Storage temperature range: -40 to +85°C
3. Humidity (non-condensing): 5% - 95%RH
4. Cooling: Convection
5. Vibration Frequency: 5-55Hz/2g, 30 minutes
6. Impact resistance: 1g/s
7. MTBF@ 40°C: 260,000 hours @ Full Load per MIL-217F Notice 2.

Safety and Compliance

1. UL8750, EN61347, CSA 22.2 safety compliant
2. FCC, 47CFR Part 15 Class B compliant
3. Water resistant and Dust Proof Design: IP66, NEMA6, for Dusty, Dry, Damp & Wet Locations.
4. Compact, Lightweight Design.
5. Safety Isolation between Primary and Secondary
6. Meets EN61000-3-2 & EN61000-3-3 Class C
7. Protection: output over-voltage, output over-current, output short circuit, reset by power cycling.
8. Transient protection built in.

Electrical Specifications at 25°C

- Input voltage range: 90 to 305VAC or 108-250VDC
- Frequency: 47 - 63Hz or 0Hz (DC)
- Power Factor: ≥ 0.90 at $> 70\%$ Load, 120Vac/230Vac/277Vac 50/60Hz
- THD%: $\leq 20\%$ at $> 70\%$ Load, 120Vac/230Vac/277Vac 50/60Hz
- Inrush current: $<30A$ at 25C, 277Vac, cold start, Full Load
- Input current: 0.76A Max @ 230Vac, 1.44A Max @ 120Vac, Full load
- Efficiency: Up to 92% typical at 230Vac Full Load
- Constant Current regulation: $\pm 3\%$ Over Input Line Variation
- Load regulation accuracy: $\pm 4\%$
- Leakage current: 600uA typical; Hold up time: half cycle

Constant Current Versions



IP66



Part Number ⁽²⁾⁽⁵⁾	Output Voltage Range	Output Constant Current	Current Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LDAD150W-428-C0350	142 - 428 VDC	350 mA	$\pm 5\%$	150W	92%
LDAD150W-333-C0450	111 - 333 VDC	450 mA	$\pm 5\%$	150W	92%
LDAD150W-283-C0530	95 - 283 VDC	530 mA	$\pm 5\%$	150W	91%
LDAD150W-214-C0700	72 - 214 VDC	700 mA	$\pm 5\%$	150W	91%
LDAD150W-142-C1050	48 - 142 VDC	1050 mA	$\pm 5\%$	150W	91%
LDAD150W-107-C1400	36 - 107 VDC	1400 mA	$\pm 5\%$	150W	91%
LDAD150W-85-C1750	29 - 85 VDC	1750 mA	$\pm 5\%$	150W	90%
LDAD150W-71-C2100	24 - 71 VDC	2100 mA	$\pm 5\%$	150W	90%
LDAD150W-61-C2450	21 - 61 VDC	2450 mA	$\pm 5\%$	150W	90%
LDAD150W-53-C2800	18 - 53 VDC	2800 mA	$\pm 5\%$	150W	90%
LDAD150W-48-C3150	16 - 48 VDC	3150 mA	$\pm 5\%$	150W	89%
LDAD150W-42-C3500	14 - 42 VDC	3500 mA	$\pm 5\%$	150W	89%
LDAD150W-35-C4200	12 - 35 VDC	4200 mA	$\pm 5\%$	150W	89%
LDAD150W-30-C4900	10 - 30 VDC	4900 mA	$\pm 5\%$	150W	88%
LDAD150W-24-C6250	8 - 24 VDC	6250 mA	$\pm 5\%$	150W	88%

Notes

1. Typical efficiency measured at 230VAC input, full load
2. For dimmable versions add appropriate designator to the end of the part number: For Example: LDAD150W-24-C6250-RD is 0-10V or resistance dimmable version, LDAD150W-24-C6250-PD is PWM dimmable version.
-RD 0-10V & Resistance dimmable version comes with an extra two wires +Purple/-Grey on the output side.
-PD PWM Dimmable version comes with an extra two wires +Purple/-Grey on the output side.
3. -RD 0-10V Dimming is compatible with most quality 0-10V wall dimmers and direct 0-10V analog signal. See page 3 for details.
4. -PD PWM version is PWM Dimmable via a positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4 for details.
5. All models are UL & cUL Non-Class 2 Output

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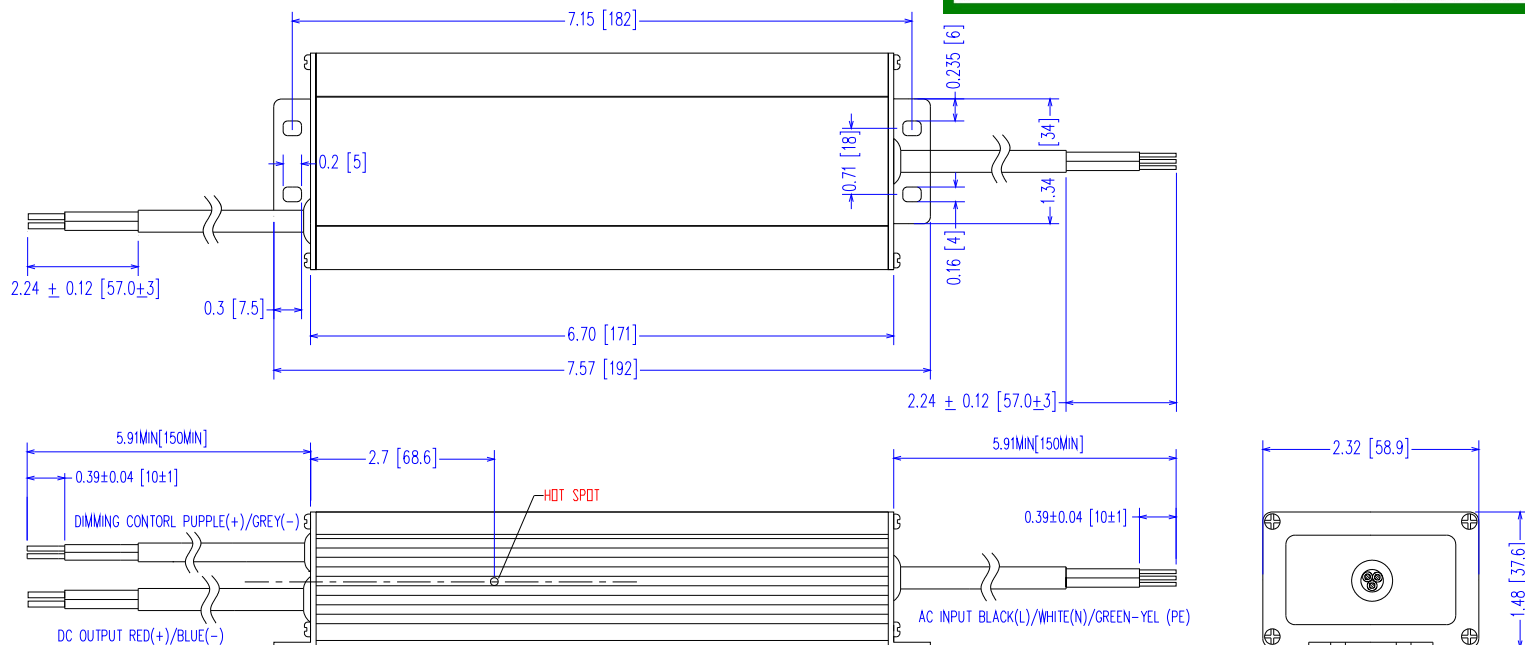
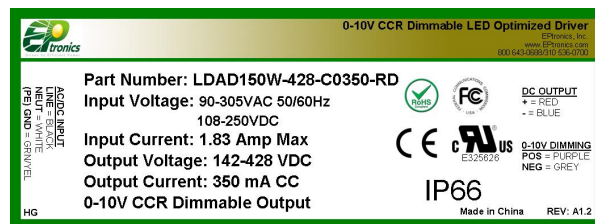
Constant Voltage Versions

Part Number ⁽⁵⁾	Output Constant Voltage	Output Current Range	Voltage Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LDAD150W-428	428 VDC	88 - 350 mA	± 5%	150W	92%
LDAD150W-333	333 VDC	113 - 450 mA	± 5%	150W	92%
LDAD150W-283	283 VDC	133 - 530 mA	± 5%	150W	91%
LDAD150W-214	214 VDC	175 - 700 mA	± 5%	150W	91%
LDAD150W-142	142 VDC	263 - 1050 mA	± 5%	150W	91%
LDAD150W-107	107 VDC	350 - 1400 mA	± 5%	150W	91%
LDAD150W-85	85 VDC	438 - 1750 mA	± 5%	150W	90%
LDAD150W-71	71 VDC	525 - 2100 mA	± 5%	150W	90%
LDAD150W-61	61 VDC	613 - 2450 mA	± 5%	150W	90%
LDAD150W-53	53 VDC	700 - 2800 mA	± 5%	150W	90%
LDAD150W-48	47 VDC	788 - 3150 mA	± 5%	150W	89%
LDAD150W-42	42 VDC	875 - 3500 mA	± 5%	150W	89%
LDAD150W-35	35 VDC	1050 - 4200 mA	± 5%	150W	89%
LDAD150W-30	30 VDC	1225 - 4900 mA	± 5%	150W	88%
LDAD150W-24	24 VDC	1563 - 6250 mA	± 5%	150W	88%

Mechanical Dimensions: Inches [mm]

Material: Black Aluminum Housing
Fully Encapsulated
Weight: 690 grams (24.4 oz) Typical

Labeling Example



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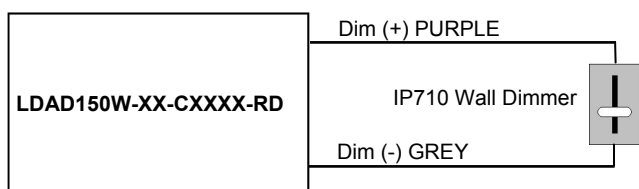
-RD 2-Wire 0-10V CCR Dimming Scheme

Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0mA	—	2mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0V	—	+15V
Sink Current into 0-10V Purple Wire	0mA	—	1.2mA

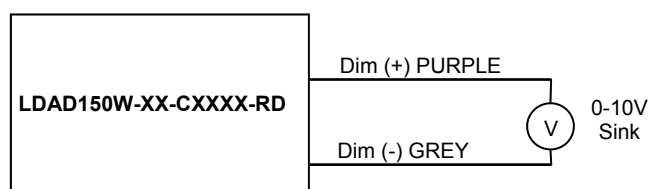
Notes

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

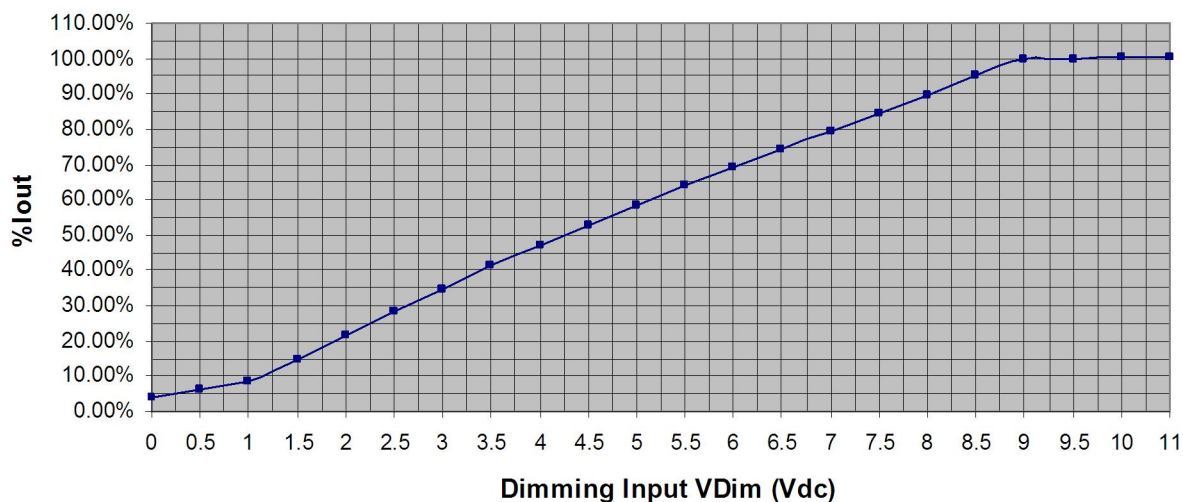
-RD 2-Wire Resistance Dimming Scheme



-RD 2-Wire 0-10V Analog Dimming Scheme



% Output Current vs. 0-10VDC Dimming Input



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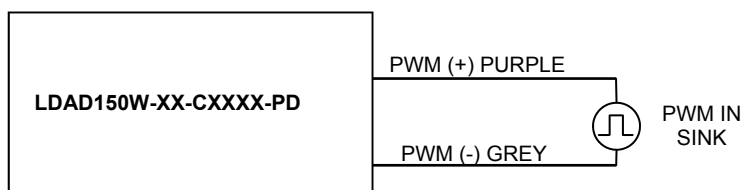
-PD 2-Wire CCR PWM Positive Dimming Scheme

Parameters	Minimum	Typical	Maximum
Absolute Maximum Voltage Range on PWM Input (Purple Wire)	-2.0V	10V	+15V
Input LOW Level Voltage Range (Purple Wire)	-2.0V	0V	+5.5V
Input HIGH Level Voltage Range (Purple Wire)	+9.0V	10V	+15V
Current into PWM Input (Purple Wire)	0mA	—	1.2mA
Source Current out of PWM Input (Purple Wire)	0mA	—	2mA
PWM Input Signal Frequency	500Hz	—	1500Hz
PWM Input Signal Positive Duty Cycle	0%	10-90%	100%

Notes

1. -PD PWM Dimmable version comes with an extra 2 wires +Purple/-Grey on the output side.
2. -PD PWM Dimmable version is not intended to dim below about 5% @ 0% Duty Cycle or 10% @ 10% Duty Cycle
3. -PD PWM dimmable version output will be 100% with Purple/Grey open and minimum with Purple/Grey Shorted.

-PD 2-Wire PWM Positive Dimming Scheme



% Output Current vs. 1.0 kHz, Positive Duty Cycle Dimming Input

