

120 Watt - LDAD120W Series

CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING



120W
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 DIMMING

Model: LDAD120W Series

- Drive Mode: Constant Current or Constant Voltage
- Technology: PFC Corrected 2-Stage Switch Mode
- Output Power: 120W Max.
- Input Voltage: 90 to 305VAC, 50/60Hz, 108-250VDC
- Number of Outputs: One
- Output Voltages: 8VDC - 343VDC
- Output Currents: 350mA - 5000mA
- Optional 0-10V or PWM Positive Dimming 10% ~ 100%

Environmental

1. Operating temperature: Tc 90C Maximum. Reference -30 to +60°C ambient
2. UL Type TL (Tref Max/Meas. Tref): 90/82°C
3. Storage temperature range: -40 to +85°C
4. Humidity (non-condensing): 5% - 95%RH
5. Cooling: Convection
6. Vibration Frequency: 5-55Hz/2g, 30 minutes
7. Impact resistance: 1g/s
8. MTBF@ 40°C: 280,000 hours @ Full Load per MIL-217F Notice 2.

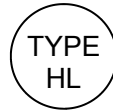
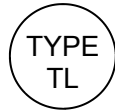
Safety and Compliance

1. UL8750, EN61347, CSA 22.2, UL Type TL & HL recognized.
2. FCC, 47CFR Part 15 Class B certified
3. Water resistant and Dust Proof Design: IP66, NEMA6, for Dry, Damp, Wet Locations.
4. Compact Miniature, 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, auto-recovery.
8. EN61000-4-5: 2kV/4kV 8/20 µsec surge protection.

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%: ≤ 20% at > 70% Load, 120Vac/230Vac/277Vac 50/60Hz
- Inrush current: <60A at 25C, 277Vac, cold start, Full Load
- Input current: 0.6A Max @ 230Vac, 1.1A Max @ 120Vac, Full Load
- Efficiency: Up to 92% typical at 230Vac Full Load
- Line regulation accuracy: ± 3%
- Load regulation accuracy: ± 4%
- Leakage current: 600µA typical; Hold up time: half cycle

Constant Current Versions



IP66



Part Number ⁽²⁾	UL Types	Output Voltage Range	Output Constant Current	Current Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LDAD120W-343-C0350	TL & HL	114 - 343 VDC	350 mA	± 5%	120W	92%
LDAD120W-266-C0450	TL & HL	89 - 266 VDC	450 mA	± 5%	120W	92%
LDAD120W-171-C0700	TL & HL	57 - 171 VDC	700 mA	± 5%	120W	90%
LDAD120W-114-C1050	TL & HL	38 - 114 VDC	1050 mA	± 5%	120W	90%
LDAD120W-86-C1400	TL & HL	29 - 86 VDC	1400 mA	± 5%	120W	90%
LDAD120W-68-C1750	TL & HL	23 - 68 VDC	1750 mA	± 5%	120W	89%
LDAD120W-57-C2100	TL & HL	19 - 57 VDC	2100 mA	± 5%	120W	89%
LDAD120W-49-C2450	TL & HL	17 - 49 VDC	2450 mA	± 5%	120W	89%
LDAD120W-43-C2800	TL & HL	15 - 43 VDC	2800 mA	± 5%	120W	88%
LDAD120W-38-C3150	TL & HL	13 - 38 VDC	3150 mA	± 5%	120W	88%
LDAD120W-34-C3500	TL & HL	12 - 34 VDC	3500 mA	± 5%	120W	88%
LDAD120W-28-C4200	TL & HL	10 - 28 VDC	4200 mA	± 5%	120W	87%
LDAD120W-24-C5000 ⁽⁵⁾	TL & HL	8 - 24 VDC	5000 mA	± 5%	120W	87%

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: LDAD120W-24-C5000-RD is 0-10V dimmable version, LDAD120W-24-C5000-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, 500Hz to 1.5kHz, 0-10V Pulse. See page 4 for details.
5. SAM Recognized.

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LED Optimized Drivers

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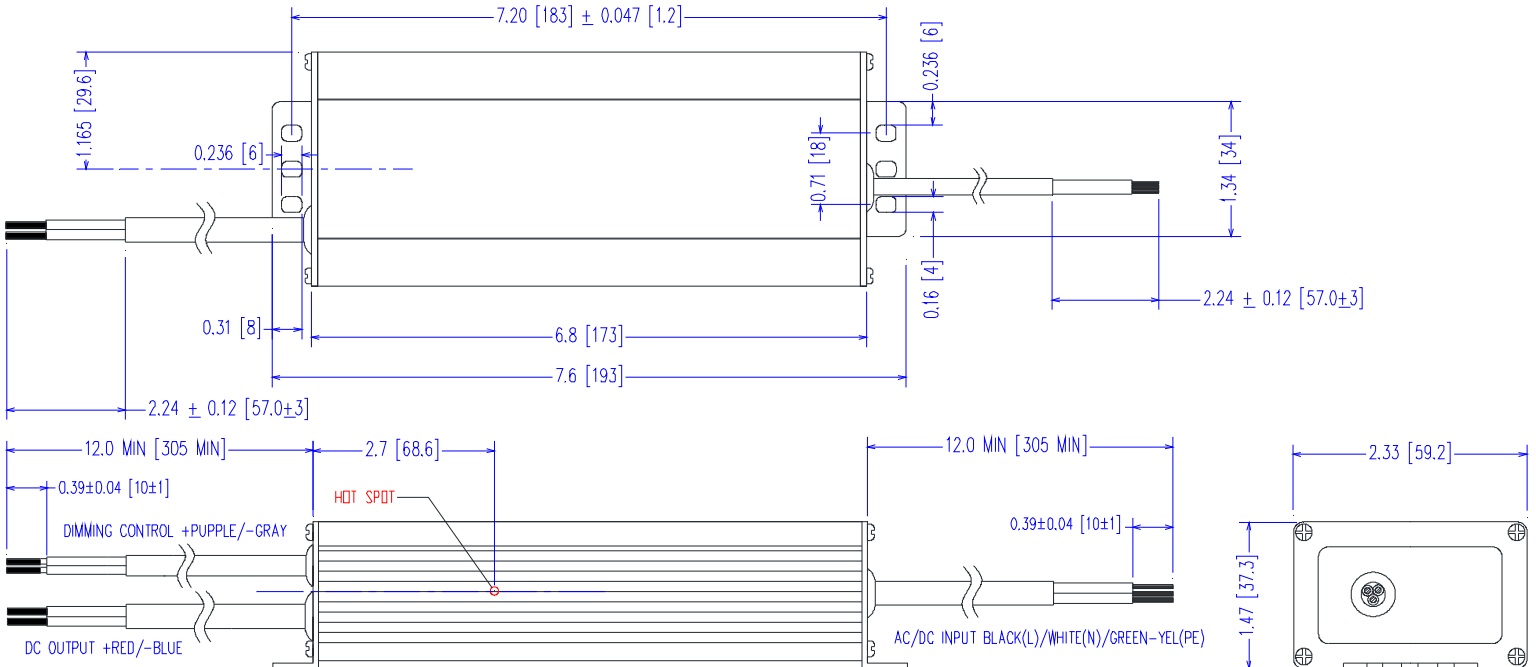
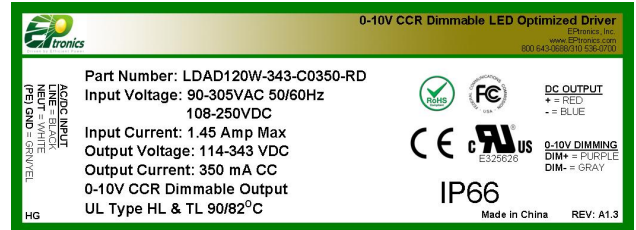
Constant Voltage Versions

Part Number	UL Types	Output Constant Voltage	Output Current Range	Voltage Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LD120W-343	TL & HL	343 VDC	88 - 350 mA	± 5%	120W	92%
LD120W-266	TL & HL	266 VDC	113 - 450 mA	± 5%	120W	92%
LD120W-171	TL & HL	171 VDC	175 - 700 mA	± 5%	120W	91%
LD120W-114	TL & HL	114 VDC	263 - 1050 mA	± 5%	120W	91%
LD120W-86	TL & HL	86 VDC	350 - 1400 mA	± 5%	120W	91%
LD120W-68	TL & HL	68 VDC	438 - 1750 mA	± 5%	120W	91%
LD120W-57	TL & HL	57 VDC	525 - 2100 mA	± 5%	120W	90%
LD120W-49	TL & HL	49 VDC	613 - 2450 mA	± 5%	120W	90%
LD120W-43	TL & HL	43 VDC	700 - 2800 mA	± 5%	120W	90%
LD120W-38	TL & HL	38 VDC	788 - 3150 mA	± 5%	120W	90%
LD120W-34	TL & HL	34 VDC	875 - 3500 mA	± 5%	120W	89%
LD120W-28	TL & HL	28 VDC	1050 - 4200 mA	± 5%	120W	89%
LD120W-24 ⁽⁵⁾	TL & HL	24 VDC	1250 - 5000 mA	± 5%	120W	89%

Mechanical Dimensions: Inches [mm]

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

Labeling Example



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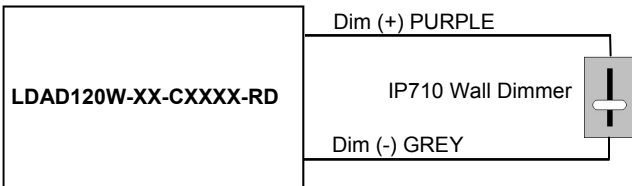
-RD 2-Wire 0-10V CCR Dimming Scheme

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

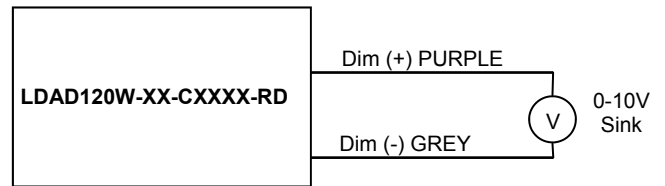
Notes

- RD 0-10V dimmable version comes with an extra two wires +Purple/-Grey on the output side.
- 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
- RD 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V
- RD 0-10V dimmable version output will be 100% with Purple/Grey open and minimum with Purple/Grey Shorted.

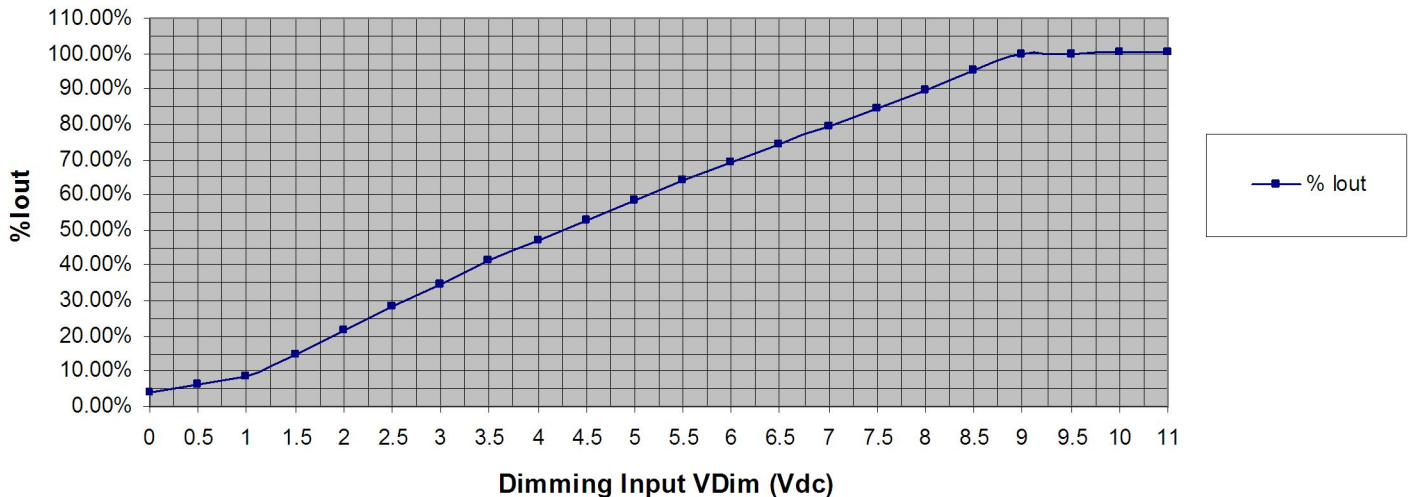
-RD 2-Wire Resistance Dimming Scheme



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



% Output Current vs. 0-10VDC Dimming Input



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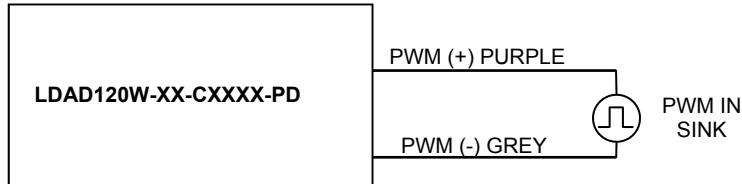
-PD 2-Wire CCR PWM Positive Dimming Scheme

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

