

96 Watt - LP96W480 Series

CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING



DIMMING
LP96W480 Series
96W

Model: LP96W480 Series

- Drive Mode: Constant Current or Constant Voltage
- Technology: PFC Corrected 2-Stage Switch Mode
- Output Power: 96W Max.
- Input Voltage: 277 to 480VAC, 50/60Hz
- Number of Outputs: One
- Output Voltages: 6VDC - 274VDC
- Output Currents: 350mA - 5350mA
- Optional 0-10V or PWM Positive Dimming 10% ~ 100%

Environmental

1. Operating temperature: Tc 90°C Maximum. Reference -30 to +65°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: 474,000 hours @ Full Load per MIL-217F Notice 2.

Safety and Compliance

1. UL8750, CSA 22.2 safety compliant. UL Type HL
 2. FCC, 47CFR Part 15 Class B compliant
 3. Water resistant and Dust Proof Design: IP66, NEMA6, for Dry, Damp, Wet Locations.
 4. Safety Isolation between Primary and Secondary
 5. EN61000-4-5: 3kV/6kV 8/20 usec surge protection.
 6. Protection: output over-voltage, output over-current, output short circuit, auto recovery.
 7. Internal Thermal protection. Hick-up mode.
- Off if Tc reaches ~110°C, On when Tc reaches ~65°C

Electrical Specifications at 25°C

- Input voltage range: 277 to 480VAC
- Frequency: 47~ 63HZ
- Power Factor: ≥ 0.90 at $\geq 60\%$ Load 277Vac/347Vac, $\geq 80\%$ Load 480Vac
- THD%: $\leq 20\%$ at $\geq 60\%$ Load 277Vac/347Vac, $\geq 80\%$ Load 480Vac
- Inrush current: $<30A$ at 25°C, 480Vac, cold start, Max. Load
- Input current: 0.45A Maximum
- Efficiency: Up to 88% typical at 480Vac Full Load
- Line regulation accuracy: $\pm 3\%$
- Load regulation accuracy: $\pm 4\%$
- Leakage current: 700uA typical; Hold up time: half cycle

Constant Current Versions



IP66



Part Number ⁽²⁾	US Class 2	CN Class 2	Output Voltage Range	Output Constant Current	Current Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LP96W480-274-C0350	NO	NO	92 - 274 VDC	350 mA	$\pm 5\%$	96W	88%
LP96W480-213-C0450	NO	NO	71 - 213 VDC	450 mA	$\pm 5\%$	96W	88%
LP96W480-137-C0700	NO	NO	46 - 137 VDC	700 mA	$\pm 5\%$	96W	86%
LP96W480-92-C1050	NO	NO	31 - 92 VDC	1050 mA	$\pm 5\%$	96W	86%
LP96W480-69-C1400	NO	NO	23 - 69 VDC	1400 mA	$\pm 5\%$	96W	86%
LP96W480-54-C1750	YES	YES	18 - 54 VDC	1750 mA	$\pm 5\%$	96W	85%
LP96W480-48-C2000	YES	YES	16 - 48 VDC	2000 mA	$\pm 5\%$	96W	85%
LP96W480-46-C2100	YES	YES	16 - 46 VDC	2100 mA	$\pm 5\%$	96W	85%
LP96W480-39-C2450	YES	YES	14 - 39 VDC	2450 mA	$\pm 5\%$	96W	84%
LP96W480-36-C2660	YES	YES	12 - 36 VDC	2660 mA	$\pm 5\%$	96W	84%
LP96W480-34-C2800	YES	YES	12 - 34 VDC	2800 mA	$\pm 5\%$	96W	84%
LP96W480-30-C3150	YES	YES	10 - 30 VDC	3150 mA	$\pm 5\%$	96W	84%
LP96W480-27-C3500	YES	YES	9 - 27 VDC	3500 mA	$\pm 5\%$	96W	83%
LP96W480-25-C3840	YES	YES	9 - 25 VDC	3840 mA	$\pm 5\%$	96W	83%
LP96W480-24-C4000	YES	YES	8 - 24 VDC	4000 mA	$\pm 5\%$	96W	81%
LP96W480-20-C4800	YES	YES	7 - 20 VDC	4800 mA	$\pm 5\%$	96W	81%
LP96W480-18-C5350	NO	NO	6 - 18 VDC	5350 mA	$\pm 5\%$	96W	81%

Notes

1. Typical efficiency measured at 480VAC input, full load
2. For dimmable versions add appropriate designator to the end of the part number: For Example: LP96W480-24-C4000-RD is 0-10V or resistance dimmable version, LP96W480-24-C4000-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, 400Hz to 1KHz, 0-10V Pulse. See page 4 for details.

96 Watt - LP96W480 Series

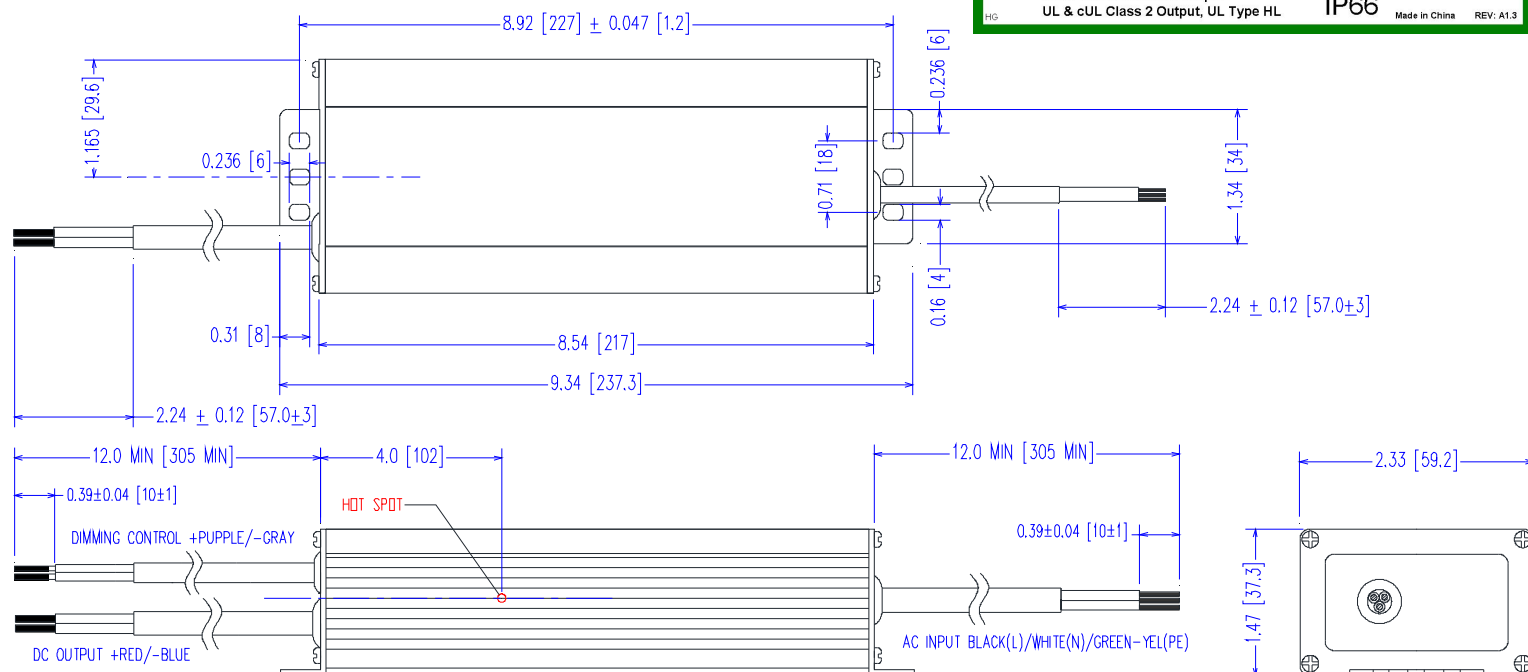
CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING

Constant Voltage Versions

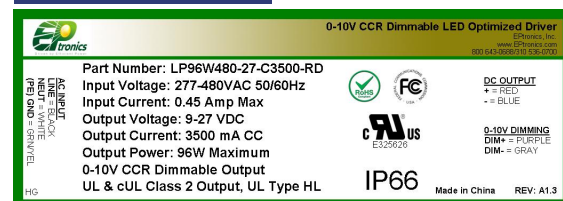
Part Number	US Class 2	CN Class 2	Output Constant Voltage	Output Current Range	Voltage Accuracy	Output Power Maximum	Typical Efficiency ⁽¹⁾
LP96W480-274	NO	NO	274 VDC	88 - 350 mA	± 5%	96W	88%
LP96W480-213	NO	NO	213 VDC	113 - 450 mA	± 5%	96W	88%
LP96W480-137	NO	NO	137 VDC	175 - 700 mA	± 5%	96W	86%
LP96W480-92	NO	NO	92 VDC	263 - 1050 mA	± 5%	96W	86%
LP96W480-69	NO	NO	69 VDC	350 - 1400 mA	± 5%	96W	86%
LP96W480-54	YES	YES	54 VDC	438 - 1750 mA	± 5%	96W	85%
LP96W480-48	YES	YES	48 VDC	500 - 2000 mA	± 5%	96W	85%
LP96W480-46	YES	YES	46 VDC	525 - 2100 mA	± 3%	96W	85%
LP96W480-39	YES	YES	39 VDC	613 - 2450 mA	± 5%	96W	84%
LP96W480-36	YES	YES	36 VDC	665 - 2660 mA	± 5%	96W	84%
LP96W480-34	YES	YES	34 VDC	700 - 2800 mA	± 5%	96W	84%
LP96W480-30	YES	YES	30 VDC	788 - 3150 mA	± 5%	96W	84%
LP96W480-27	YES	YES	27 VDC	875 - 3500 mA	± 5%	96W	83%
LP96W480-25	YES	YES	25 VDC	960 - 3840 mA	± 5%	96W	83%
LP96W480-24	YES	YES	24 VDC	1000 - 4000 mA	± 5%	96W	81%
LP96W480-20	YES	YES	20 VDC	1200 - 4800 mA	± 5%	96W	81%
LP96W480-18	NO	NO	18 VDC	1338 - 5350 mA	± 5%	96W	81%

Mechanical Dimensions: Inches [mm]

Material: Black Aluminum Housing
Fully Encapsulated
Weight: 32.1 oz (910 grams) Typical



Labeling Example



96 Watt - LP96W480 Series

CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING

DIMMING

LP96W480 Series

96W

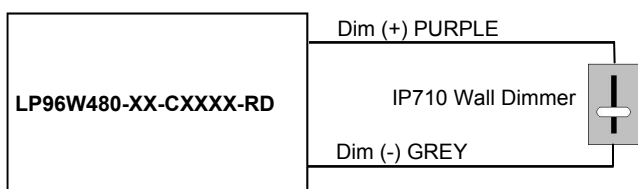
-RD 2-Wire 0-10V CCR Dimming Scheme

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

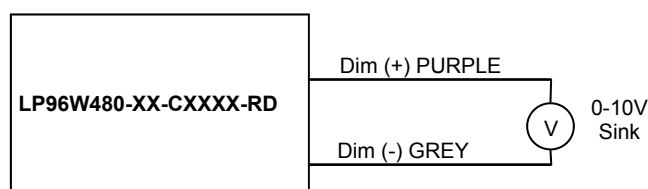
Notes

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.

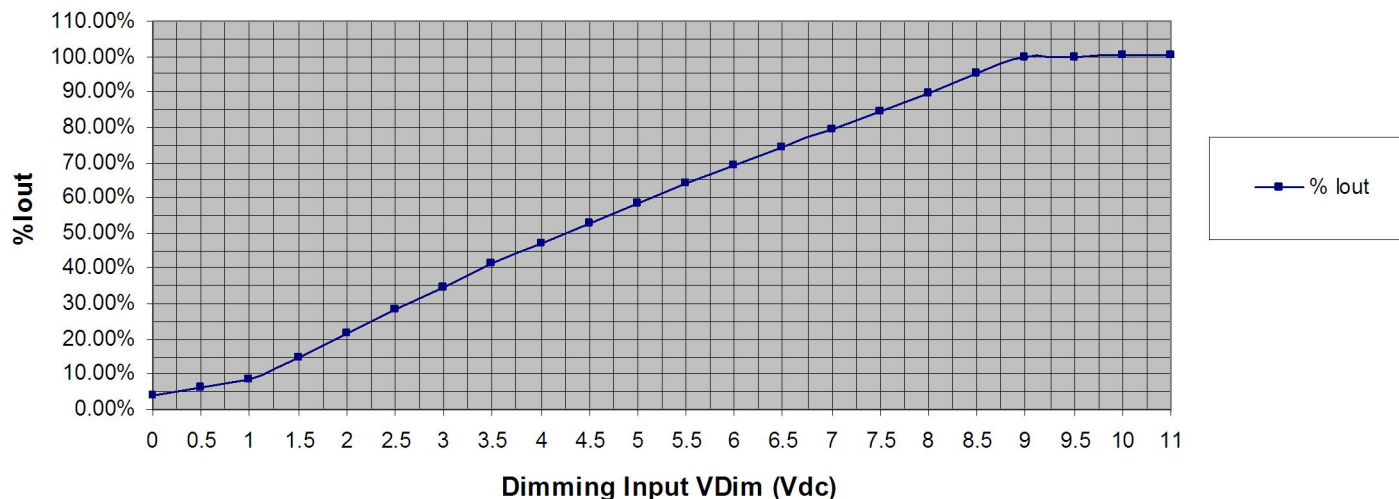
-RD 2-Wire Resistance Dimming Scheme



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



% Output Current vs. 0-10VDC Dimming Input



96 Watt - LP96W480 Series

CONSTANT VOLTAGE OR CONSTANT CURRENT LED DRIVER WITH DIMMING

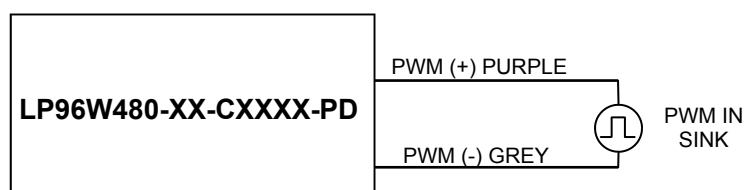
-PD 2-Wire CCR PWM Positive Dimming Scheme

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

