



PLED-96W Series– Fixed Output & Dimmable Flicker-Free 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 @ 60-100% load, 100-277Vac
Inrush Current:	<50.0 Amps max @ 230Vac, cold start 25°C
Input Current:	1.30 Amps max
Maximum Power:	96W
Current Accuracy:	± 2% Over input line variation
Load Regulation:	± 3%
THD:	≤ 20% @ 60-100% load, 100-277Vac
Ripple & Noise: (Vpk-pk)	5% Vo max @ 20 MHz BW, Full load output in parallel with 0.1 µF ceramic & 10 µF Electrolytic
Ripple: (Ipk-pk)	5% Io max @ 20 MHz BW, Full load output in parallel with 0.1 µF ceramic & 10 µF Electrolytic. 120 Hz component (Flicker Free)
Start-up Time:	200mS typical @ Full Load, 120Vac/60Hz (1000mS max)
Leakage Current:	0.28 mA max @ 120Vac, 0.78 mA max @ 277Vac
Hold Up Time:	40mS typical @ Full Load, 277Vac
Output Protection:	Over-Voltage, Over-Current, and Short Circuit Protection with Auto Recovery

Environmental Specifications

Minimum Starting Temp:	-30°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
Impact Resistance:	1g/s
MTBF:	474,000 Hours @ full load and 40°C ambient conditions per MIL-217F Notice 2
EMC:	FCC 47CFR Part 15 Class B compliant
Weight:	21.6 oz. (612 grams)

Ordering Options:

- D: 0-10V & Resistance dimmable models dim 100-10%. Two extra wires on the output side (+Purple/-Gray). Compatible with most quality 0-10V wall dimmers. See page 3.
- D3: 3-wire dimmable models dim 100-10%. Three extra wires on the output side (Yellow/Purple/Gray). Compatible with potentiometer dimming. See page 3.
- PD: PWM Dimmable models. Two extra wires on the output side(+Purple/-Gray). Dims via positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4.



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.



- Total Power: 96 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66 & NEMA6
- UL Type HL Rated for Hazardous Materials
- UL Sign Components Manual (S.A.M. Models)

Constant Current Versions - Specifications

Model Number	Output Current (mA ±3%)	Output Voltage Range (Vdc)	Max. Output Power (W)	Max Efficiency
PLED96W-274-C0350-XX	350	92-274	95.9	92%
PLED96W-213-C0450-XX	450	71-213	95.6	92%
PLED96W-137-C0700-XX	700	46-137	95.9	92%
PLED96W-092-C1050-XX	1050	31-92	96	91%
PLED96W-069-C1400-XX	1400	23-69	96	91%
PLED96W-054-C1750-XX	1750	18-54	94.5	91%
PLED96W-048-C2000-XX	2000	16-48	96	90%
PLED96W-046-C2100-XX	2100	16-46	96	90%
PLED96W-039-C2450-XX	2450	14-39	95.5	89%
PLED96W-036-C2660-XX	2660	12-36	95.7	89%
PLED96W-034-C2800-XX	2800	12-34	95.2	89%
PLED96W-030-C3150-XX	3150	10-30	94.8	89%
PLED96W-027-C3500-XX	3500	9-27	94.5	88%
PLED96W-025-C3840-XX	3840	9-25	96	88%
PLED96W-024-C4000-XX	4000	8-24	96	88%
PLED96W-020-C4800-XX	4800	7-20	96	87%
PLED96W-018-C5350-XX	5350	6-18	96	86%

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

Constant Voltage Versions - Specifications

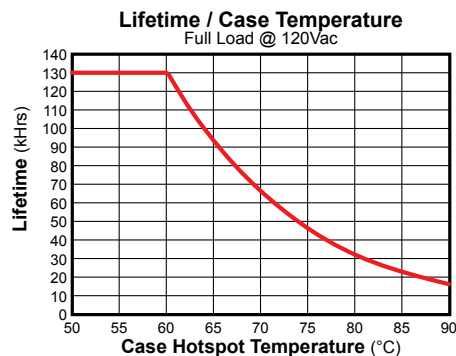
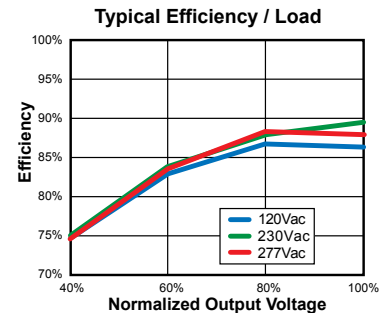
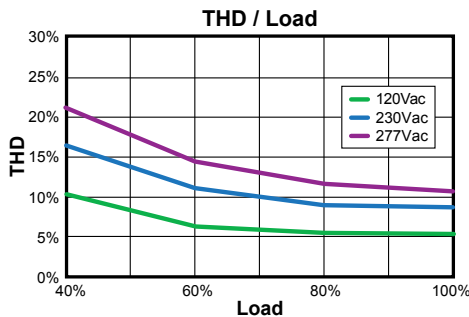
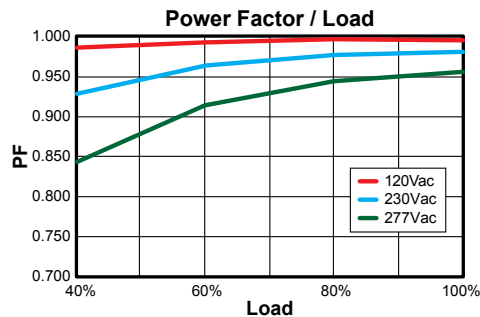
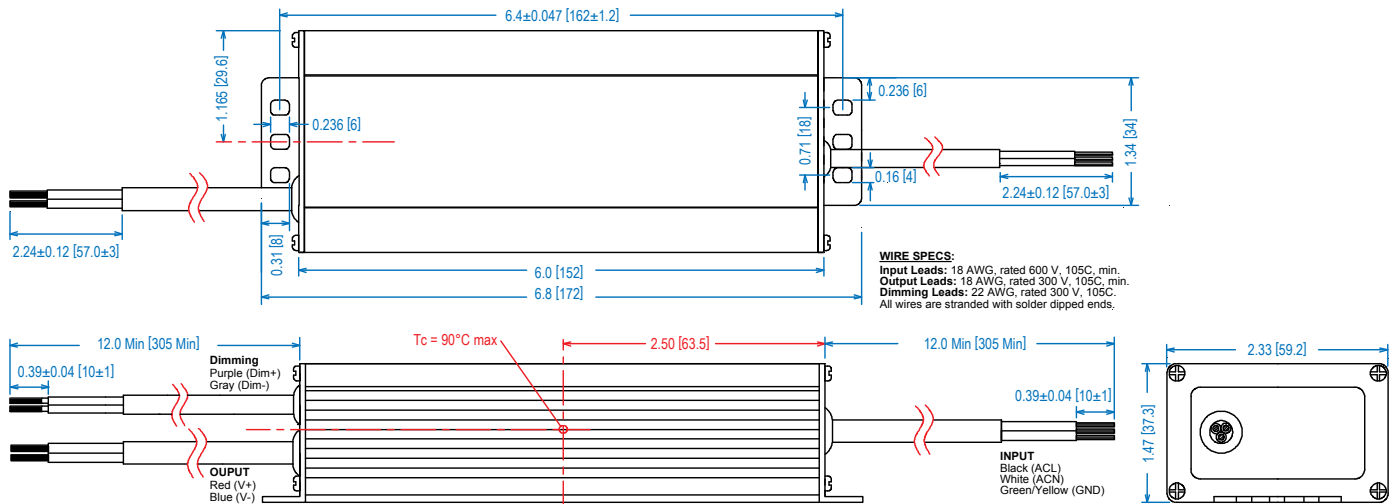
Model Number	Output Voltage (Vdc ±5%)	Output Current Range (mA)	Max. Output Power (W)	Max Efficiency
PLED96W-018	18	1338-5350	96	86%
PLED96W-020	20	1200-4800	96	87%
PLED96W-025	25	960-3840	96	88%
PLED96W-027	27	875-3500	94.5	88%
PLED96W-030	30	788-3150	94.8	89%
PLED96W-034	34	700-2800	95.2	89%
PLED96W-036	36	665-2660	95.7	89%
PLED96W-039	39	613-2450	95.5	89%
PLED96W-046	46	525-2100	96	90%
PLED96W-048	48	500-2000	96	90%
PLED96W-054	54	438-1750	94.5	91%
PLED96W-069	69	350-1400	96	91%
PLED96W-092	92	263-1050	96	91%
PLED96W-137	137	175-700	95.9	92%
PLED96W-213	213	113-450	95.6	92%
PLED96W-274 •	274	88-350	95.9	92%
PLED96W-024 •	24	1000-4000	96	88%

• Indicates S.A.M.

Class 2: US/Canada US Only

Rev 8-26-15

Dimensions - IN [mm]



Safety and EMC Compliance	
UL/CUL	UL8750 & CAN/CSA-22.2 No. 250.13-12, UL1310/CSA-C22.2 No.223-M91, UL1012/CSA-C22.2 No.107.1 for Non-Class 2
CE	EN 61347-1, EN61347-2-13
FCC, 47CFR Part 15	Class B
EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.
EN 61000-3-2	Part 3-2: Limits for harmonic current emissions Class C, >80% Rated Power
EN 61000-3-3	Part 3-3: Limitation of voltage changes, voltage fluctuations and flicker.
EN 61000-4-5	Part 4-5: Surge Immunity test, 2 kV L-N, 4 kV L-G & N-G

Note:

Life calculations are based on reliability with confidence using a 90% confidence level and <5% failure rate. At a confidence level of 90% it is expected that <5% of the parts will fail at the rated life provided. (Failure is defined as a driver drifting outside specification, rather than fail to operate)

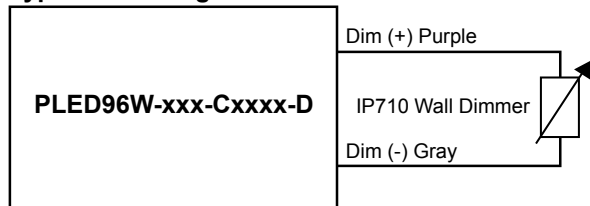
UL Conditions of Acceptability

See website for additional information

"-D" and "-D3" Options: 0-10VDC and Resistance Dimming

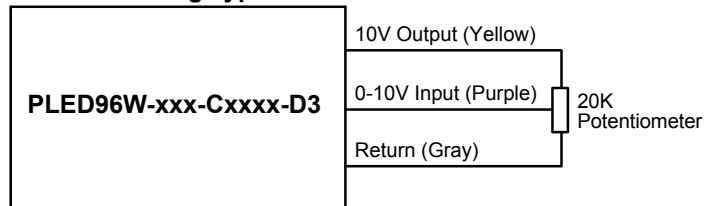
Parameters	Minimum	Typical	Maximum
10V Output, Yellow Wire	9.2V	10.0V	10.8V
10 Output Source Current, Yellow Wire	0mA	—	10mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0V	—	+15V
Source Current out of 0-10V Purple Wire	0mA	—	2mA

Typical Dimming Circuit

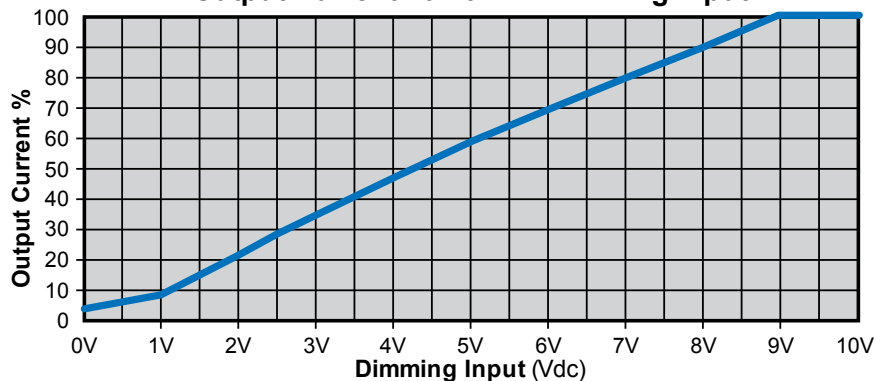


(Dimmer must be current-sink type control)

3-Wire Dimming Typical Circuit



Output Current / 0-10VDC Dimming Input



Notes:

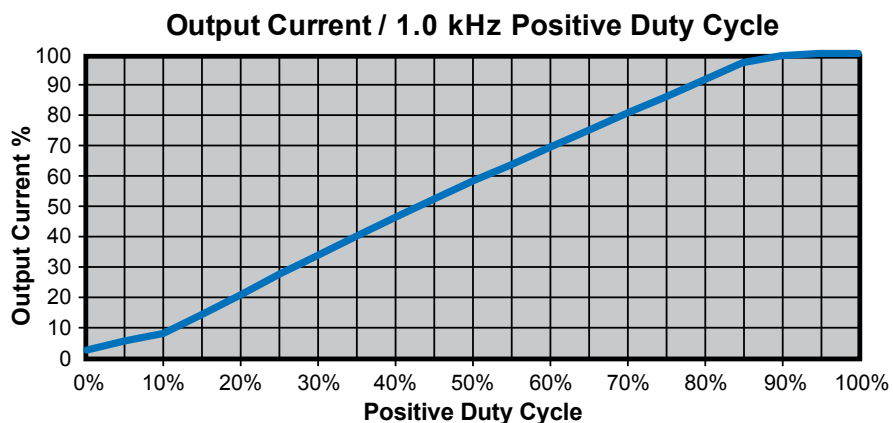
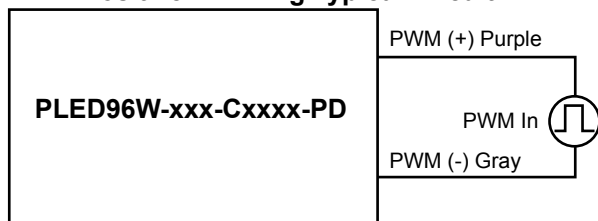
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V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



"-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



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.