

# PLED-96W Series

## Flicker-Free LED Drivers



### 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

### Protections

Over-voltage	Over-Voltage, Over-Current
Short Circuit	Auto Recovery

### Environmental Specifications

Maximum Case Temp.	90°C
Minimum Starting Temp:	-30°C
UL Type TL Rating:	Class 2: 83/54°C; Non-Class 2: 90/75°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)

### Safety Cert. Standard

UL/CUL	UL8750 & CAN/CSA-22.2 No. 250.13-12, UL1310/CSA-C22.2 No.223-M91 for Class 2, UL1012/CSA-C22.2 No.107.1 for Non-Class 2
CE	EN 61347-1, EN61347-2-13

### EMC Standard Notes

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

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### Constant Current Models

Model	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%

### Constant Voltage Models

Model	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-024	24	1000-4000	96	88%
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%

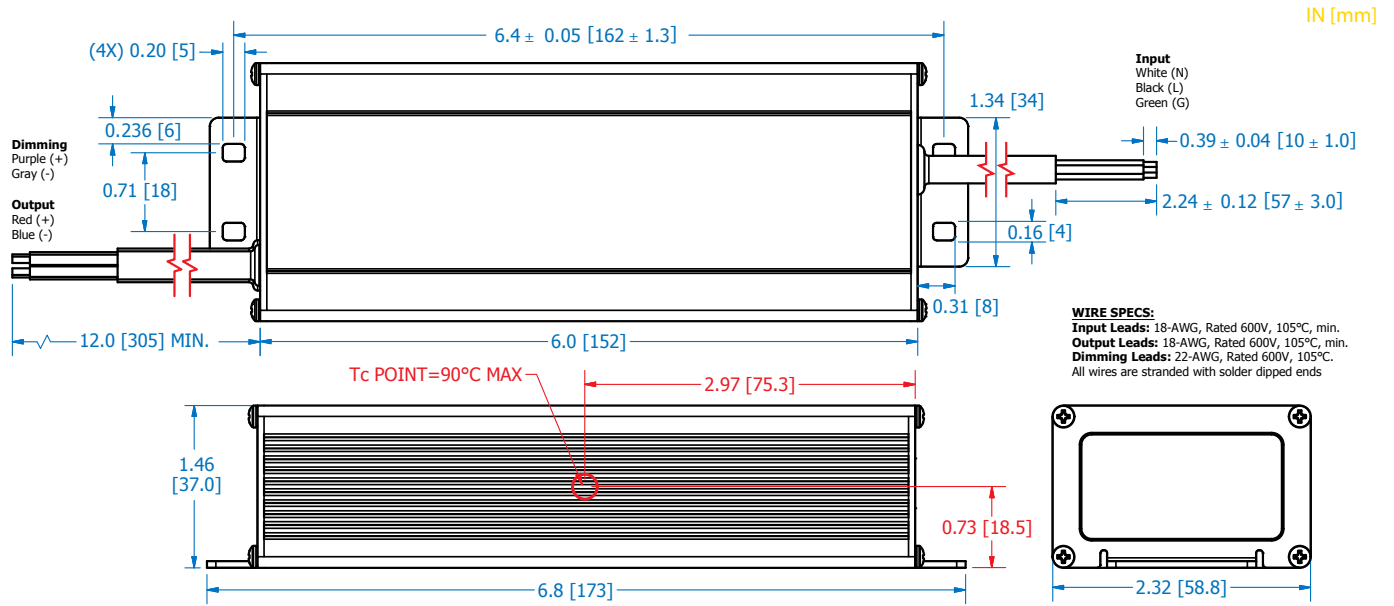
### Ordering Options:

- 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.
- Total Power: 96 Watts
- Constant Current & Constant Voltage with Isolation
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66 & NEMA6
- UL Type HL Rated for Hazardous Locations
- UL Sign Components Manual (S.A.M. Models)
- Black Magic Thermal Advantage™ Aluminum Housing

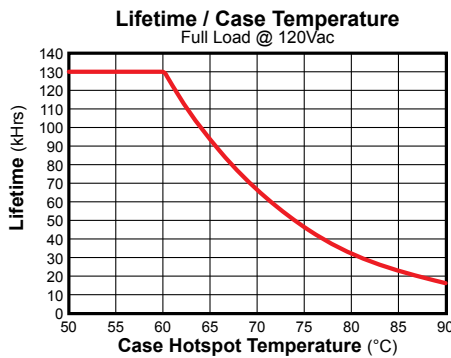
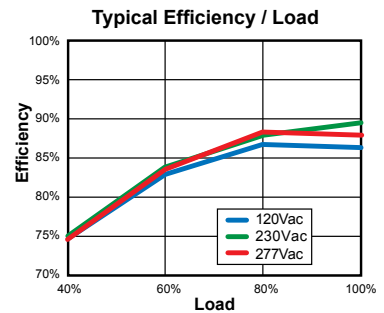
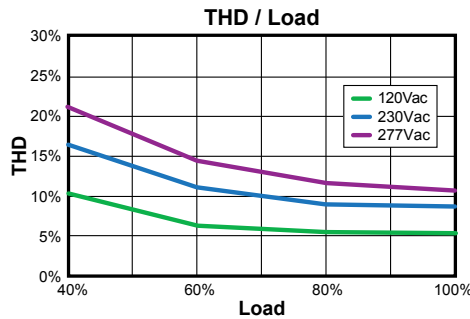
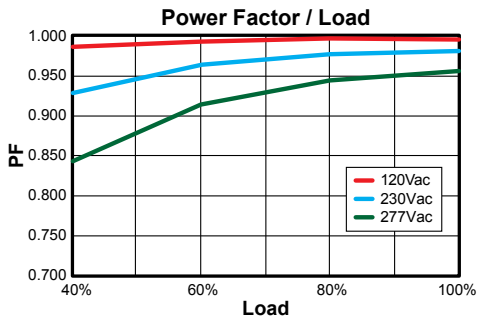
Class 2: US/Canada  
• Indicates S.A.M.



### Dimensions



### Power Characteristics



### UL Conditions of Acceptability

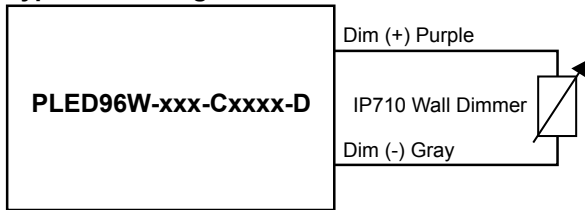
See website for additional information

**Note:** The area under the life-temperature curve represents where the driver has highly reliable operation within specification. Driver performance may drift out of published specifications as the hours of operation exceed the curve at a given temperature. Higher operating temperatures increase the chances of a failure to function. Other electrical, mechanical and environmental factors affect driver lifetime but are not represented in this calculation.

**“-D” and “-D3” Options: 0-10VDC and Resistance Dimming**

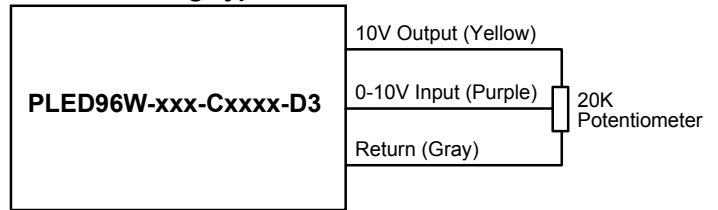
Parameters	Minimum	Typical	Maximum
10V Output, Yellow Wire	9.2V	10.0V	10.8V
Source Current out of Aux Yellow Wire	—	—	10mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0V	—	+15V
Source Current out of 0-10V Purple Wire	0mA	—	2mA

**Typical Dimming Circuit**

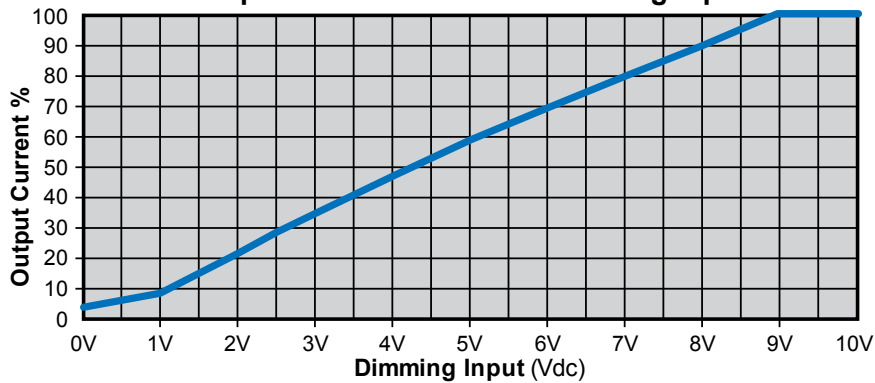


(Dimmer must be current-sink type control)

**3-Wire Dimming Typical Circuit**



**Output Current / 0-10VDC Dimming Input**



**Notes:**

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