



# PLED60W 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 @ 75-100% load, 100-277Vac
Inrush Current:	<50.0 Amps max @ 277Vac, cold start 25°C
Input Current:	0.80 Amps max
Maximum Power:	60W
Current Regulation:	± 3% Over input line variation
Load Regulation:	± 4%
THD:	≤ 20% @ 75-100% 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 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 at full load and 40°C ambient conditions per MIL-217F Notice 2
EMC:	FCC 47CFR Part 15 Class B compliant
Weight:	19 oz. (538 g)

### 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.



- Smallest Footprint Driver for this wattage
- Total Power: 60 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66 & NEMA6
- UL Type HL Rated for Hazardous Locations
- UL Sign Components Manual Models Available

## Constant Current Versions - Product Specifications

Model Number	Output Current (mA ±3%)	Output Voltage Range (Vdc)	Max. Output Power (W)	Max Efficiency
PLED60W-214-C0280-XX	280	72-214	60	91%
PLED60W-166-C0360-XX	360	56-166	60	91%
PLED60W-108-C0550-XX	550	36-108	60	90%
PLED60W-072-C0850-XX	850	24-72	60	90%
PLED60W-054-C1100-XX	1100	18-54	60	88%
PLED60W-048-C1250-XX	1250	16-48	60	88%
PLED60W-042-C1450-XX	1450	14-42	60	86%
PLED60W-036-C1670-XX	1670	12-36	60	86%
PLED60W-027-C2250-XX	2250	9-27	60	85%
PLED60W-024-C2500-XX	2500	8-24	60	85%
PLED60W-020-C3000-XX	3000	7-20	60	84%
PLED60W-015-C4000-XX	4000	5-15	60	84%
PLED60W-012-C5000-XX	5000	4-12	60	84%

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

## Constant Voltage Versions - Product Specifications

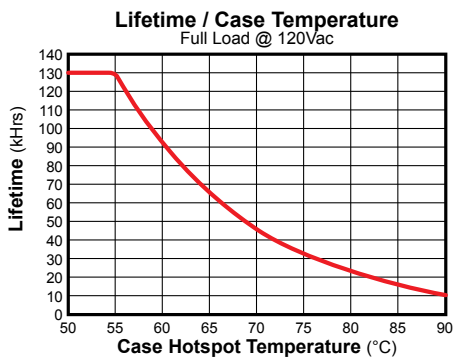
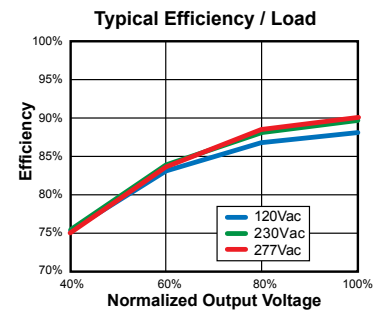
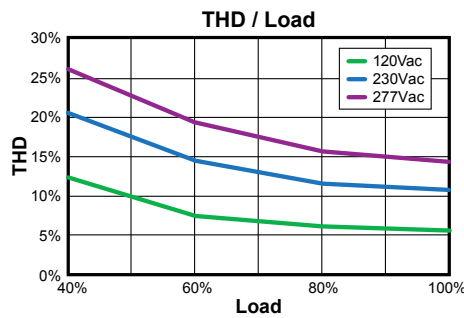
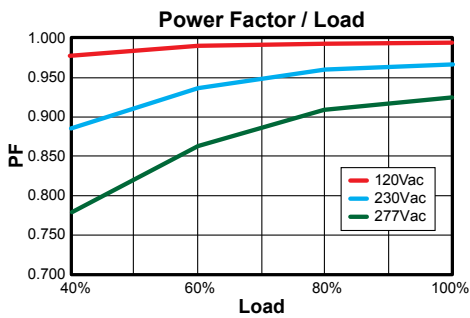
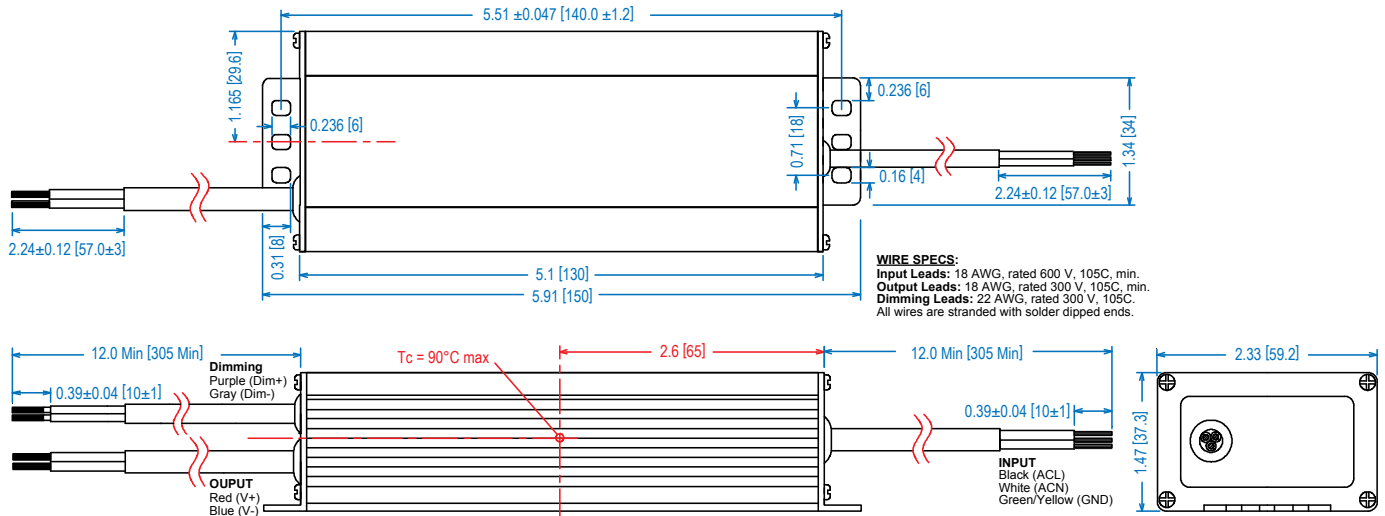
Model Number	Output Voltage (Vdc ±5%)	Output Current Range (mA)	Max. Output Power (W)	Max Efficiency
PLED60W-012 •	12	1563-5000	60	84%
PLED60W-015	15	1250-4000	60	84%
PLED60W-020	20	938-3000	60	84%
PLED60W-024 •	24	783-2500	60	85%
PLED60W-027	27	700-2250	60	85%
PLED60W-036	36	525-1670	60	86%
PLED60W-042	42	448-1450	60	86%
PLED60W-048	48	390-1250	60	88%
PLED60W-054	54	350-1200	60	88%
PLED60W-072	72	263-850	60	90%
PLED60W-108	108	175-550	60	90%
PLED60W-166	166	113-360	60	91%
PLED60W-214	214	88-280	60	91%

• Indicates S.A.M.

Class 2: US/Canada US Only

Rev 9-11-15

## 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)

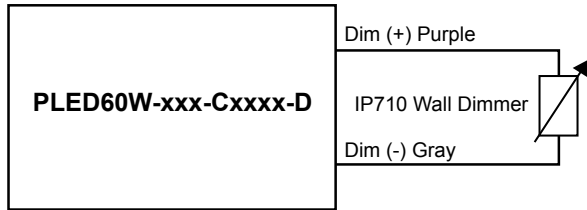
## UL Conditions of Acceptability

See website for additional information

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

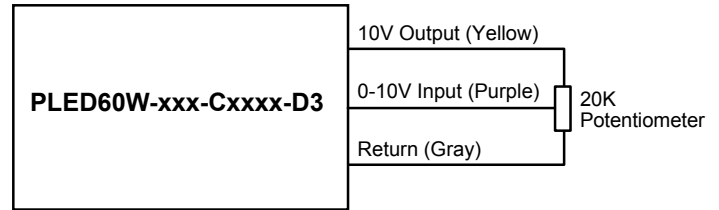
Parameters	Minimum	Typical	Maximum
10V Output, Yellow Wire	9.2V	10.0V	10.8V
10 Output Source Current, Yellow Wire	0mA	—	10mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0V	—	+15V
Source Current out of 0-10V Purple Wire	0mA	—	2mA

#### Typical Dimming Circuit

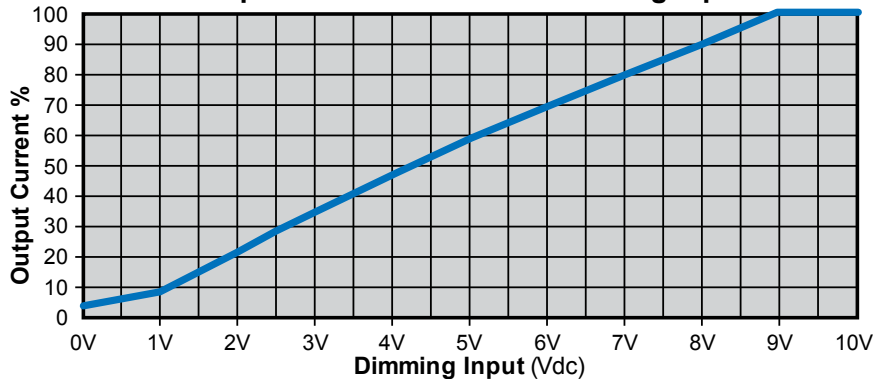


(Dimmer must be current-sink type control)

#### 3-Wire Dimming Typical Circuit



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



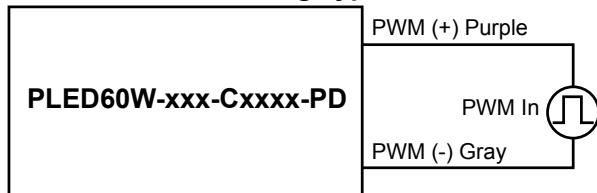
#### Notes:

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).

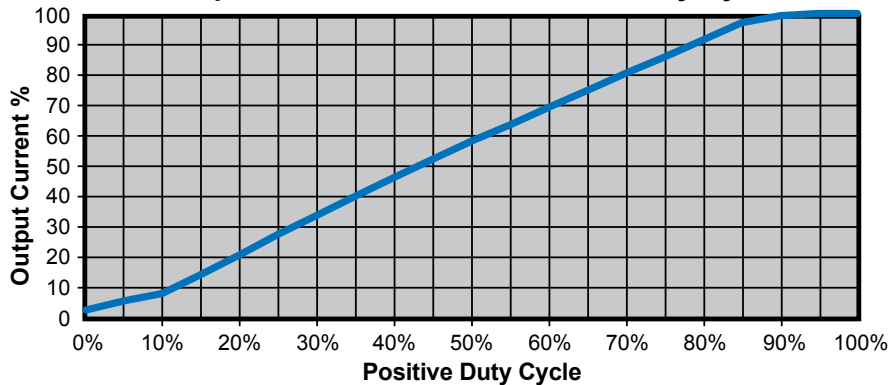
**"-PD" Option: PWM Dimming**

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

**PWM Positive Dimming Typical Circuit**



**Output Current / 1.0 kHz Positive Duty Cycle**



**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.