Thomas Research Products

SSL Solutions Faster Than The Speed Of Light®

PLED-200W Series– Fixed Output & Dimmable

Switch Mode LED Drivers
Constant Current & Constant Voltage with Isolation
Black Magic Thermal Advantage™ Aluminum Housing

Total Power: 200 Watts
Input Voltage: 100 - 277 Vac Nom.
Outputs: Single from 12-445 Vdc
Indoor or Outdoor Applications, NEMA6, IP66
High Power Factor
UL8750, EN61347, CSA 22.2
EN61000-3-2, EN61000-3-3 Class C

Electrical Specifications

Input Voltage Range:	**100-277 Vac Nom. (90-305 V Min/Max)**
Frequency:	**50/60 Hz Nom. (47-63 Hz Min/Max)**
Power Factor:	**>0.90 @ full load, 100V through 277V**
Inrush Current:	**<45.0 Amps max @ 230 Vac, cold start, full load**
Input Current:	**0.95 Amps max @ 230 Vac, 1.83 A max @ 120 Vac**
Maximum Power:	**200W**
Current Accuracy:	**± 2% Over input line variation**
Load Regulation:	**± 3%**
THD:	**≤ 20% @ full load**
Leakage Current:	**600 µA Typical**
Hold Up Time:	**Half Cycle**
Protection:	**Output Protection: Over-Voltage, Over-Current, and Short Circuit reset by power cycling**

Environmental Specifications

Operating Temperature:	**-30ºC to +60ºC**
Maximum Case Temp.	**90°C**
Storage Temperature:	**-40ºC to +85ºC**
Humidity:	**5% to 95%**
Cooling:	**Convection**
Vibration Frequency:	**5 to 55 Hz/2g, 30 minutes**
MTBF:	**280,000 Hours at full load and 40ºC ambient conditions per MIL-217F Notice 2**
EMC:	**FCC 47CFR Part 15 Class B compliant**
Impact Resistance:	**1g/s**
Weight:	**TBD**

Ordering Options:

-D: 0-10V & Resistance dimmable version comes with an extra two wires +Purple/-Gray on the output side. -D 0-10V Dimming is compatible with most quality 0-10V wall dimmers. See page 3 for additional specifications.

-PD: PWM Dimmable version comes with an extra two wires +Purple/-Gray on the output side. PD PWM version is PWM Dimmable via a positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4 for additional specifications.

c UL us E332160 CE FC RoHS IP66

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 driver, and therefore cannot 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.

Constant Current Versions - Product Specifications

Model Number	Output Current *(mA ±5%)*	Output Voltage Range *(Vdc)*	Max Output Power *(W)*	Typical Efficiency
PLED200W-445-C0450-XX	450	222 - 445	200W	92%
PLED200W-285-C0700-XX	700	142 - 285	200W	92%
PLED200W-190-C1050-XX	1050	95 - 190	200W	91%
PLED200W-142-C1400-XX	1400	71 - 142	200W	91%
PLED200W-114-C1750-XX	1750	57 - 114	200W	91%
PLED200W-095-C2100-XX	2100	47 - 95	200W	91%
PLED200W-081-C2450-XX	2450	40 - 81	200W	90%
PLED200W-071-C2800-XX	2800	35 - 71	200W	90%
PLED200W-063-C3150-XX	3150	31 - 63	200W	90%
PLED200W-057-C3500-XX	3500	28 - 57	200W	90%
PLED200W-047-C4200-XX	4200	23 - 47	200W	89%
PLED200W-40-C4900-XX	4900	20 - 40	200W	89%
PLED200W-035-C5600-XX	5600	17 - 35	200W	89%
PLED200W-032-C6300-XX	6300	16 - 32	200W	88%
PLED200W-024-C8330-XX	8330	12 - 24	200W	88%

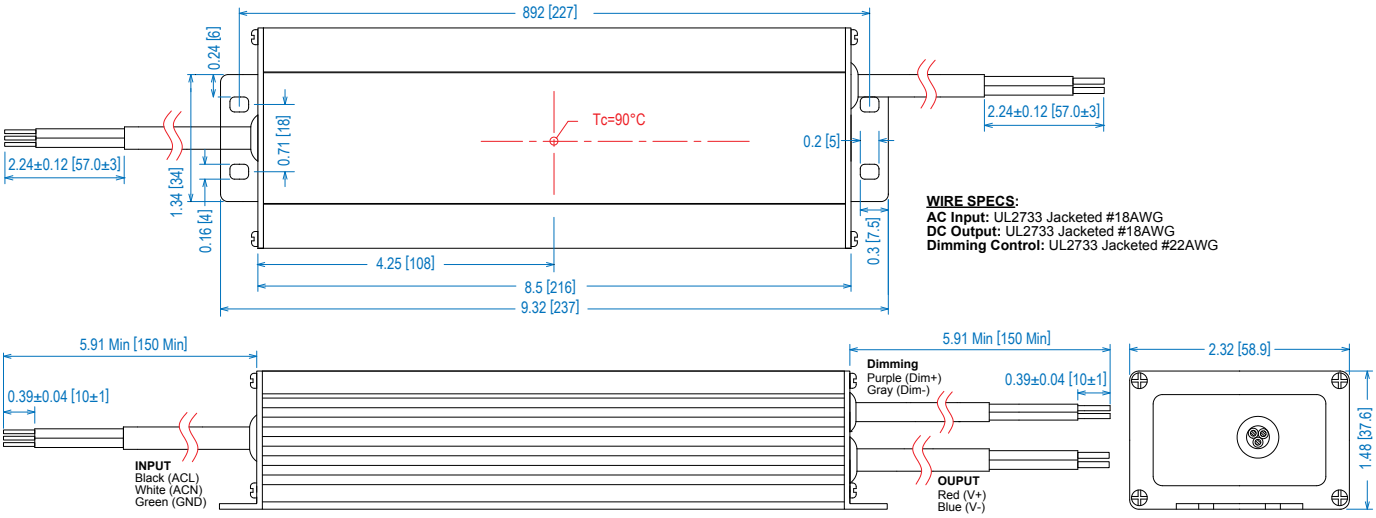
-XX indicates dimming options are available. See options at left. Blank = fixed current output

Constant Voltage Versions - Product Specifications

Model Number	Output Voltage *(Vdc ±5%)*	Output Current Range *(mA)*	Max Output Power *(W)*	Typical Efficiency
PLED200W-445	445	225-450	200W	92%
PLED200W-285	285	350-700	200W	92%
PLED200W-190	190	525-1050	200W	91%
PLED200W-142	142	700-1400	200W	91%
PLED200W-114	114	875-1750	200W	91%
PLED200W-095	95	1050-2100	200W	91%
PLED200W-081	81	1225-2450	200W	90%
PLED200W-071	71	1400-2800	200W	90%
PLED200W-063	63	1575-3150	200W	90%
PLED200W-057	57	1750-3500	200W	90%
PLED200W-047	47	2100-4200	200W	89%
PLED200W-040	40	2450-4900	200W	89%
PLED200W-035	35	2800-5600	200W	89%
PLED200W-032	32	3150-6300	200W	88%
PLED200W-024	24	4165-8330	200W	88%

8-20-13

Dimensions - Inches (mm)



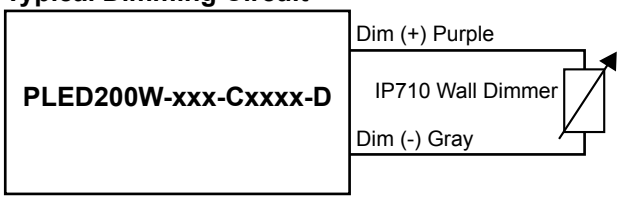
UL Conditions of Acceptability

See website for additional information

"-D" Option: 0-10VDC and Resistance Dimming

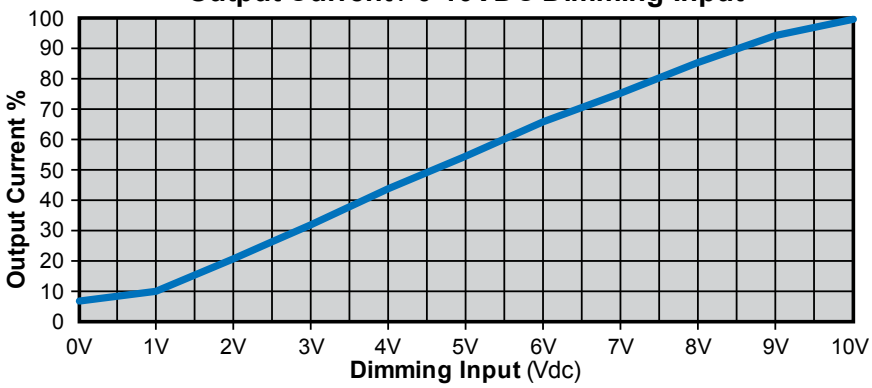
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0mA	—	2mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0V	—	+15V

Typical Dimming Circuit



(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input



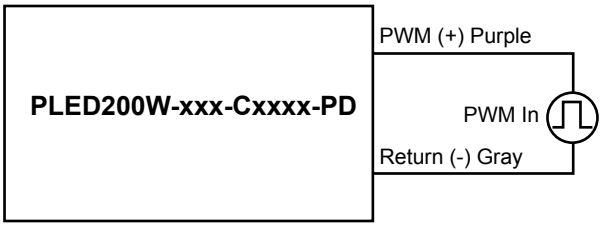
Notes:

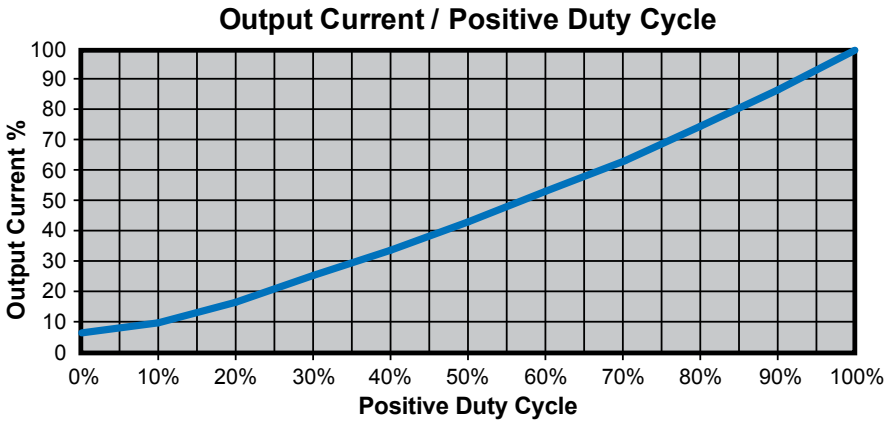
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim to zero (off). Will be Iout <10%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

"-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.