



Thomas Research Products

SSL Solutions Faster Than The Speed Of Light™

**LED-100W Series— Fixed Output and Dimmable
Switch Mode LED Drivers
Constant Current & Constant Voltage with Isolation
Black Magic Thermal Advantage™ Aluminum Housing**

**Total Power: 100 Watts
Input Voltage: 100-277 Vac
Outputs: Single from 6 - 286 Vdc
Indoor or Outdoor Applications
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: <30.0 Amps max @ 230 Vac, cold start 25°C
Input Current: 1.30 Amps max
Maximum Power: 100W
Current Accuracy: ± 1% Over input line variation
Load Regulation: ± 3%
THD: ≤ 20% @ full load
Leakage Current: 400 µA Typical
Hold Up Time: Half Cycle
Protection: Output Over-Voltage, Output Over-Current, and Output Short Circuit Protection reset by power cycling

Electrical Specifications

Operating Temperature: -30°C to +65°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
MTBF: 418,000 Hours at full load and 40°C ambient conditions per MIL-217F Notice 2
EMC: FCC 47CFR Part 15 Class B compliant



Constant Current - Product Specifications

Model Number	Output Current (mA ±3%)	Output Voltage Range (Vdc)	Max. Output Power (W)	Typical Efficiency
LED100W-286-C0350-XX	350	95-286	100	92%
LED100W-222-C0450-XX	450	74-222	100	92%
LED100W-143-C0700-XX	700	47-143	100	91%
LED100W-095-C1050-XX	1050	31-95	100	91%
LED100W-071-C1400-XX	1400	23-71	100	91%
LED100W-057-C1750-XX	1750	19-57	100	90%
LED100W-048-C2100-XX	2100	16-48	100	90%
LED100W-041-C2450-XX	2450	13-41	100	90%
LED100W-036-C2800-XX	2800	12-36	100	90%
LED100W-032-C3150-XX	3150	10-32	100	90%
LED100W-028-C3570-XX	3570	9-28	100	89%
LED100W-024-C4200-XX	4200	8-24	100	89%
LED100W-020-C5000-XX	5000	7-20	100	88%
LED100W-018-C5550-XX	5550	6-18	100	88%

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

Constant Voltage - Product Specifications

Model Number	Output Voltage (Vdc ±5%)	Output Current Range (mA)	Max. Output Power (W)	Typical Efficiency
LED100W-286	286	88-350	100	92%
LED100W-222	222	113-450	100	92%
LED100W-143	143	175-700	100	91%
LED100W-095	95	263-1050	100	91%
LED100W-071	71	350-1400	100	91%
LED100W-057	57	438-1750	100	90%
LED100W-048	48	525-2100	100	90%
LED100W-041	41	613-2450	100	90%
LED100W-036	36	700-2800	100	90%
LED100W-032	32	788-3150	100	90%
LED100W-028	28	893-3570	100	89%
LED100W-024	24	1050-4200	100	89%
LED100W-020	20	1250-5000	100	88%
LED100W-018	18	1388-5550	100	88%

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 and direct 0-10V analog signal. 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.



Specifications subject to change without notice.

3-06-13



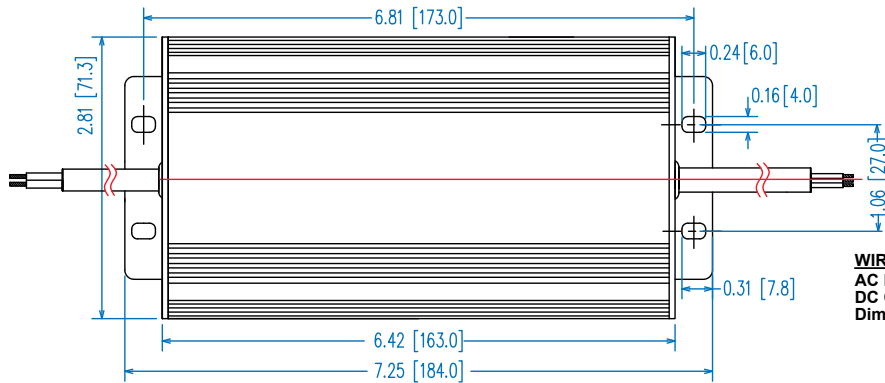
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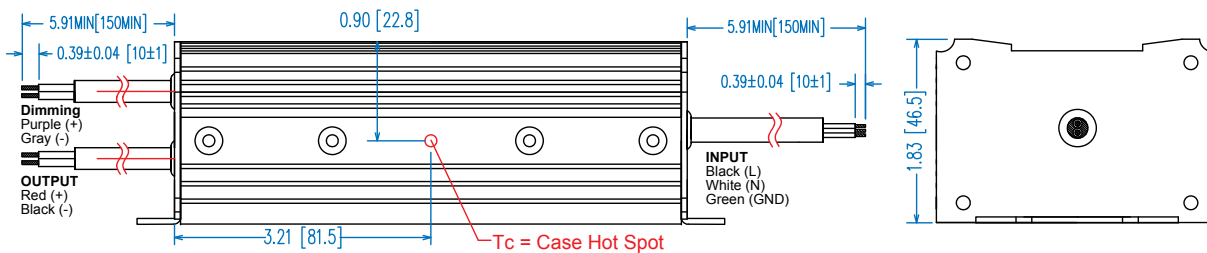
LED100W

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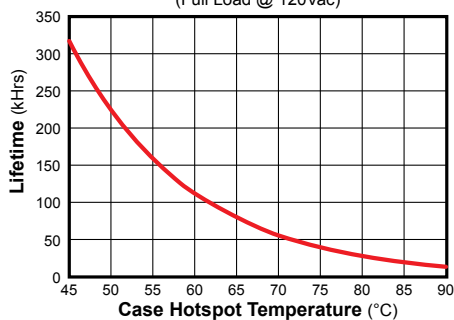
Dimensions - Inches (mm)



WIRE SPECS:
AC Input: UL2733 Jacketed #18AWG
DC Output: UL2733 Jacketed #18AWG
Dimming Control: UL2733 Jacketed #22AWG



Lifetime/Case Temperature
(Full Load @ 120Vac)



UL Conditions of Acceptability

See website for additional information



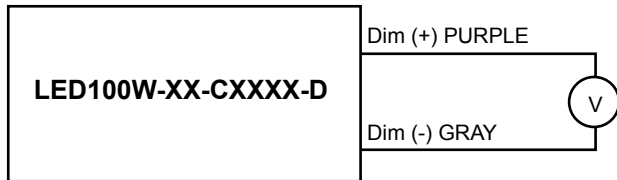
“-D” Option: 0-10VDC and Resistance Dimming

Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	10 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—	+15 V
Sink Current into 0-10V Purple Wire	0 mA	—	1.2 mA

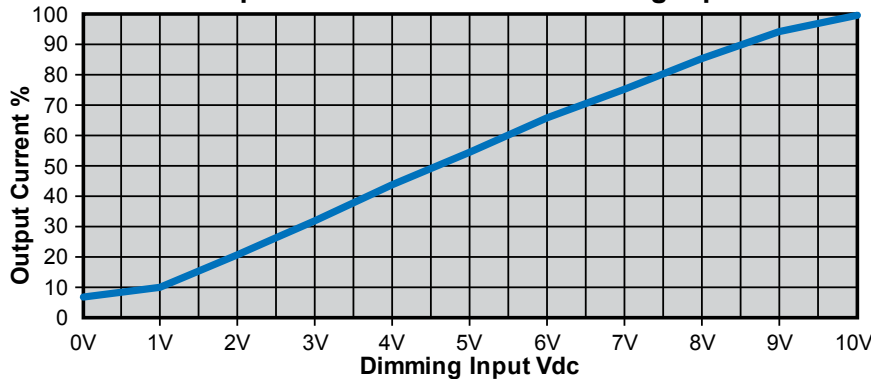
Resistance Dimming Typical Circuit



0-10V Analog Dimming Typical Circuit



Output Current / 0-10VDC Dimming Input



Notes:

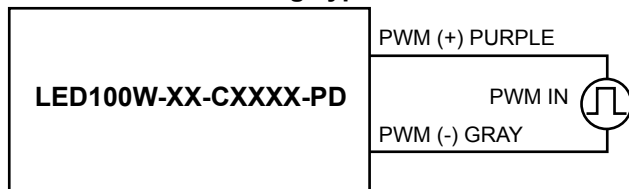
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V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



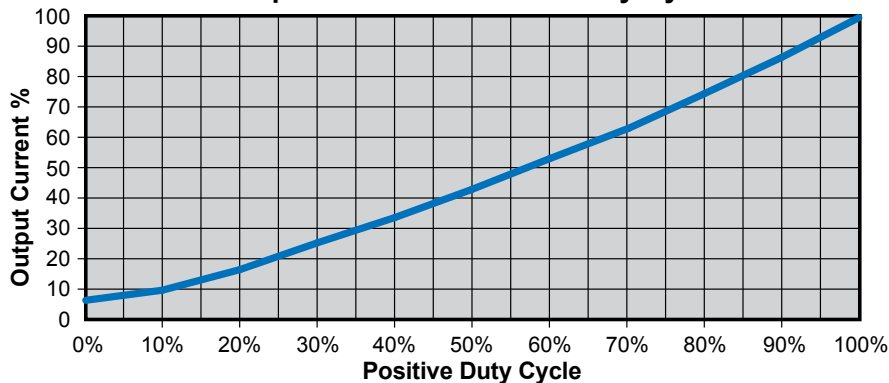
“-PD” Option: PWM Dimming

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



Output Current / 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.