Thomas Research Products

LEG-150W Series– Fixed Output and Dimmable
Switch Mode LED Drivers
Constant Current, Non-Isolated
Black Magic Thermal Advantage™ Metallic Housing

Electrical Specifications

Input Voltage Range:	**120-277 VAC Nom. (108-305 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 @ full load, 100V through 277V**
THD:	**≤ 20% @ for all loads >80%**
Inrush Current:	**<40.0 Amps maximum @ 230 VAC, cold start 25ºC**
Input Current:	**1.4A@ 120Vac, 0.68A @ 230Vac**
Maximum Power:	**150W**
Current Accuracy:	**± 1% Over input line variation**
Load Regulation:	**± 2%**
Leakage Current:	**400 uA Typical**
Hold Up Time:	**Half Cycle**
Protection:	**Output Protection: Over-Voltage, Over-Current, and Short Circuit Protection, reset by power cycling**

Environmental Specifications

Minimum Starting Temp:	**-30ºC**
Maximum Case Temp.	**80°C**
UL Type TL Rating:	**Non-Class 2: 65/58°C**
Storage Temperature:	**-40ºC to +85ºC**
Humidity:	**5% to 95%**
Cooling:	**Convection**
Vibration Frequency:	**5 to 55 Hz/2g, 30 minutes**
Sound Rating:	**Class A**
MTBF:	**380,000 Hours at full load and 40ºC ambient conditions per MIL-217F Notice 2**
EMC:	**FCC 47CFR Part 15 Class A compliant**
Impact Resistance:	**1g/s**
Weight:	**45 oz (1270 grams)**

- Total Power: 150 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66
- High Power Factor
- UL8750, EN61347, CSA 22.2
- UL Type HL Rated for Hazardous Locations
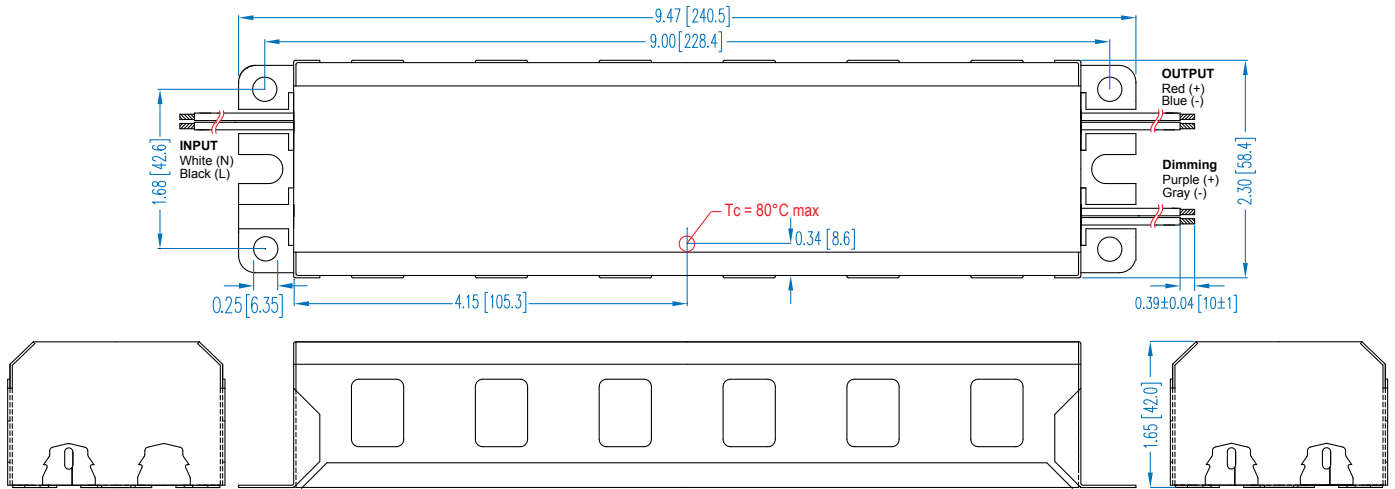
Ordering Options:

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

Constant Current - Non Dimming				
Model Number	**Output Current** *(mA ±3%)*	**Output Voltage Range** *(Vdc)*	**Max Output Power** *(W)*	**Max Efficiency**
LEG150W-425-C0350	350	120-425	148.7	92%
LEG150W-280-C0530	530	94-280	148.4	91%
LEG150W-210-C0700	700	70- 210	147.0	90%

Constant Current - 0-10VDC Dimming				
Model Number	**Output Current** *(mA ±3%)*	**Output Voltage Range** *(Vdc)*	**Max Output Power** *(W)*	**Max Efficiency**
LEG150W-425-C0350-D	350	120-425	148.7	92%
LEG150W-280-C0530-D	530	94-280	148.4	91%
LEG150W-210-C0700-D	700	70-210	147.0	90%

C**UL**US   CE   FC   RoHS   IP66

E332160

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.
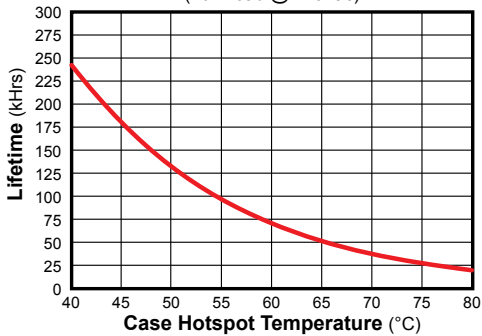
Specifications subject to change without notice.

Rev 10-27-16

Dimensions - Inches (mm)

9.47 [240.5]
9.00 [228.4]

OUTPUT
Red (+)
Blue (-)

INPUT
White (N)
Black (L)

Dimming
Purple (+)
Gray (-)

1.68 [42.6]
2.30 [58.4]

Tc = 80°C max
0.34 [8.6]

0.25 [6.35]
4.15 [105.3]
0.39±0.04 [10±1]

1.65 [42.0]

CASE MUST BE GROUNDED IN END USE APPLICATION

WIRE SPECS:
AC Input / DC Output / Dimming Control:
• Solid Copper
• 8 IN [203mm]
• UL1316/1452 #18AWG

Lifetime/Case Temperature
(Full Load @ 120Vac)

Lifetime (kHrs)
300, 275, 250, 225, 200, 175, 150, 125, 100, 75, 50, 25, 0

Case Hotspot Temperature (°C)
40, 45, 50, 55, 60, 65, 70, 75, 80

Safety Cert.	Standard
UL/CUL	UL8750
CSA	22.2
CE	EN61347
EMC Standard	Notes
FCC, 47CFR Part 15	Class B
EN6100-4-5	2KV L-N, 8/20 μsec Surge Protection

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)
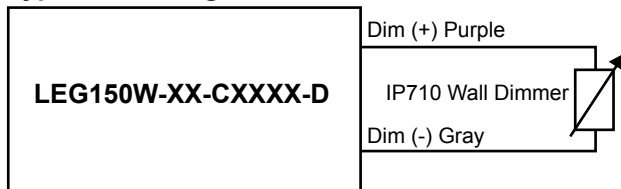
UL Conditions of Acceptability

See website for additional information

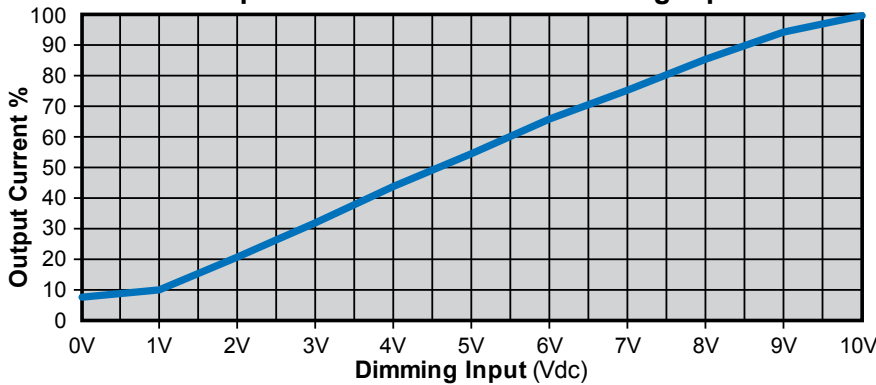## "-D" Option: - 0-10VDC and Resistance Dimming

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

Typical Dimming Circuit

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LEG150W-XX-CXXXX-D        Dim (+) Purple
                          IP710 Wall Dimmer
                          Dim (-) Gray
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(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input

Y-axis: Output Current %
X-axis: Dimming Input (Vdc)

Notes:

1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. When connected to a dimming device, 0-10V dimmable version will have a ±10% output current tolerance.
   This is due to variation between different 0-10V dimmers.
3. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
4. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V
5. 0-10V dimmable version output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.