Thomas Research Products

SSL Solutions Faster Than The Speed Of Light™

LED-25W Series– Fixed Output and Dimmable

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

Total Power: 25 Watts
Input Voltage: 90-305 Vac
Outputs: Single from 4-72 Vdc
Indoor or Outdoor Applications, IP66
High Power Factor
UL8750 and Class 2 Compliant, as noted
IP66 Compliant

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:	**<15.0 Amps max @ 230 Vac, cold start 25ºC**
Input Current:	**0.25 Amps max @ 120 Vac**
Maximum Power:	**25W**
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 with Auto Recovery**

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**
Sound Rating:	**Class A**
MTBF:	**482,000 Hours at full load and 40ºC 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
LED25W-72-C0350-XX	350	24-72	25	86%
LED25W-28-C0350-XX	350	10-28	9.8	83%
LED25W-62-C0400-XX	400	21-62	25	85%
LED25W-56-C0450-XX	450	19-56	25	84%
LED25W-40-C0500-XX	500	13-40	20	84%
LED25W-40-C0620-XX	620	13-40	25	84%
LED25W-36-C0700-XX	700	12-36	25	84%
LED25W-28-C0850-XX	850	10-28	25	83%
LED25W-24-C1040-XX	1040	8-24	25	83%
LED25W-20-C1250-XX	1250	7-20	25	83%
LED25W-18-C1400-XX	1400	6-18	25	82%
LED25W-16-C1560-XX	1560	6-16	25	82%
LED25W-14-C1750-XX	1750	5-14	25	82%
LED25W-12-C2080-XX	2080	4-12	25	81%

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

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Constant Voltage - Product Specifications

Model Number	Output Voltage *(Vdc ±5%)*	Output Current Range *(mA)*	Max. Output Power *(W)*	Typical Efficiency
LED25W-72	72	88-350	25	86%
LED25W-62	62	100-400	25	85%
LED25W-56	56	113-450	25	84%
LED25W-40	40	155-620	25	84%
LED25W-36	36	175-700	25	84%
LED25W-28	28	213-850	25	83%
LED25W-24	24	260-1040	25	83%
LED25W-20	20	313-1250	25	83%
LED25W-18	18	360-1400	25	82%
LED25W-16	16	390-1560	25	82%
LED25W-14	14	438-1750	25	82%
LED25W-12	12	520-2080	25	81%

Class 2: US/Canada | US Only

Ordering Options:

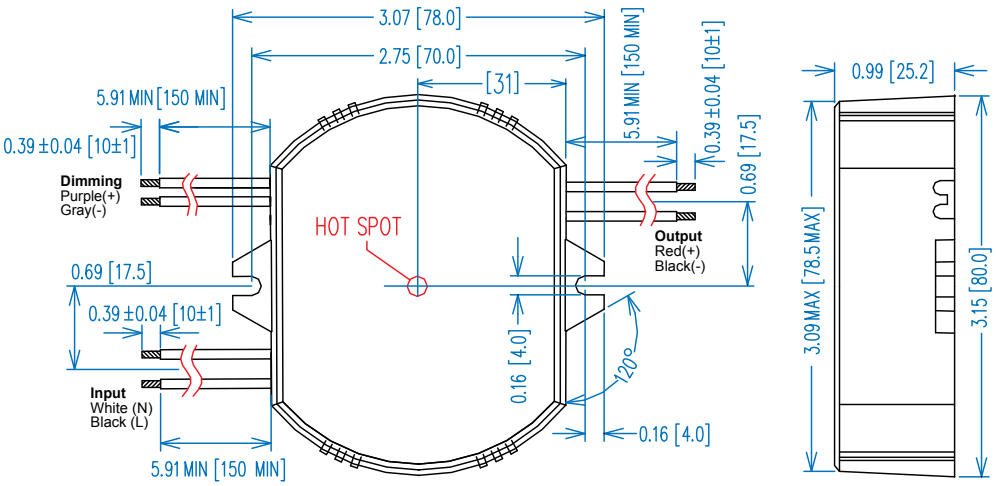
-D: 0-10V & Resistance dimmable version comes with an extra two wires +Purple/-Gray on the output side. -D 0-10V Dimming is compatible with most quality 0-10V wall dimmers and direct 0-10V analog signal. See page 3 for additional specifications.

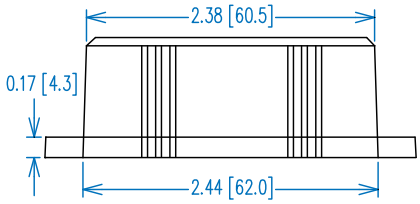
-PD: PWM Dimmable version comes with an extra two wires +Purple/-Gray on the output side. PD PWM version is PWM Dimmable via a positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4 for additional specifications.

Specifications subject to change without notice.

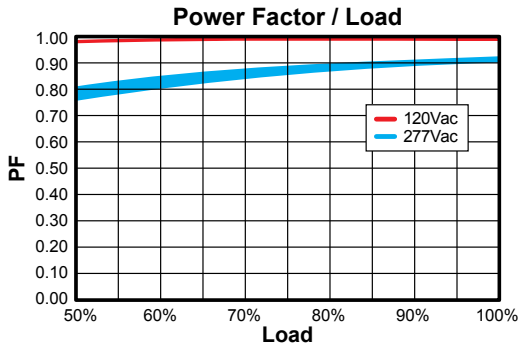
3-18-13

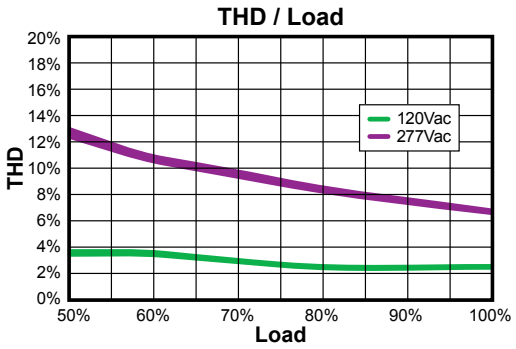
Dimensions - Inches (mm)





WIRE SPECS:
AC Input: UL1015 #18AWG
DC Output: UL1569 #18AWG
Dimming Control: UL1569 #22AWG





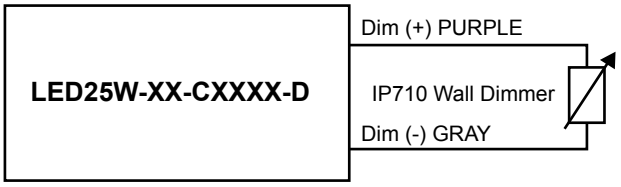
UL Conditions of Acceptability

See website for additional information

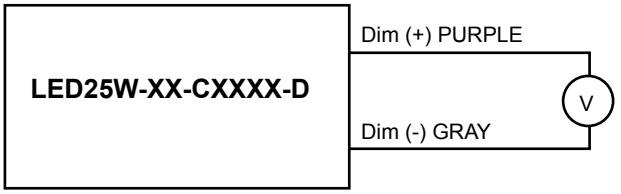
"-D" Option: 0-10VDC and Resistance Dimming

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

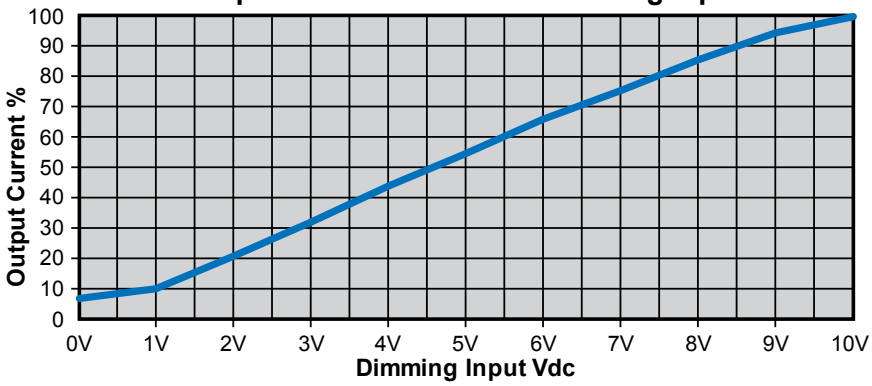
Resistance Dimming Typical Circuit



0-10V Analog Dimming Typical Circuit



Output Current / 0-10VDC Dimming Input



Notes:

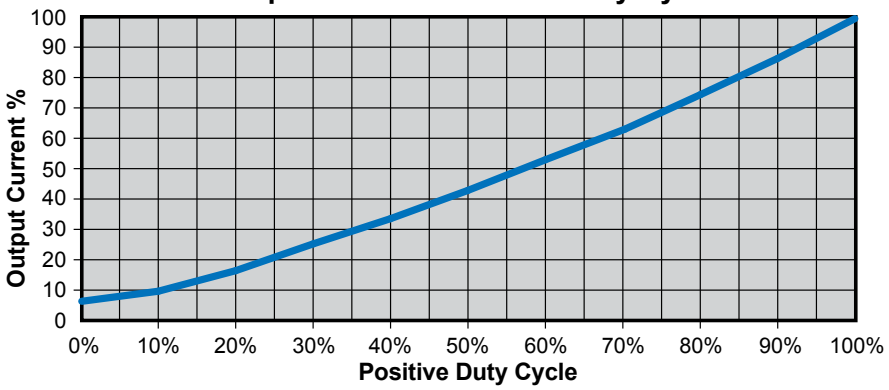
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V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