



# 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 25°C
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:	-30°C to +60°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
MTBF:	482,000 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
LED25W-072-C0350-XX	350	24-72	25	86%
LED25W-040-C0350-XX	350	13-40	14	84%
LED25W-028-C0350-XX	350	10-28	9.8	83%
LED25W-062-C0400-XX	400	21-62	25	85%
LED25W-056-C0450-XX	450	19-56	25	84%
LED25W-040-C0500-XX	500	13-40	20	84%
LED25W-040-C0620-XX	620	13-40	25	84%
LED25W-036-C0700-XX	700	12-36	25	84%
LED25W-028-C0850-XX	850	10-28	25	83%
LED25W-024-C1040-XX	1040	8-24	25	83%
LED25W-020-C1250-XX	1250	7-20	25	83%
LED25W-018-C1400-XX	1400	6-18	25	82%
LED25W-016-C1560-XX	1560	6-16	25	82%
LED25W-014-C1750-XX	1750	5-14	25	82%
LED25W-012-C2080-XX	2080	4-12	25	81%

-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
LED25W-012	12	520-2080	25	81%
LED25W-014	14	438-1750	25	82%
LED25W-016	16	390-1560	25	82%
LED25W-018	18	360-1400	25	82%
LED25W-020	20	313-1250	25	83%
LED25W-024	24	260-1040	25	83%
LED25W-028	28	213-850	25	83%
LED25W-036	36	175-700	25	84%
LED25W-040	40	155-620	25	84%
LED25W-056	56	113-450	25	84%
LED25W-062	62	100-400	25	85%
LED25W-072	72	88-350	25	86%

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. See page 3 for additional specifications.
- PD: PWM Dimmable version comes with an extra two wires +Purple/-Gray on the output side. "-PD" version is PWM Dimmable via a positive 10% to 100% Duty Cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4 for additional specifications.



### 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 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.



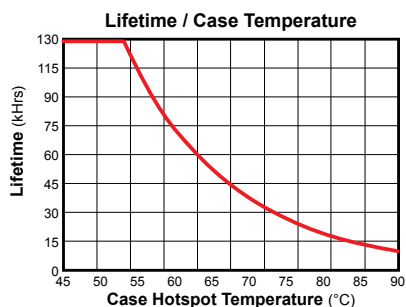
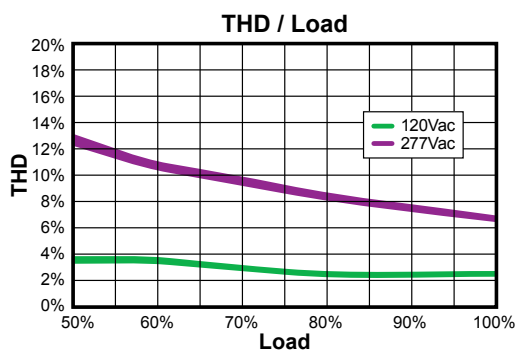
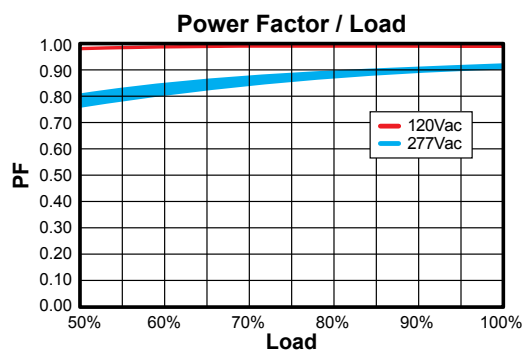
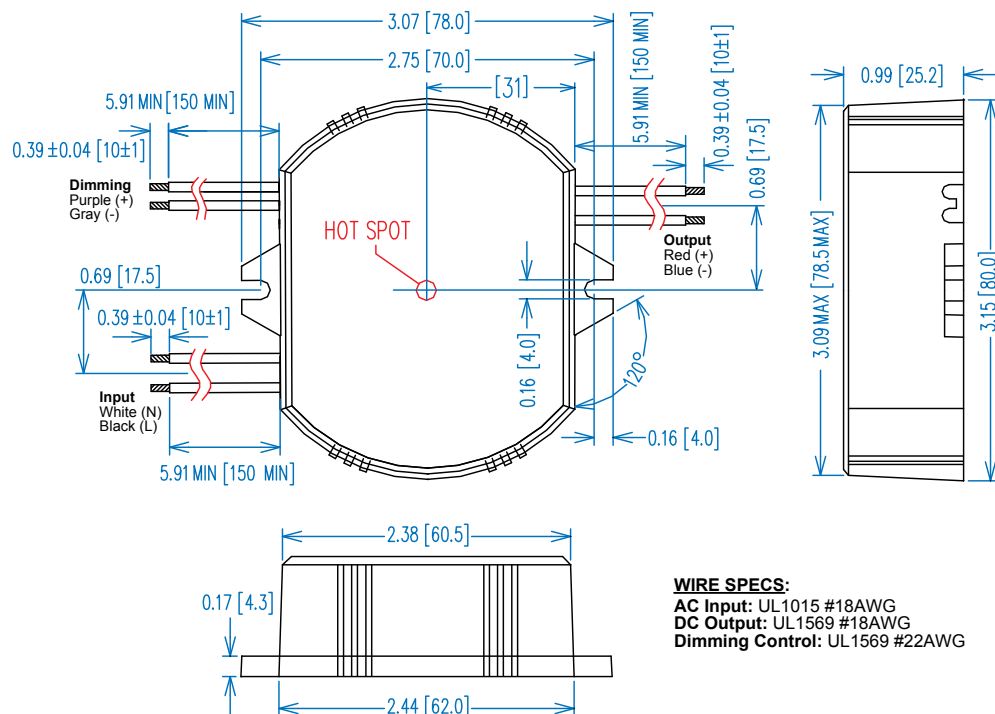
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LED25W

Pg 2 of 4

## Dimensions - Inches (mm)



## UL Conditions of Acceptability

See website for additional information



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

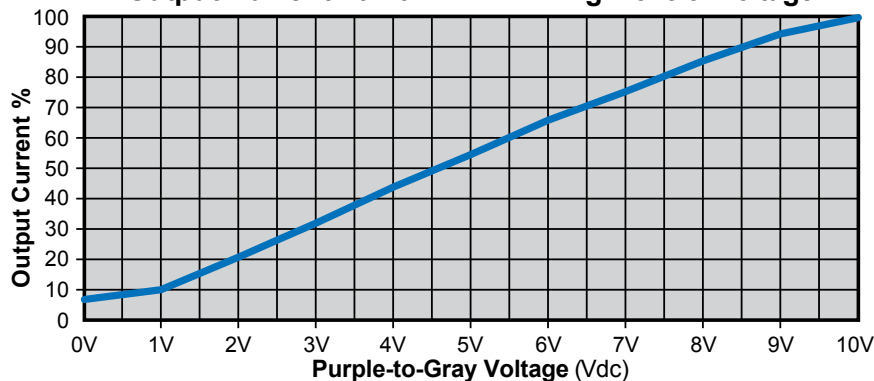
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	2 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—	+15 V

### Typical Dimming Circuit



(Dimmer must be current-sink type control)

### Output Current / 0-10VDC Dimming Control Voltage



### Notes:

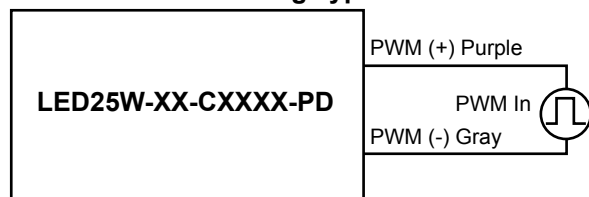
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V dimmers. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V
4. 0-10V dimmable version output will be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



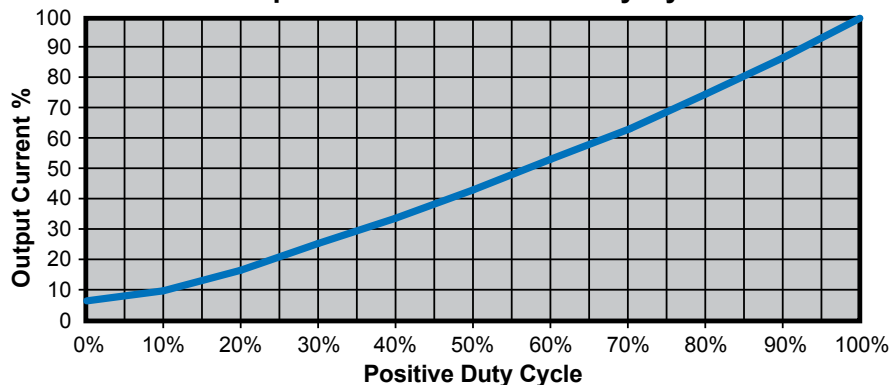
### “-PD” Option: PWM Dimming

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.