



# Thomas Research Products

SSL Solutions Faster Than The Speed Of Light®

**LED-30W Series— Fixed Output and Dimmable  
Switch Mode LED Drivers  
Constant Current & Constant Voltage with Isolation  
Black Magic Thermal Advantage™ Plastic Housing**

**Total Power: 30 Watts  
Input Voltage: 90-305 Vac  
Outputs: Single from 4-85 Vdc  
Indoor or Outdoor Applications  
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:** 0.32 Amps max  
**Maximum Power:** 30W  
**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:** 484,000 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
LED30W-085-C0350-XX	350	28-85	30	88%
LED30W-075-C0400-XX	400	25-75	30	87%
LED30W-066-C0450-XX	450	22-66	30	87%
LED30W-042-C0700-XX	700	14-42	30	87%
LED30W-036-C0830-XX	830	12-36	30	87%
LED30W-024-C1250-XX	1250	8-24	30	86%
LED30W-018-C1660-XX	1660	6-18	30	85%
LED30W-012-C2500-XX	2500	4-12	30	85%

-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
LED30W-085	85	88-350	30	88%
LED30W-075	75	100-400	30	87%
LED30W-066	66	113-450	30	87%
LED30W-042	42	175-700	30	87%
LED30W-036	36	208-830	30	86%
LED30W-024	24	313-1250	30	85%
LED30W-018	18	415-1660	30	85%
LED30W-012	12	625-2500	30	84%

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 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.



## 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.

8-29-13



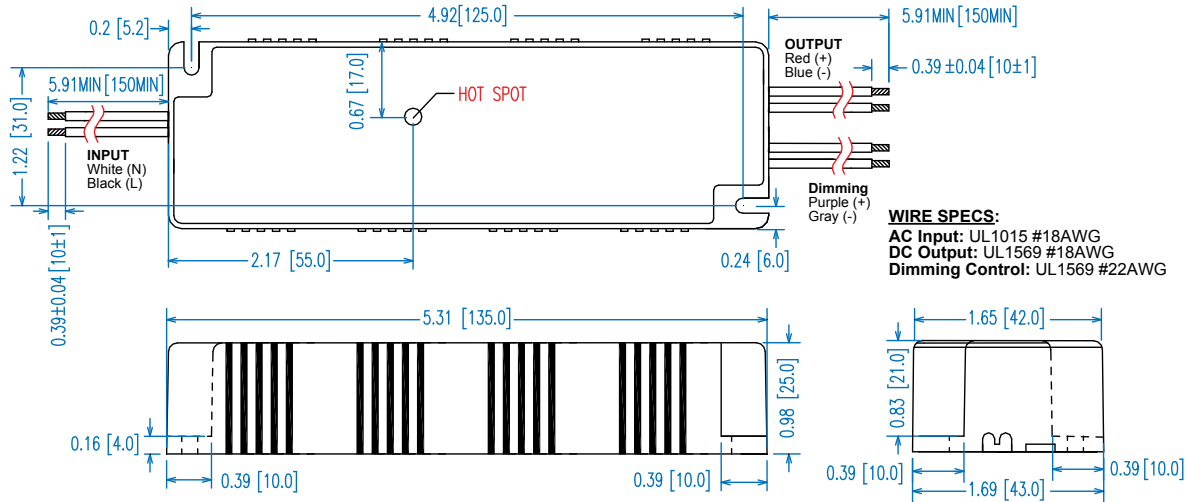
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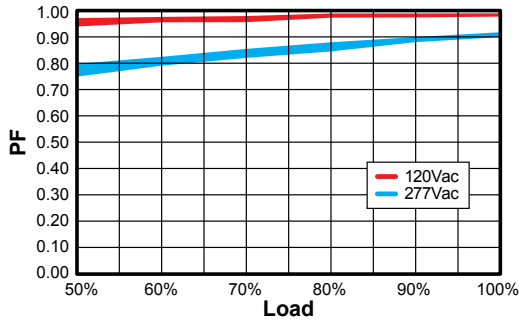
LED30W

Pg 2 of 4

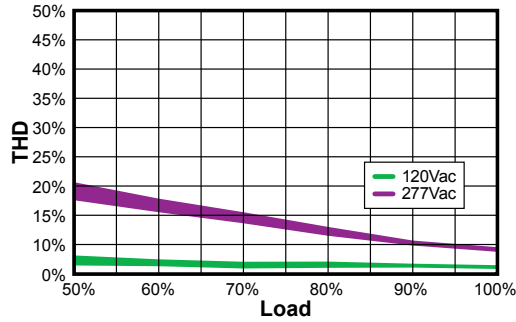
## Dimensions - Inches (mm)



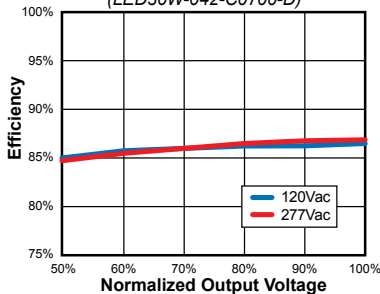
Power Factor / Load



THD / Load



Typical Efficiency / Load  
(LED30W-042-C0700-D)



## UL Conditions of Acceptability

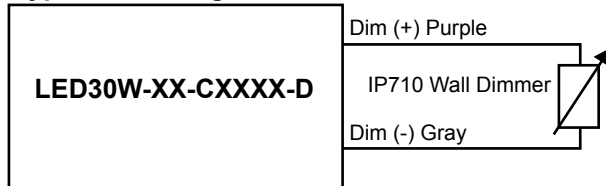
See website for additional information



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

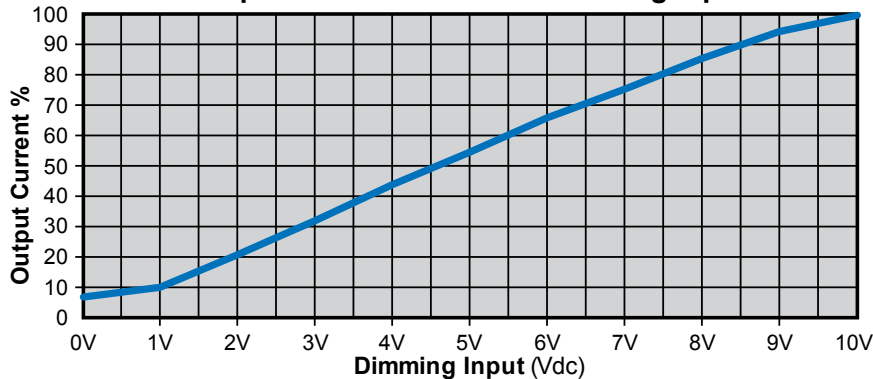
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	10 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—	+15 V

### Typical Dimming Circuit



(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input



### Notes:

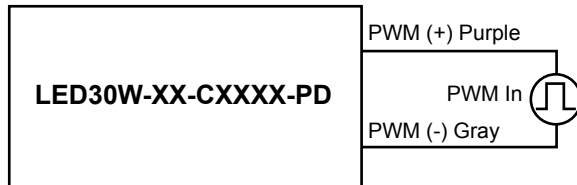
1. 0-10V dimmable version comes with an extra two wires +Purple/-Gray on the output side.
2. Compatible with most 0-10V Wall Slide dimmers and direct 0-10V analog signal. Recommended dimmer is Leviton IP710 or equivalent
3. 0-10V dimmable version is not intended to dim below about 5% @ 0V or 10% @ 1.0V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



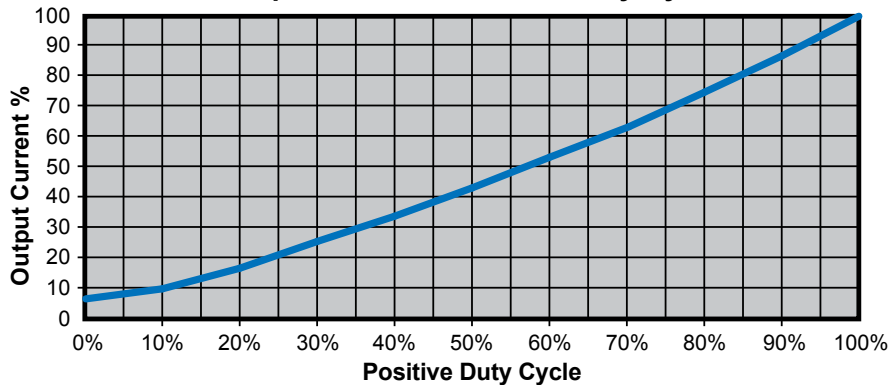
## “-PD” Option: PWM Dimming

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.