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Thomas Research Products
LED30W-12

For any questions, you can email us directly:
sales@integrated-circuit.com

LED-30W Series– Fixed Output and Dimmable

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

Electrical Specifications

Input Voltage Range:	**100-277 Vac Nom. (90-305 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**
Inrush Current:	**<15.0 Amps max @ 230 Vac, cold start 25ºC**
Input Current:	**0.41 Amps max (LED30W-42-C0700: 0.43 Amp 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

Minimum Starting Temp:	**-30ºC**
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:	**484,000 Hours at full load and 40ºC ambient conditions per MIL-217F Notice 2**
EMC:	**FCC 47CFR Part 15 Class B compliant**

- Total Power: 30 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66
- High Power Factor
- UL Sign Components Manual (S.A.M. Models)

Constant Current - Product Specifications

Model Number	Output Current *(mA ±3%)*	Output Voltage Range *(Vdc)*	Max. Output Power *(W)*	Typical Efficiency
LED30W-85-C0350-XX	350	28-85	29.8	88%
LED30W-75-C0400-XX	400	25-75	30	87%
LED30W-66-C0450-XX	450	22-66	29.7	87%
LED30W-42-C0700-XX	700	14-42	29.4	87%
LED30W-36-C0830-XX	830	12-36	29.9	87%
LED30W-24-C1250-XX	1250	8-24	30	86%
LED30W-18-C1660-XX	1660	6-18	30	85%
LED30W-12-C2500-XX	2500	4-12	30	85%

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

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.

E332160

Constant Voltage - Product Specifications

Model Number	Output Voltage *(Vdc ±5%)*	Output Current Range *(mA)*	Max. Output Power *(W)*	Typical Efficiency
LED30W-12 •	12	652-2500	30	84%
LED30W-18	18	415-1660	30	85%
LED30W-24 •	24	313-1250	30	85%
LED30W-36	36	208-830	29.9	86%
LED30W-42	42	175-700	29.4	87%
LED30W-66	66	113-450	29.7	87%
LED30W-75	75	100-400	30	87%
LED30W-85	85	88-350	29.8	88%

• Indicates S.A.M.

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.

Class 2: US/Canada

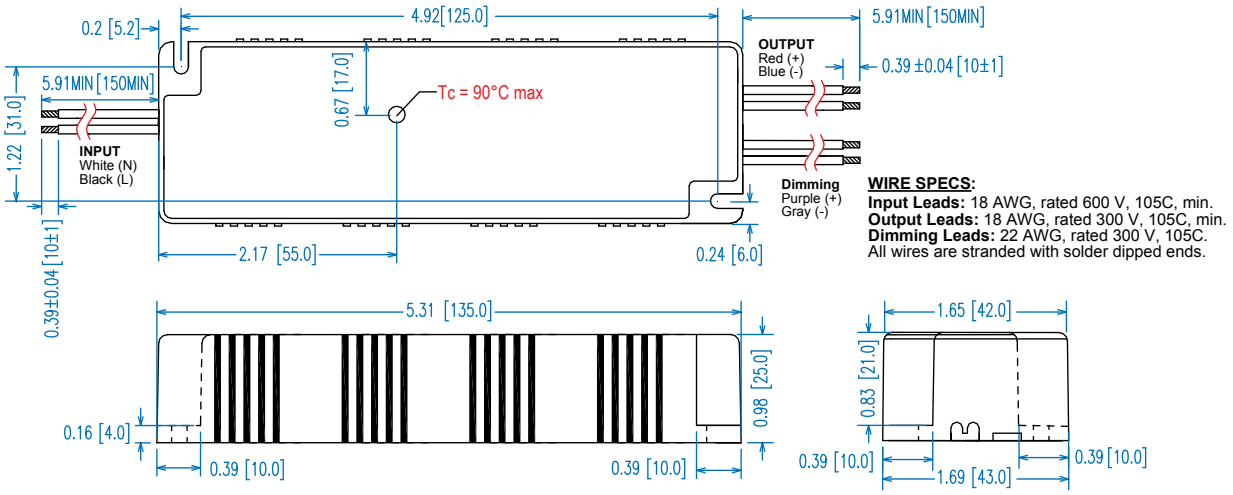
Specifications subject to change without notice.

Rev 6-3-16

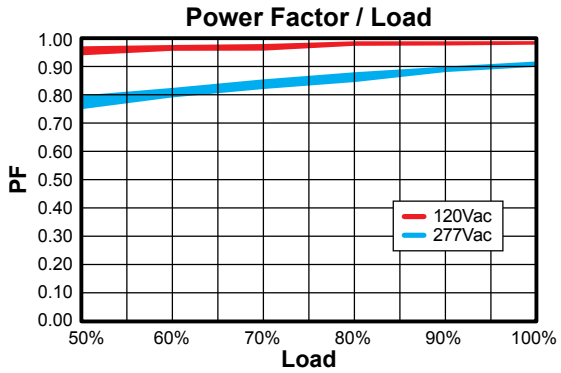
LED30W Series

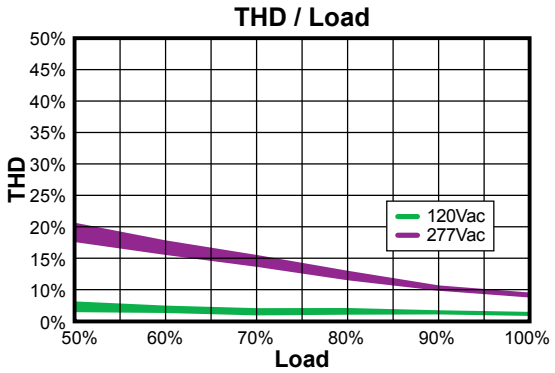
SSL Solutions Faster Than The Speed Of Light®

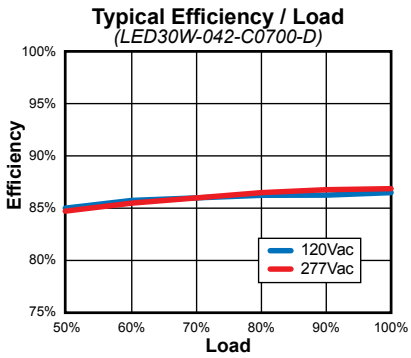
Dimensions - IN[mm]

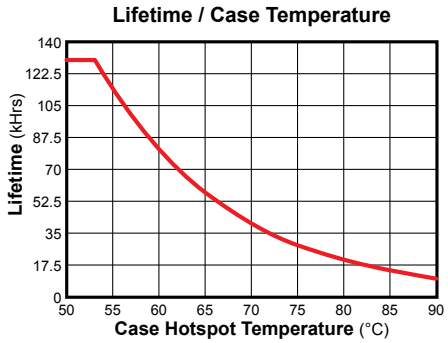


WIRE SPECS:
Input Leads: 18 AWG, rated 600 V, 105C, min.
Output Leads: 18 AWG, rated 300 V, 105C, min.
Dimming Leads: 22 AWG, rated 300 V, 105C.
All wires are stranded with solder dipped ends.









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)

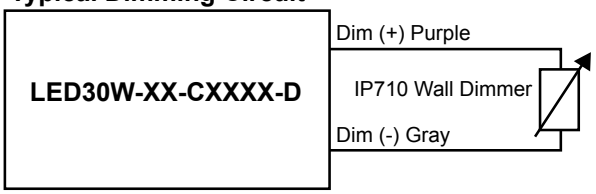
UL Conditions of Acceptability

See website for additional information

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

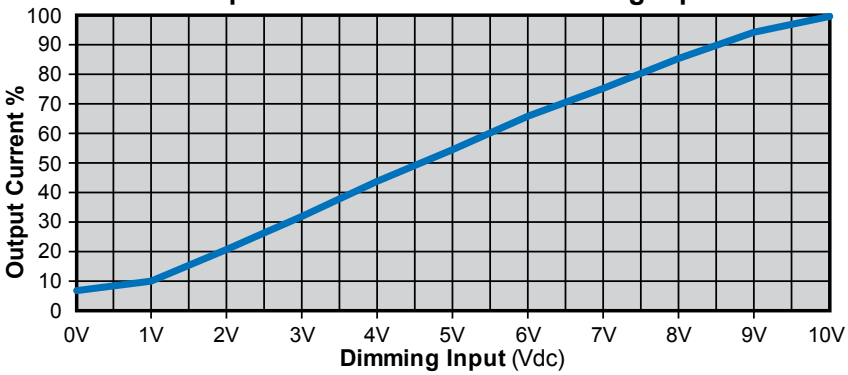
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	2 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—	+15 V

Typical Dimming Circuit



(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input



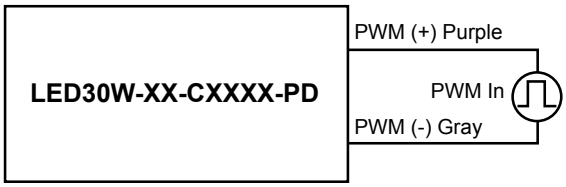
Notes:

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.

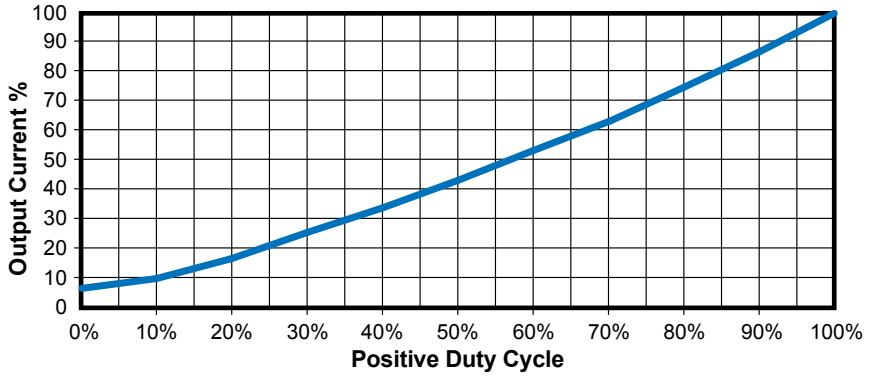
"-PD" Option: PWM Dimming

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.