Thomas Research Products

SSL Solutions Faster Than The Speed Of Light®

LED-35W Series

Off-line Switch Mode LED Drivers
Constant Current or Constant Voltage, with Isolation
Black Magic Thermal Advantage™ Plastic Housing,
Narrow cross-section fits T5-style ballast channels

Total Power: 35 Watts
Input Voltage: 100-277Vac Nom.
Outputs: Single from 14-100Vdc
Dry, Damp or Wet Locations, IP66, NEMA4
Fully Encapsulated
High Power Factor
Designed to be DLC & Energy Star 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 @ >70% load, 120-277Vac
Inrush Current:	<10.0 Amps @ 230 Vac, cold start 25ºC
Input Current:	0.37 A @ 120Vac, full load
Maximum Power:	35W
Current Regulation:	± 2% Over input line variation
Load Regulation:	± 4%
THD:	≤ 20% @ >70% load, 120-277Vac
Leakage Current:	400 µA Typical
Start Up Time:	<1S full output
Hold Up Time:	Half Cycle
Protection:	Output Over-Voltage, Output Over-Current, Short Circuit with auto-recovery, transient

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 @ full load and 40ºC ambient conditions per MIL-217F Notice 2
EMC:	FCC 47CFR Part 15 Class B compliant
Impact Resistance:	1g/s
Weight:	8.8 oz (250 grams) typical

Constant Current - Product Specifications

Model Number	Output Current *(mA ±4%)*	Output Voltage Range *(Vdc)*	Max. Output Power *(W)*	Typical Efficiency
LED35W-100-C0350-XX	350	34-100	35	86%
LED35W-054-C0700-XX	700	18-54	35	86%
LED35W-036-C1050-XX	1050	18-36	35	85%
LED35W-028-C1250-XX	1250	14-28	35	84%

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

Constant Voltage - Product Specifications

Model Number	Output Current Range *(mA)*	Output Voltage *(Vdc ±5%)*	Max. Output Power *(W)*	Typical Efficiency
LED35W-100	88-350	100	35	86%
LED35W-054	175-700	54	35	86%
LED35W-036	263-1050	36	35	85%
LED35W-028	313-1250	28	35	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" version 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.

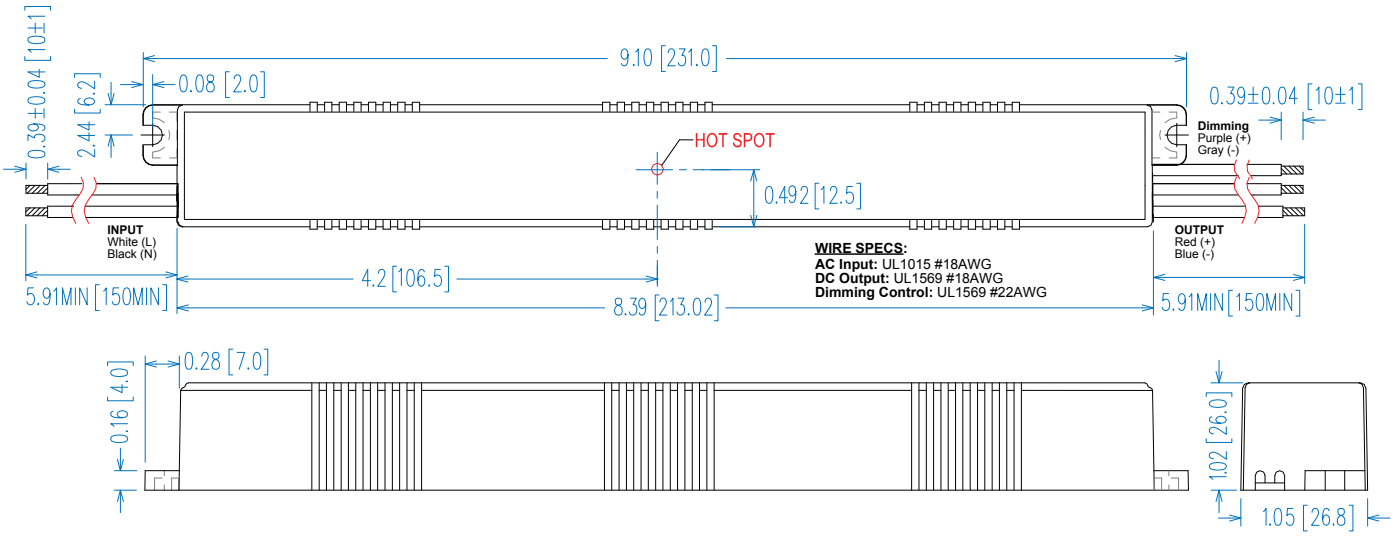
c UL us PENDING CE FC RoHS IP66

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 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.

8-22-13

Dimensions - mm

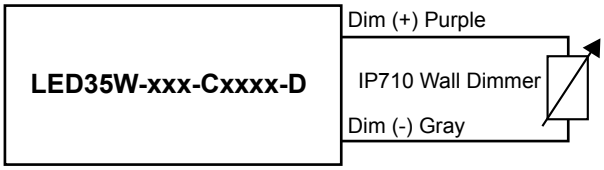


Safety and EMC Compliance	
UL/CUL	UL8750, CSA-C22.2
C E	EN61347
EN61000-3-2	Harmonic current emissions
EN61000-3-3	Voltage fluctuations & flicker, Class C

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

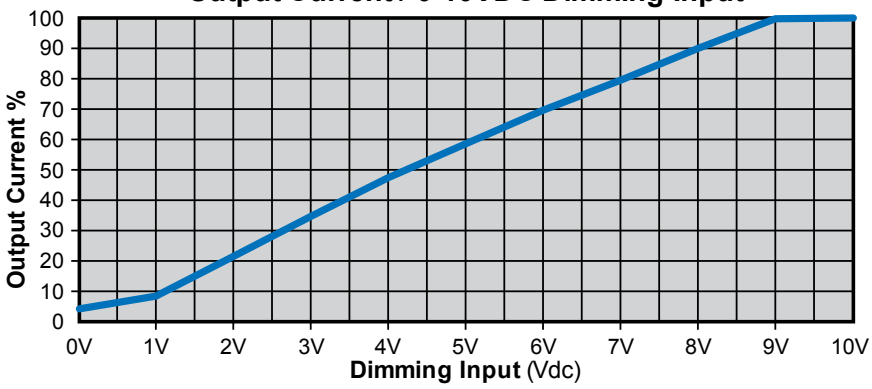
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	0.5 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—	+15 V

Typical Dimming Circuit



(Dimmer must be current-sink type control)

Output Current / 0-10VDC Dimming Input



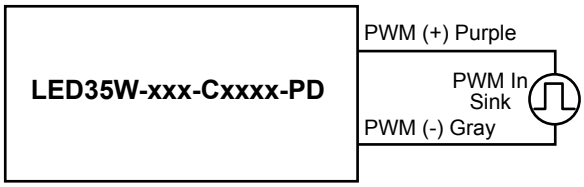
Notes:

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 output will be ≤ 10% @ 0-1.0V
4. 0-10V dimmable version output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.

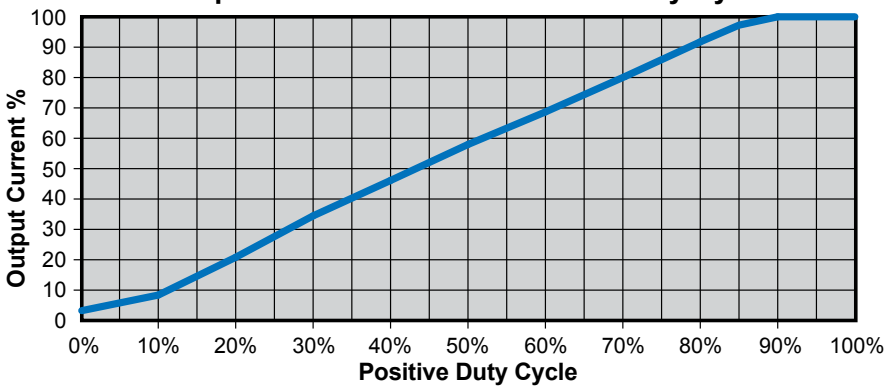
"-PD" Option: PWM Dimming

Parameters	Minimum	Typical	Maximum
Absolute Maximum Voltage Range on PWM Input (Purple Wire)	-2.0 V	10 V	+15 V
Input LOW Level Voltage Range (Purple Wire)	-2.0	0 V	+5.5 V
Input HIGH Level Voltage Range (Purple Wire)	+9.0	10 V	+15 V
Current into PWM Input (Purple Wire)	0 mA	—	1.2 mA
Source Current out of PWM Input (Purple Wire)	0 mA	—	0.5 mA
PWM Input Signal Frequency	500 Hz	—	1500 Hz
PWM Input Signal Positive Duty Cycle	0%	10-90%	100%

PWM Positive Dimming Typical Circuit



Output Current / 1.0kHz 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 dim below 5% at 0% Duty Cycle.
3. PWM dimmable version output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.