



# LED-40W 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:	<20.0 Amps max @ 230 Vac, cold start 25°C
Input Current:	0.40 Amps max
Maximum Power:	40W
Current Accuracy:	± 1% Over input line variation
Load Regulation:	± 3%
THD:	≤ 20% @ full load
Leakage Current:	400 µA Typical
Hold Up Time:	Half Cycle
Output Protection:	Over-Voltage, Over-Current, and Short Circuit Protection with Auto Recovery

## Environmental Specifications

Maximum Case Temp.	90°C
Minimum Starting Temp:	-30°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



- Total Power: 40 Watts
- Input Voltage: 100-277 Vac
- UL Dry & Damp Location Rated
- IP66 & NEMA4
- High Power Factor
- UL Sign Components Manual (S.A.M. Models)

## Constant Current - Product Specifications

Model Number	Output Current (mA ±5%)	Output Voltage Range (Vdc)	Max Output Power (W)	Max Efficiency
LED40W-114-C0350-XX	350	38-114	40	87%
LED40W-100-C0400-XX	400	33-100	40	87%
LED40W-089-C0450-XX	450	30-89	40	87%
LED40W-054-C0700-XX	700	18-54	37.8	86%
LED40W-048-C0830-XX	830	16-48	40	86%
LED40W-045-C0900-XX	900	15-45	40	86%
LED40W-040-C1000-XX	1000	20-40	40	85%
LED40W-036-C1100-XX	1100	12-36	40	86%
LED40W-030-C1300-XX	1300	10-30	39.0	86%
LED40W-030-C1400-XX	1400	10-30	42	85%
LED40W-024-C1300-XX	1300	8-24	31.2	86%
LED40W-024-C1400-XX	1400	8-24	33.6	86%
LED40W-024-C1670-XX	1670	8-24	40	86%
LED40W-022-C1820-XX	1820	7-22	40	86%
LED40W-018-C2220-XX	2200	6-18	40	85%
LED40W-015-C2680-XX	2680	5-15	40	85%
LED40W-013-C3080-XX	3080	4-13	40	85%
LED40W-012-C3330-XX	3330	4-12	40	84%
LED40W-010-C4000-XX	4000	3-10	40	84%
LED40W-009-C4450-XX	4450	3-9	40	83%

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

## Constant Voltage - Product Specifications

Model Number	Output Voltage (Vdc ±5%)	Output Current Range (mA)	Max Output Power (W)	Max Efficiency
LED40W-009	9	1113-4450	40	83%
LED40W-010	10	1000-4000	40	84%
LED40W-012	12	833-3330	40	84%
LED40W-013	13	770-3080	40	85%
LED40W-015	15	670-2680	40	85%
LED40W-018	18	550-2200	40	85%
LED40W-022	22	455-1820	40	86%
LED40W-024	24	418-1670	40	86%
LED40W-030	30	350-1400	42	85%
LED40W-036	36	275-1100	40	86%
LED40W-040	40	250-100	40	85%
LED40W-045	45	225-900	40	86%
LED40W-048	48	208-830	40	86%
LED40W-054	54	175-700	40	86%
LED40W-089	89	113-450	40	87%
LED40W-100	100	100-400	40	87%
LED40W-114	114	88-350	40	87%

• Indicates S.A.M.

### Ordering Options:

- D: 2-wire dimmable model dims 100% to 10%. Two extra wires included on the output side: +Purple/-Gray. This model is offers 0-10V & Resistance dimming, compatible with most quality 0-10V dimmers. See page 3.
- D3: 3-wire dimmable model dims 100% to 10%. Three extra wires included on the output side: Yellow/Purple/Gray. This model is suitable for potentiometer dimming. See page 3.
- PD: PWM dimmable version dims 100% to 10%. Two extra wires included on the output side: +Purple/-Gray. This model is PWM Dimmable via a positive duty cycle, 200Hz to 1KHz, 0-10V Pulse. See page 4.



### 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.

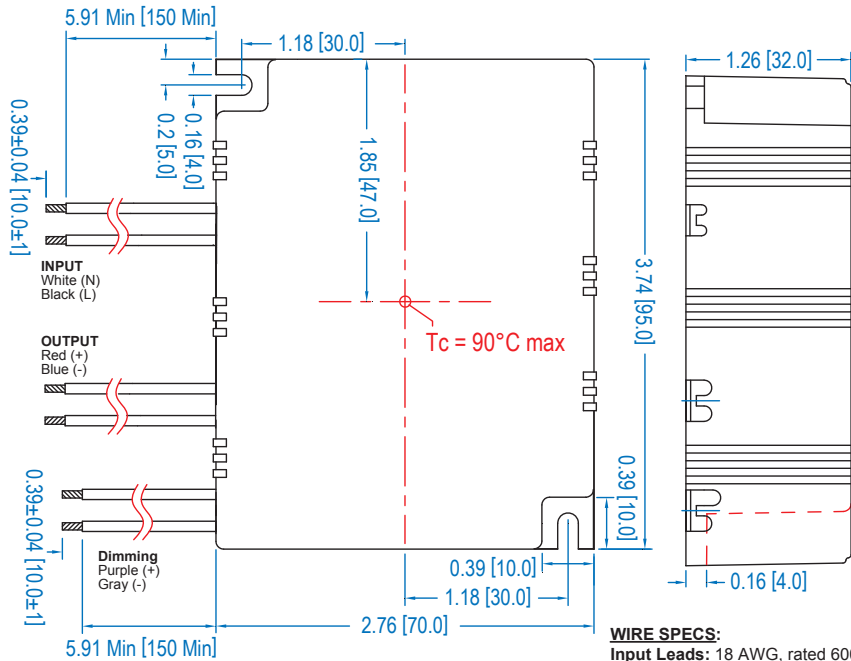
Specifications subject to change without notice.

Class 2: US/Canada

Rev 4-19-16

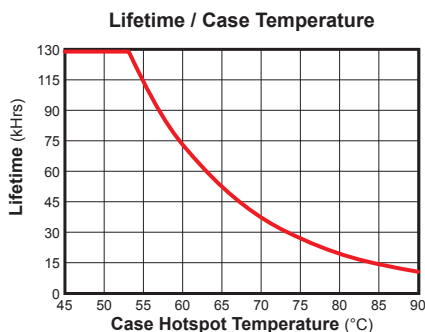
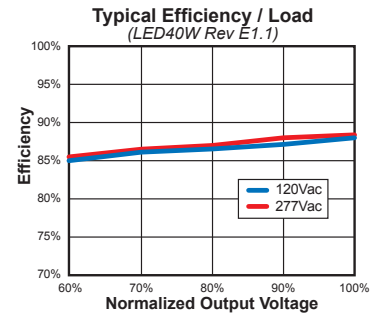
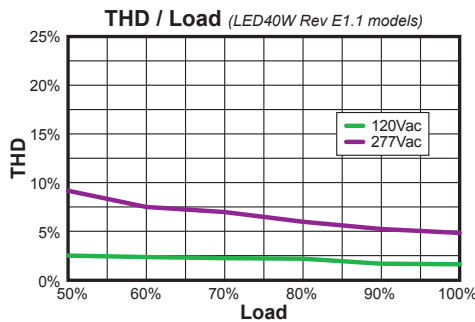
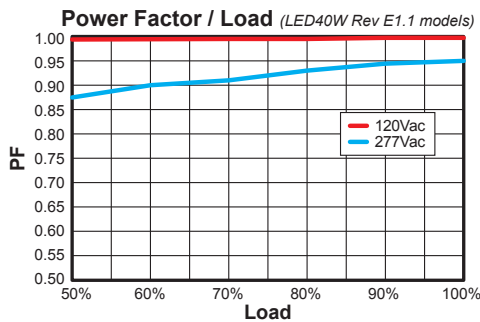


## Dimensions - IN [mm]



### 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.



Safety and EMC Compliance	
UL/CUL	UL8750, CSA-C22.2
C E	EN 61347
FCC, 47CFR Part 15	Class B
EN61000-3-2	
EN61000-3-3	Class C
EN61000-4-5	2kV

### 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)

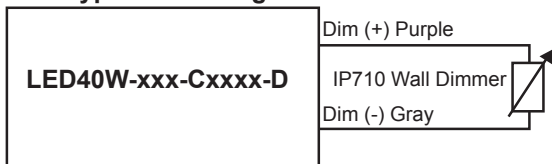
## UL Conditions of Acceptability

See website for additional information

**“-D” and “-D3” Option: 0-10VDC and Resistance Dimming**

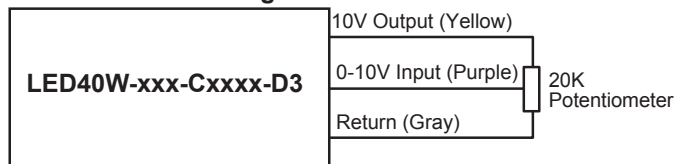
Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—	2 mA
Absolute Voltage Range on 0-10V (+) Yellow Wire	-2.0 V	—	+15 V
Source Current out of Aux Yellow Wire	—	—	10mA

**“-D” Typical Dimming Circuit**

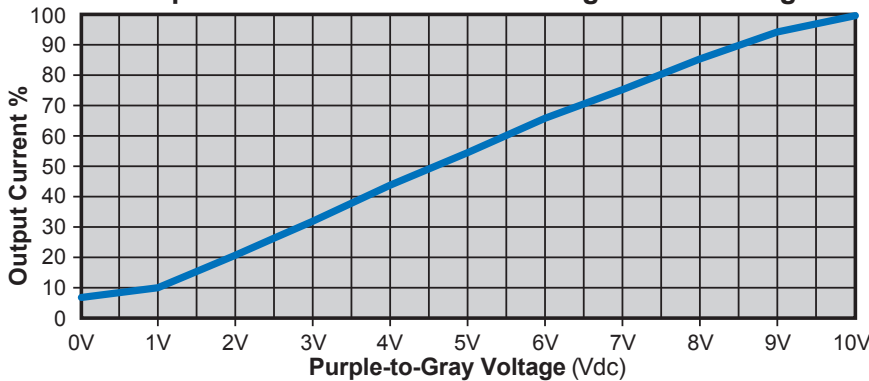


(Dimmer must be current-sink type control)

**“-D3” 3-Wire Dimming Circuit**



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



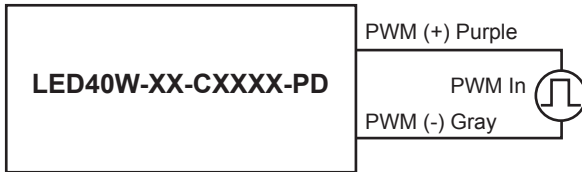
**Notes:**

1. D dimmable version comes with an extra two wires on the output side: +Purple/-Gray.
2. Compatible with most 0-10V dimmers. Recommended dimmer is Leviton IP710 or equivalent.
3. D & D3 dimmable versions are not intended to dim below about 5% @ 0V or 10% @ 1.0V.
4. Output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.

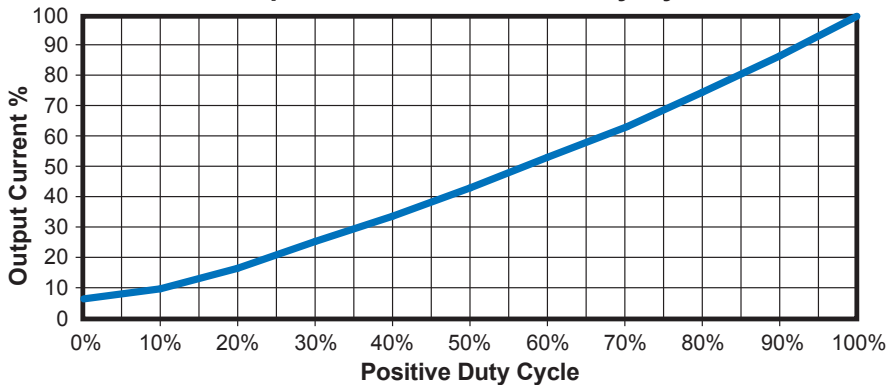
**“-PD” Option: PWM Dimming**

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%

**“-PD” PWM Positive Dimming Typical Circuit**



**Output Current / Positive Duty Cycle**



**Notes:**

1. PD dimmable version comes with an extra 2 wires on the output side for PWM type dimming: +Purple/-Gray.
2. Below 10% Duty cycle proper dimming operation is not assured. Unit is not intended to turn off at <10% Duty Cycle.
3. Output will be 100% with Purple/Gray open and minimum with Purple/Gray Shorted.