



LED-40W HL Series-- Hazardous Location, 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 @ ≥ 60% load 100-230V, ≥ 85% load 277V
Inrush Current:	<20.0 Amps max @ 230 Vac, cold start 25°C
Input Current:	0.40 Amps typical @ 120Vac, 60Hz, Full Load
Maximum Power:	40W
Current Regulation:	± 3% Over input line variation
Load Regulation:	± 4%
THD:	≤ 20% @ ≥ 60% load 100-230V, ≥ 80% load 277V
Leakage Current:	400 µA Typical
Hold Up Time:	Half Cycle
Output Protection:	Over-Voltage, Over-Current, Short Circuit (Auto Recovery) plus Internal Thermal Protection (Hiccup Mode)

Environmental Specifications

Minimum Starting Temp:	-30°
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
Impact Resistant:	1g/s
MTBF:	482,000 Hrs @ full load, 40°C per MIL-217F Notice 2
Weight:	12.9 oz (364 g)

-X indicates lead options. B for bottom leads, S for side leads.
-Y indicates dimming options are available. See options below. Blank = fixed current output

Ordering Options:

- D: Dimmable model dims 100-10%. Two extra wires on the output side: +Purple/-Gray. It offers 0-10V & Resistance dimming, compatible with most quality 0-10V dimmers. See page 3.
- P: PWM dimmable version dims 100-10%. Two extra wires on the output side: +Purple/-Gray. It 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.



- Total Power: 40 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66
- High Power Factor
- UL Type HL, with V5A Case
- Rated for Hazardous Locations

Constant Current - Product Specifications

Model Number	Current Out (mA ±3%)	Voltage Out, Range (Vdc)	Power Out Max (W)	Typical Effic (%)
LED40W-130-C0300-HL-XY	300	44-130	40	87
LED40W-114-C0350-HL-XY	350	38-114	40	86
LED40W-100-C0400-HL-XY	400	33-100	40	86
LED40W-89-C0450-HL-XY	450	30-89	40	86
LED40W-72-C0550-HL-XY	550	24-72	40	85
LED40W-54-C0700-HL-XY	700	18-54	38	85
LED40W-48-C0830-HL-XY	830	16-48	40	85
LED40W-45-C0900-HL-XY	900	16-45	40	85
LED40W-40-C1000-HL-XY	1000	13-40	40	85
LED40W-36-C1100-HL-XY	1100	12-36	40	85
LED40W-30-C1400-HL-XY	1400	10-30	42	85
LED40W-24-C1670-HL-XY	1670	8-24	40	85
LED40W-22-C1820-HL-XY	1820	7-22	40	85
LED40W-18-C2220-HL-XY	2200	6-18	40	84
LED40W-15-C2680-HL-XY	2680	5-15	40	84
LED40W-13-C3080-HL-XY	3080	4-13	40	84
LED40W-12-C3330-HL-XY	3330	4-12	40	83
LED40W-10-C4000-HL-XY	4000	3-10	40	83
LED40W-09-C4450-HL-XY	4450	3-9	40	82

Constant Voltage - Product Specifications

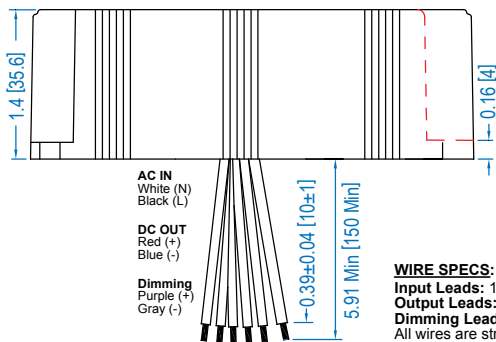
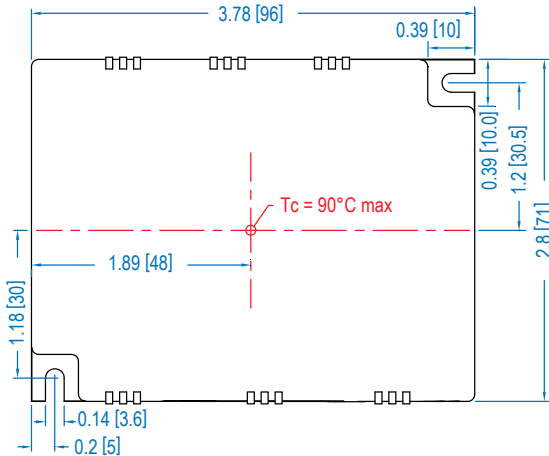
Model Number	Voltage Out (Vdc ±5%)	Current Out Range (mA)	Power Out Max (W)	Typical Effic (%)
LED40W-09-HL-X	9	1113-4450	40	87
LED40W-10-HL-X	10	1000-4000	40	86
LED40W-12-HL-X	12	825-3330	40	86
LED40W-13-HL-X	13	770-3080	40	86
LED40W-15-HL-X	15	670-2680	40	85
LED40W-18-HL-X	18	550-2200	40	85
LED40W-22-HL-X	22	455-1820	40	85
LED40W-24-HL-X	24	418-1670	40	85
LED40W-30-HL-X	30	350-1400	42	85
LED40W-36-HL-X	36	275-1100	40	85
LED40W-40-HL-X	40	250-1000	40	85
LED40W-45-HL-X	45	225-900	40	85
LED40W-48-HL-X	48	208-830	40	85
LED40W-54-HL-X	54	175-700	38	84
LED40W-72-HL-X	72	138-550	40	84
LED40W-89-HL-X	89	113-450	40	84
LED40W-100-HL-X	100	100-400	40	83
LED40W-114-HL-X	114	75-350	40	83
LED40W-130-HL-X	130	75-300	40	82

Class 2: US/Canada US Only

Rev 8-25-15

Dimensions - Inches (mm)

Standard "-BY" Bottom Leads Configuration:



AC IN
White (N)
Black (L)

DC OUT
Red (+)
Blue (-)

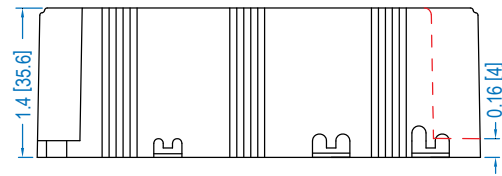
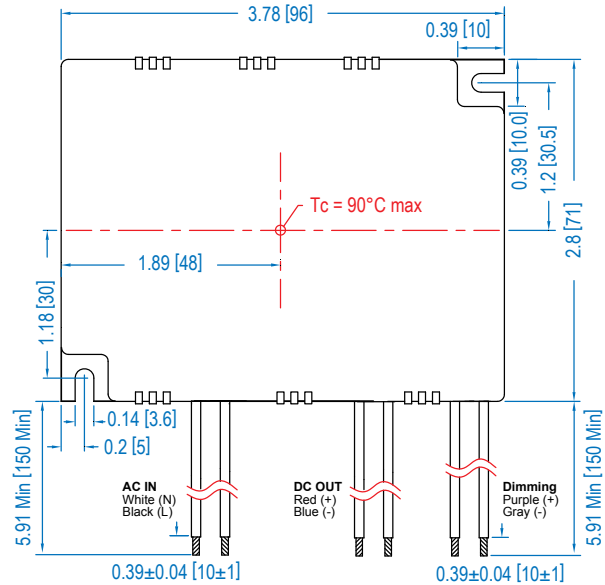
Dimming
Purple (+)
Gray (-)

0.39±0.04 [10±1]
5.91 Min [150 Min]

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.

"-SY" Optional Side Leads Configuration:

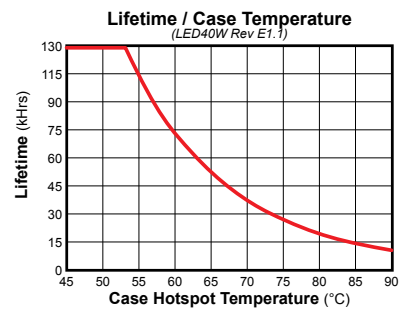
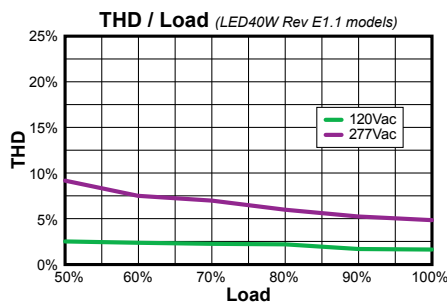
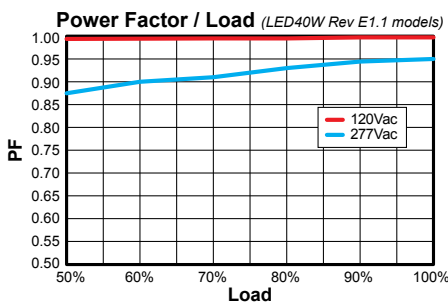


AC IN
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DC OUT
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Dimming
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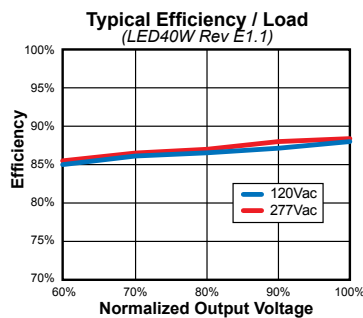
0.39±0.04 [10±1]
5.91 Min [150 Min]



Safety and EMC Compliance	
UL/CUL	UL8750 Type HL, CSA-C22.2
C E	EN61347
FCC, 47CFR Part 15	Class B

UL Conditions of Acceptability

See website for additional information



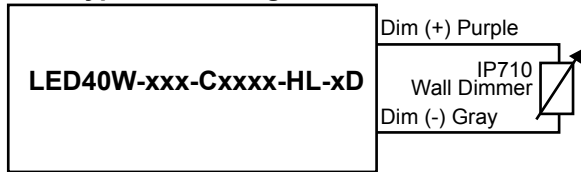
Note:

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)

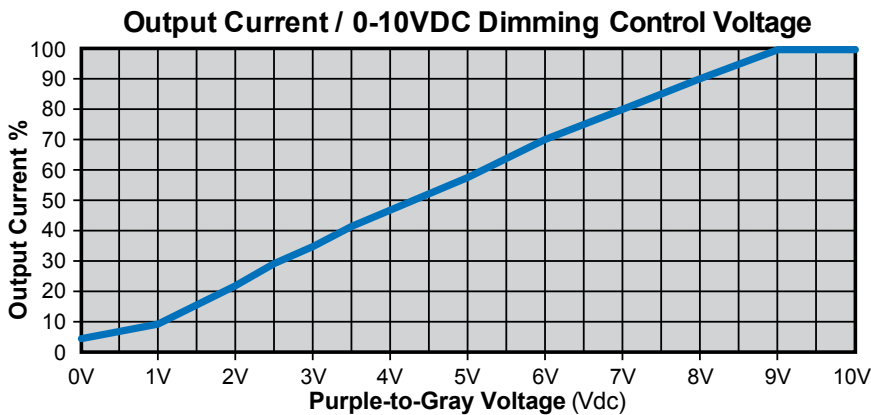
“-D” Option: 0-10VDC and Resistance Dimming

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

“-D” Typical Dimming Circuit



(Dimmer must be current-sink type control)



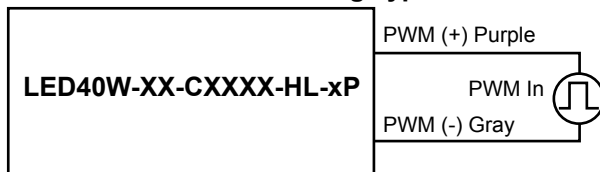
Notes:

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.

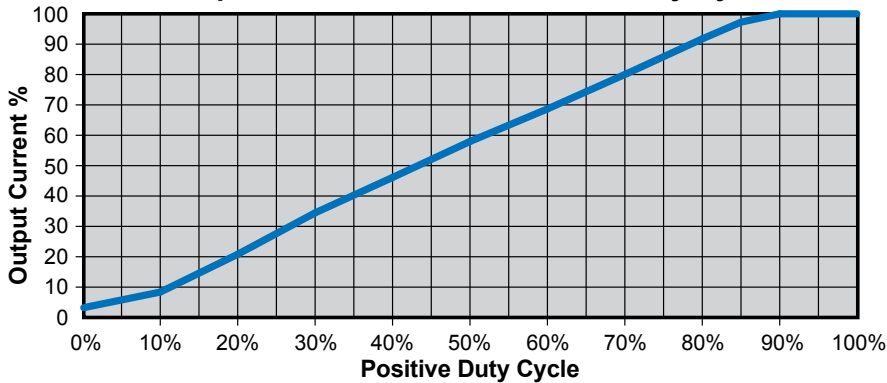
“-PD” Option: PWM Dimming

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

“-P” PWM Positive Dimming Typical Circuit



Output Current / 1.0kHz 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.