

# LED-40W-HL Series

Hazardous Location, Fixed Output and Dimmable Switch Mode LED Drivers



## 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                                     |

## Protections

|               |               |
|---------------|---------------|
| Over-voltage  | Output        |
| Over-current  | Output        |
| Short Circuit | Auto Recovery |

## Environmental Specifications

|                                       |                                                     |
|---------------------------------------|-----------------------------------------------------|
| Max Case Life Temp: (5 year warranty) | 66°C                                                |
| Maximum Case Temp (UL):               | 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                                             |
| Impact Resistance:                    | 1g/s                                                |
| MTBF:                                 | 482,000 Hrs @ full load, 40°C per MIL-217F Notice 2 |
| Weight:                               | 12.9 oz (364 g)                                     |

- Total Power: 40 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP66
- High Power Factor
- Constant Current & Constant Voltage with Isolation
- Black Magic Thermal Advantage™ Plastic Housing
- UL Type HL, with V5A Case
- Rated for Hazardous Locations

### Dimming Option:

0-10V & Resistance dimmable models include an extra two wires +Purple/-Gray on the output side. "-D" Compatible with most quality 0-10V wall dimmers. See page 3 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 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.



## Constant Current Models

| Model                  | 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-089-C0450-HL-XY | 450                  | 30-89                    | 40                | 86                |
| LED40W-072-C0550-HL-XY | 550                  | 24-72                    | 40                | 85                |
| LED40W-054-C0700-HL-XY | 700                  | 18-54                    | 38                | 85                |
| LED40W-048-C0830-HL-XY | 830                  | 16-48                    | 40                | 85                |
| LED40W-045-C0900-HL-XY | 900                  | 16-45                    | 40                | 85                |
| LED40W-040-C1000-HL-XY | 1000                 | 13-40                    | 40                | 85                |
| LED40W-036-C1100-HL-XY | 1100                 | 12-36                    | 40                | 85                |
| LED40W-030-C1400-HL-XY | 1400                 | 10-30                    | 42                | 85                |
| LED40W-024-C1670-HL-XY | 1670                 | 8-24                     | 40                | 85                |
| LED40W-022-C1820-HL-XY | 1820                 | 7-22                     | 40                | 85                |
| LED40W-018-C2220-HL-XY | 2200                 | 6-18                     | 40                | 84                |
| LED40W-015-C2680-HL-XY | 2680                 | 5-15                     | 40                | 84                |
| LED40W-013-C3080-HL-XY | 3080                 | 4-13                     | 40                | 84                |
| LED40W-012-C3330-HL-XY | 3330                 | 4-12                     | 40                | 83                |
| LED40W-010-C4000-HL-XY | 4000                 | 3-10                     | 40                | 83                |
| LED40W-009-C4450-HL-XY | 4450                 | 3-9                      | 40                | 82                |

-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

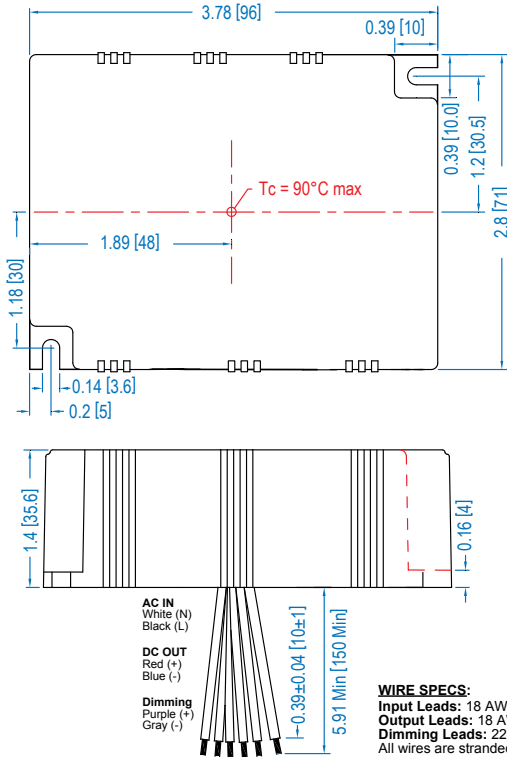
## Constant Voltage Models

| Model           | Voltage Out (Vdc ±5%) | Current Out Range (mA) | Power Out Max (W) | Typical Effic (%) |
|-----------------|-----------------------|------------------------|-------------------|-------------------|
| LED40W-009-HL-X | 9                     | 1113-4450              | 40                | 87                |
| LED40W-010-HL-X | 10                    | 1000-4000              | 40                | 86                |
| LED40W-012-HL-X | 12                    | 825-3330               | 40                | 86                |
| LED40W-013-HL-X | 13                    | 770-3080               | 40                | 86                |
| LED40W-015-HL-X | 15                    | 670-2680               | 40                | 85                |
| LED40W-018-HL-X | 18                    | 550-2200               | 40                | 85                |
| LED40W-022-HL-X | 22                    | 455-1820               | 40                | 85                |
| LED40W-024-HL-X | 24                    | 418-1670               | 40                | 85                |
| LED40W-030-HL-X | 30                    | 350-1400               | 42                | 85                |
| LED40W-036-HL-X | 36                    | 275-1100               | 40                | 85                |
| LED40W-040-HL-X | 40                    | 250-1000               | 40                | 85                |
| LED40W-045-HL-X | 45                    | 225-900                | 40                | 85                |
| LED40W-048-HL-X | 48                    | 208-830                | 40                | 85                |
| LED40W-054-HL-X | 54                    | 175-700                | 38                | 84                |
| LED40W-072-HL-X | 72                    | 138-550                | 40                | 84                |
| LED40W-089-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                |

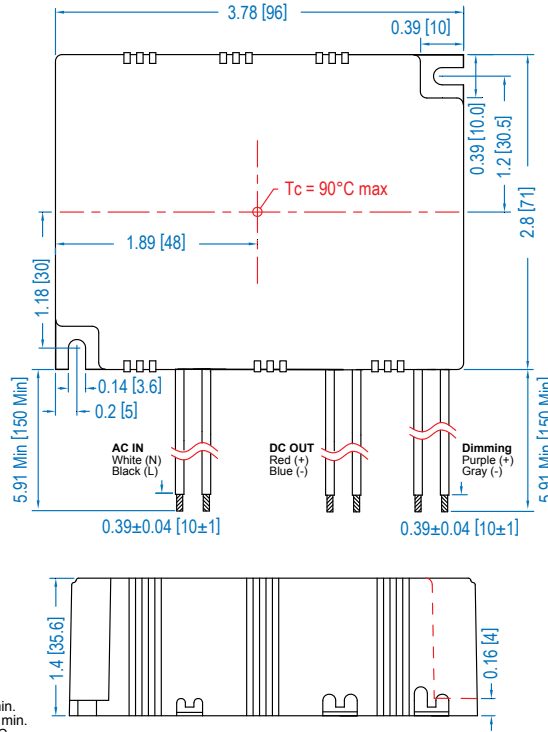
Class 2: US/Canada

### Dimensions

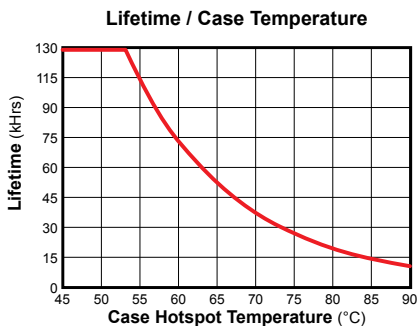
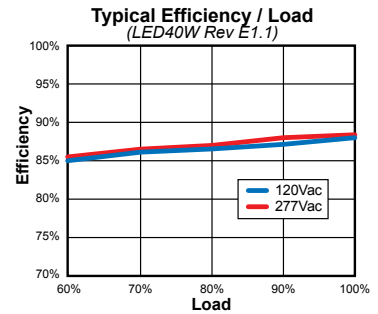
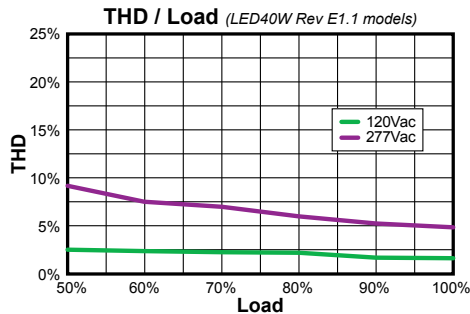
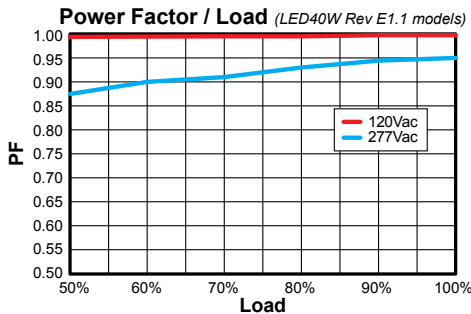
Standard “-BY” Bottom Leads Configuration:



“-SY” Optional Side Leads Configuration:



### Power Characteristics



| Safety Cert.       | Standard                            |
|--------------------|-------------------------------------|
| UL/CUL             | UL8750                              |
| CSA                | 22.2                                |
| CE                 | EN61347                             |
| EMC Standard       | Notes                               |
| EN61000-3-2        |                                     |
| EN61000-3-3        | Class C                             |
| FCC, 47CFR Part 15 | Class B                             |
| EN6100-4-5         | 2KV L-N, 8/20 μsec Surge Protection |

### UL Conditions of Acceptability

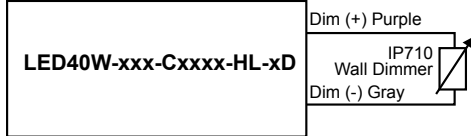
See website for additional information

**Note:** The area under the life-temperature curve represents where the driver has highly reliable operation within specification. Driver performance may drift out of published specifications as the hours of operation exceed the curve at a given temperature. Higher operating temperatures increase the chances of a failure to function. Other electrical, mechanical and environmental factors affect driver lifetime but are not represented in this calculation.

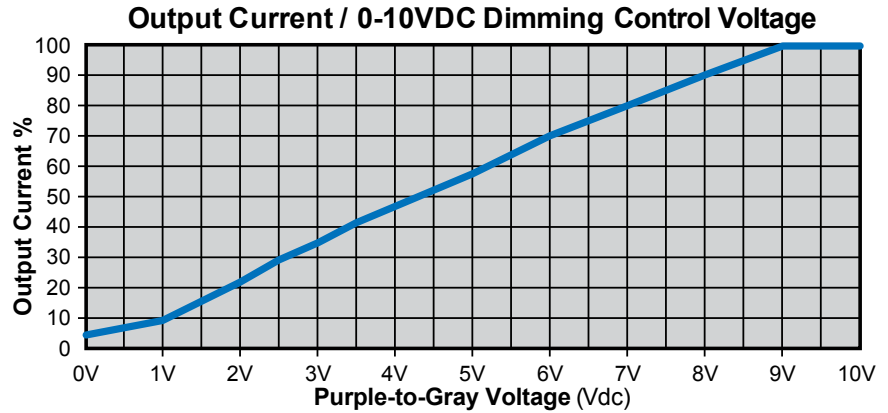
**“-D” Option: 0-10VDC and Resistance Dimming**

| 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.