

## Main Features:

- Input Voltage: 277~480Vac
- Output Wattage: Constant Current (C.C.) at 96W  
with Adjustable Current Setting
- Programmable Method: Wiring with Bluetooth Programmer
- High Efficiency: Up to 89%
- Dimming Function: **0-10V with Dim to off (dto)**
- Lightning Protection: Built-in [Line to line 1kV, line to ground 2kV]
- Reliability Protection: SCP, OTP
- Safety Regulation: Complies with UL8750 Class 2 & Class P
- Waterproof Rating: IP20
- Five Year Warranty under Normal Usage Conditions



## SPECIFICATION

| Model No. (*)  | Output Voltage Range   | C.C. or C.P. Programmable Rated Output or Range | Programming Method | Dimming Control Method | Dim to off (dto) | Aux   |
|--|--|---|--------------------|------------------------|------------------|-------|
| LDD- <b>www(D)vvv(P/F)ccccHH-(V/D)</b>   | (Vdc)  | (mA) <sup>(i)</sup>                             |                    |                        | (V or %)         | (Vdc) |
| <b>LDDS096D040P2400HHV</b>   | 10 - 54  | 700 - 2400                                      | Analog/Wire        | 0-10V                  | 1V or 10%        | 12    |
| (*) model name pattern:<br><b>LDD-<b>www(D)vvv(P/F)ccccHH-(V/D)</b></b><br>LDD means, LED Driver with C.C.<br>(D) means, 12V Aux<br>(P/F) means, Wire/Wireless<br>Programming method<br>(V/D) means, Analog Voltage/Digital<br>DALI Dimming method | (i) Pre-set Constant Current Value with dimming<br>Auxiliaries Voltage: 12V <sub>aux</sub> with <b>100mA</b><br>Dim to Off (dto) with 0.5W Standby Power<br>Case Temp: T <sub>c</sub> : 90°C<br>SCP (Short Circuit Protection): when its load is being shorted, the driver will enter hiccup mode, and shall be self-recover when the fault condition is clean.<br>OTP (Over Temperature Protection): Reduce the output current to about 50mA once T <sub>a</sub> ≥75±10°C; Recover only If restart the input power at T <sub>a</sub> ≤50±10°C . |   |                    |                        |                  |       |

| Input Spec.           | Condition Description   | Min. | Normal | Max.      | Units |
|-----------------------|---|------|--------|-----------|-------|
| Input Voltage Range   | Universal Input   | 277  |        | 480       | VAC   |
| Input Frequency Range |   | 47   | 50/60  | 63        | Hz    |
| Input Current         | At 277 VAC/480 VAC input, full load output                            |      |        | 0.42/0.24 | A     |
| Power Factor          | At 277 VAC/480 VAC input, 25°C full load                              |      | >0.92  |           |       |
| Inrush Current        | At 277 VAC input, 25°C cold start / At 480 VAC input, 25°C cold start |      |        | 20        | A     |
| Leakage Current       | @480Vac 60Hz  |      |        | 0.5       | mA    |
| Surge Protection      | Differential and common mode, combination wave                        |      |        | 1.0/2.0K  | V     |

| Output Spec.         | Condition Description   | Min. | Normal | Max. | Units       |
|----------------------|---|------|--------|------|-------------|
| Current Accuracy     | At 25°C, @277Vac & 480Vac, full load  |      | ±5     |      | %           |
| Ripple Current       | At 25°C, full load, measured at 20MHz bandwidth. The result differs according to different LED load characteristic. |      |        | 5    | % Ip-p (Io) |
| Overshoot/Undershoot | % of I out max & LED load, at 25°C, measured at 20MHz bandwidth   |      |        | 10   | %           |
| Turn-On Delay        | Measured at 277Vac/480Vac input and Full Load   |      |        | 0.5  | S           |
| Aux Output Voltage   | Aux out current with 100mA up to 1.2W max   | 11   | 12     | 13   | Vdc         |

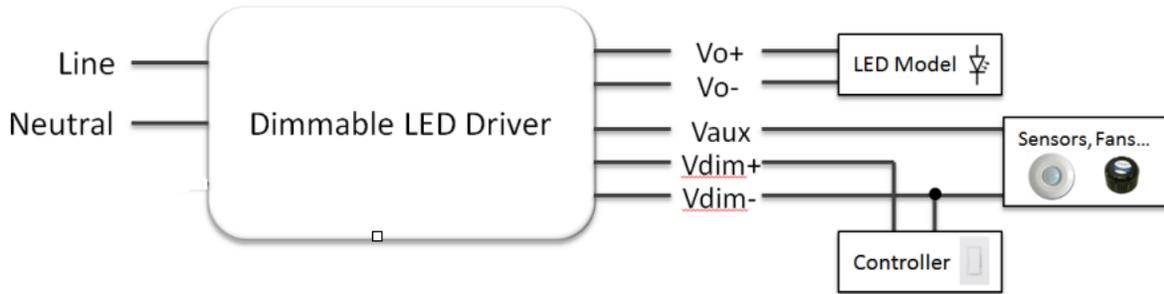
| General Spec.                 | Condition Description                              | Min.                    | Normal   | Max.  | Units |
|-------------------------------|--|-------------------------|----------|-------|-------|
| Efficiency                    | 277Vac 480Vac measured at 25°C, full load          | 87 89                   | 87 89    |       | %     |
| MTBF                          | at Tc = 25°C Full load and nominal input condition |                         | ≥500,000 |       | Hours |
| Lifetime                      | at Tc < 85°C Full load and nominal input condition |                         | ≥50,000  |       | Hours |
| Operating/Storage Temperature | 10%RH~85%RH/5%RH~95%RH                             | -30/-40                 |          | 55/85 | °C    |
| Dimension (OL/L x W x H)      | OL is the overall length with mounting plates      | 241.3/228 x 44.0 x 30.0 |          |       | mm    |
|                               |  | 9.5/8.98 x 1.73 x 1.18  |          |       | inch  |
| Weight                        | Net weight without package                         | <b>1.17/0.53</b>        |          |       | lb/kg |

| Safety & EMC Compliance | Category                     | Condition Description   |
|-------------------------|------------------------------|---|
| Safety Regulations      | UL8750                       | Light Emitting Diode (LED) Equipment for Use in Lighting Products, Class 2 Class P    |
|                         | Dielectric Strength (Hi-POT) | Primary to Secondary: 2500Vac /10mA max / 60 seconds (3 seconds for production)       |
|                         | Insulation Resistance        | 50M ohm min. @primary to secondary  |
|                         | IEC 61000-3-3                | Voltage fluctuations & flicker  |
|                         | FCC Part 15                  | Class A   |
| EMS Standards           | IEC 61000-4-2                | Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge, criteria A |
|                         | IEC 61000-4-4                | Electrical fast transient (EFT)/ burst-EFT 2kV/5KHz                                   |
|                         | IEC 61000-4-5                | Surge immunity test, differential and common mode, 1.0/2.0kV, combination wave        |
|                         |                              |   |

### ■ Dimming Curve

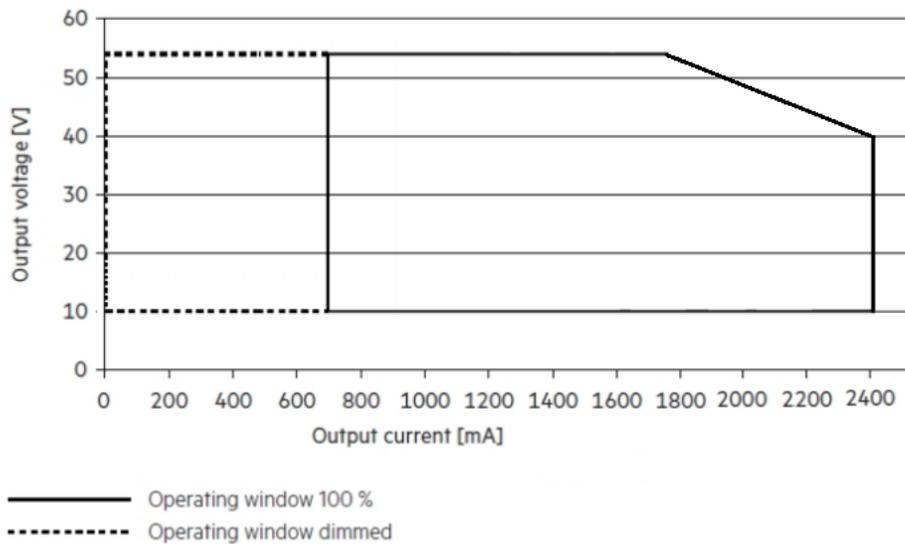
| Parameter                  | Min.         | Typ.   | Max.              |
|----------------------------|--------------|--------|-------------------|
| Vdim Sourcing Current      | 200uA        | 500uA  | 1mA               |
| Vdim Allowed Input Voltage | -15 V        |        | 15 V              |
| 0-10V Dimming Range        | 0% (Vdim=1V) | Linear | 100% (Vdim=9~10V) |

Dimming Wire



### ■ Operating Window

Make sure that the LED driver is operated within the given window under all the operation conditions. Special attention needs to be paid at dimming as the forward voltage of the connected LED modules varies with the dimming level.



■ **Mechanical Outline** (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance: ±0.51 mm

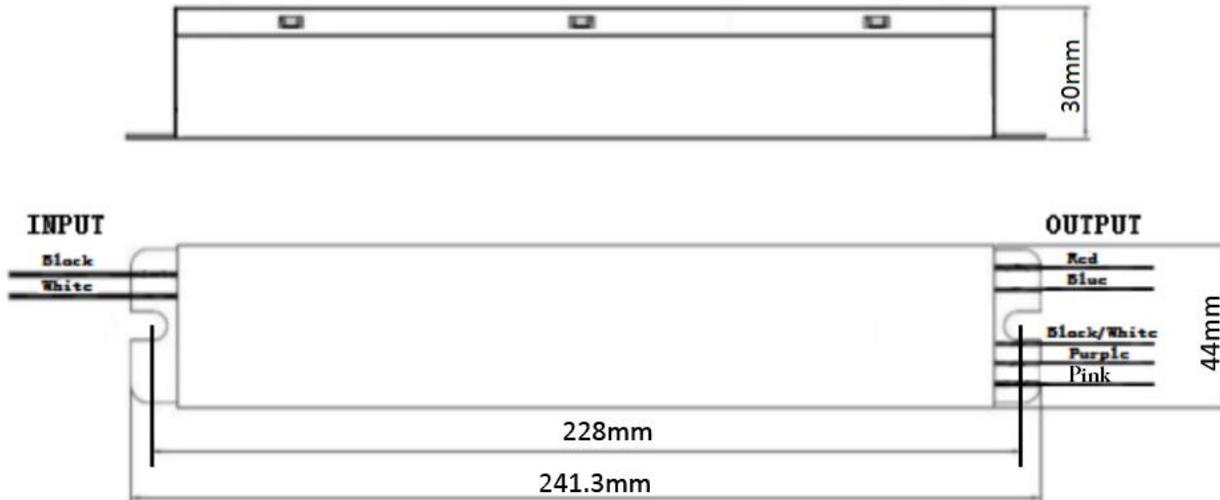


Figure 30, MR12YT

■ **Wiring : (± 20mm)**

**Input wiring:**

White & Black : 300mm ± 10mm , strip 10mm Tin Plated , 18AWG , UL1015 .

**Output wiring:**

Red & Blue : 300mm ± 10mm , strip 10mm Tin Plated , 18AWG , UL1015 .

**Dimming wiring:**

Purple & Pink : 270mm ± 10mm , strip 10mm Tin Plated , 22AWG , UL1569 .

**Vaux wiring:**

Black / White : 270mm ± 10mm , strip 10mm Tin Plated , 22AWG , UL1569

**Safety Note:** Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

## Revision

| Date       | Rev. | Description of Change |     |     |
|------------|------|-----------------------|-----|-----|
|            |      | Item                  | Old | New |
| Date       | Rev. | Description of Change |     |     |
|            |      | Item                  | Old | New |
| 10/28/2022 | V1a  | In Draft Release      | /   | /   |