

# HX-1200W Power Supply 48VDC



The TLD-1K2 series power supply is a dual stage high efficiency power supply designed specifically for LED Rope Lighting. Highest Wattage in class (1200Watt for an IP67 Industrial rated power supply), 100k hour long life and 5-year warranty provide high confidence to luminaire users. All around protections including digital OTP, SCP and OCP with auto-recovery. Designed for 24hour non-stop operation for LED Rope Lights.

### Features

- Constant Voltage mode LED power supply
- Supply Voltage: 180-528Vac
- Great Surge Immunity 10kV
- Low Inrush Current
- 100,000Hour Life @ Tc=75°C
- 5 Year Warranty @ Tc<=75°C
- UL Class P, ENEC/CB/CCC SELV Output
- Safety according to UL8750, EN 61347-1, 61347-2-13, 62384



| HX-TLD-1K2-V048-NNZ |                     |  |
|---------------------|---------------------|--|
| Input               | Input Voltage       | 180~528Vac, 380Vac for 2 hours   |
|                     | Input Frequency     | 47~63Hz  |
|                     | Power Factor        | >0.9@60-100%load, refer to PF vs. Load curve   |
|                     | THD                 | <25%@60-100%load, refer to THD vs. Load curve  |
|                     | Input Current       | 6.5Amax@208Vac & Full-Load<br>6.0Amax@220Vac & Full-Load<br>4.5Amax@227Vac & Full-Load<br>2.7Amax@480Vac & Full-Load |
|                     | Inrush Current      | See Inrush Current Section in the datasheet  |
|                     | Leakage Current     | 0.75mIU max @480Vac 60Hz, UL8750<br>0.7mA max @400Vac 50/60Hz, IEC60598-1  |
|                     | Input Under Voltage | Shut down and auto-restart   |
|                     | Surge Protection    | Line to line 10kV, line to ground 10kV,<br>V out+ to V out- 1kV, V out to ground 3kV<br>According to IEC 61000-4-5   |

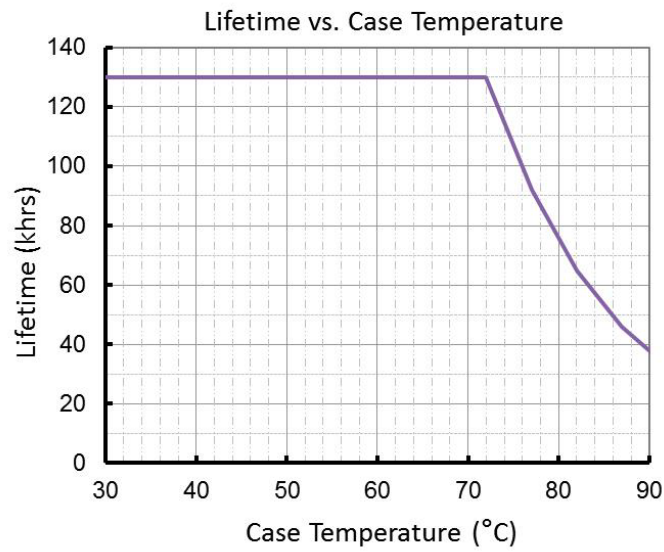
|                    |                       |   |
|--------------------|-----------------------|---|
| <b>Output</b>      | Voltage               | 48VDC   |
|                    | Current               | 25A   |
|                    | Power                 | 1200W   |
|                    | Voltage Ripple        | Vp-p:5%Vo max   |
|                    | Voltage Accuracy      | ±5%Vo   |
|                    | Setup Time            | 1.5s max.   |
| <b>Protection</b>  | Output Overshoot      | 10% Vo max  |
|                    | Output Over Current   | 110% Io max   |
|                    | Short Circuit         | Auto recovery. The output recovers when short is removed.   |
|                    | Over Temperature      | Turn off the output when $T_c \geq 105 \pm 10^\circ\text{C}$ ;<br>Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$ |
| <b>Environment</b> | Operating Temperature | -40°C/40F ~ +90°C/194F ; 10%RH ~ 100%RH   |
|                    | Storage Temperature   | -40°C/40F ~ +85°C/185F ; 5%RH ~ 100%RH  |

|                            |            |  |
|----------------------------|------------|--|
| <b>Physical Attributes</b> | Dimensions | <ul style="list-style-type: none"> <li>• 11 5/16" × 4 15/16" × 1 15/16" (body)</li> <li>• 12 5/16" × 4 15/16" × 1 15/16" (endcaps included)</li> </ul> |
|                            |            | <ul style="list-style-type: none"> <li>• 287.0 x 125.0 x 49.0 mm (body)</li> <li>• 312.0 x 125.0 x 49.0 mm (endcaps included)</li> </ul>               |
|                            | Net Weight | 3.25kg   |

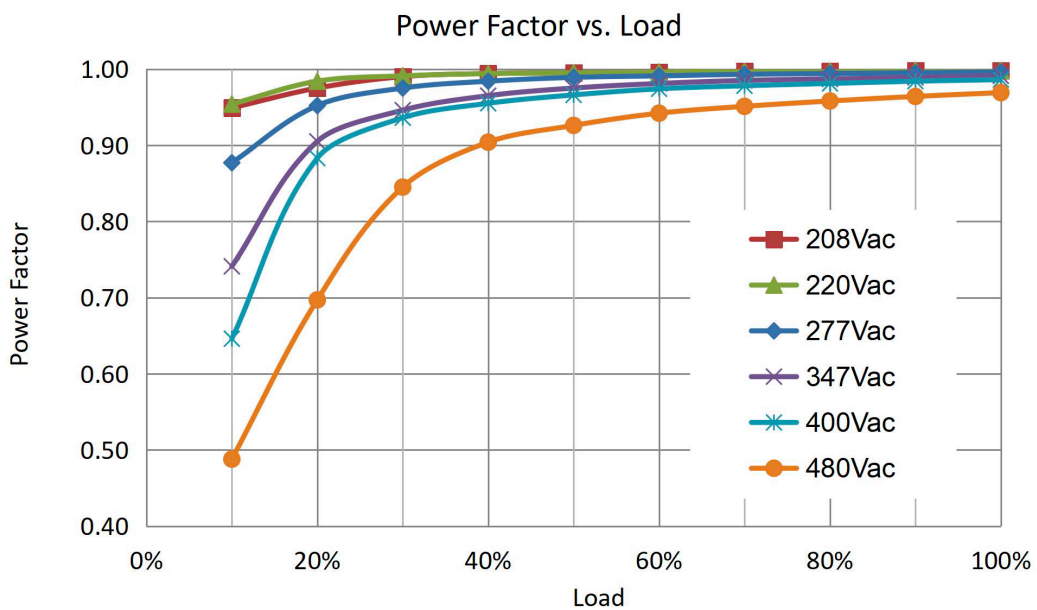
|               |                |   |
|---------------|----------------|---|
| <b>Safety</b> | IP67           | Dust and water resistant  |
|               | UL8750         | Light emitting diode(LED) equipment for use in lighting products  |
|               | UL1012         | Power units other than class 2  |
|               | IEC 61347-1    | Lamp control gear Part 1: general and safety requirements   |
|               | IEC 61347-2-13 | Lamp control gear Part 2-13: particular requirement for DC or AC supplied electronic control gear for LED modules |
|               | IEC 62384      | DC or AC supplied electronic control gear for LED modules - Performance requirements                              |
| <b>EMC</b>    | IEC 55015      | Conducted emission test & radiated emission test  |
|               | IEC 61000-3-2  | Harmonic current emissions; Class C   |
|               | IEC 61000-3-3  | Voltage fluctuations & flicker  |
|               | FCC Part 15    | ANSI C63.4:2009 Class B   |
|               | IEC 61000-4-2  | Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge   |
|               | IEC 61000-4-3  | Radio frequency electromagnetic field susceptibility test (RS)  |
|               | IEC 61000-4-4  | Electrical fast transient (EFT)   |

|  |                |   |
|--|----------------|---|
|  | IEC 61000-4-5  | Surge immunity test   |
|  | IEC 61000-4-6  | Conducted radio frequency disturbances test (CS)                    |
|  | IEC 61000-4-8  | Power frequency magnetic field test                                 |
|  | IEC 61000-4-11 | Voltage dips  |
|  | IEC 61547      | Electromagnetic immunity requirements applies to lighting equipment |

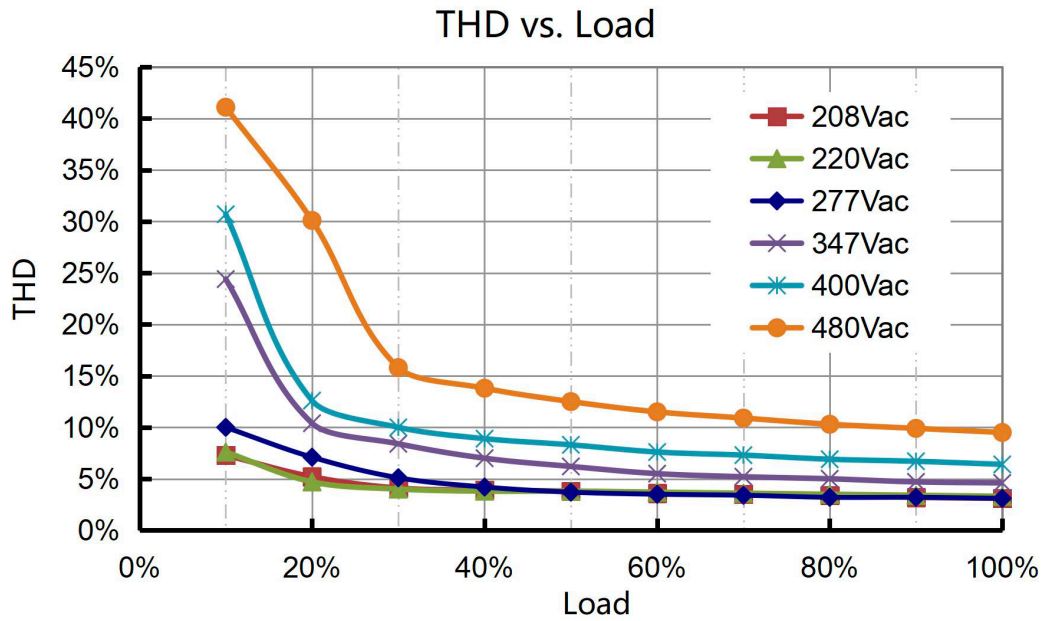
### Lifetime vs. Case Temperature



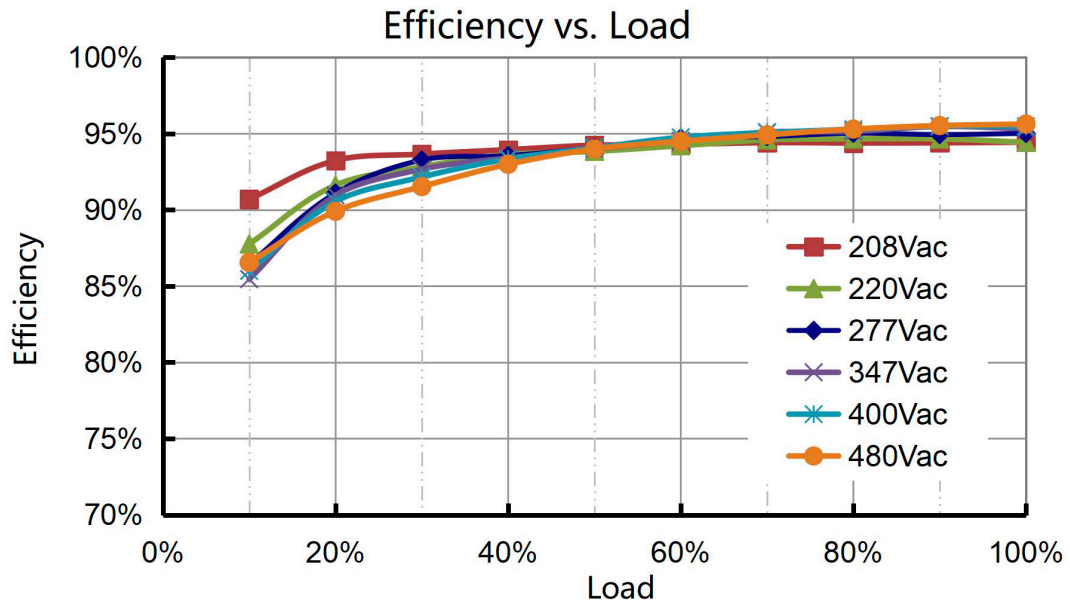
### Power Factor vs. Load



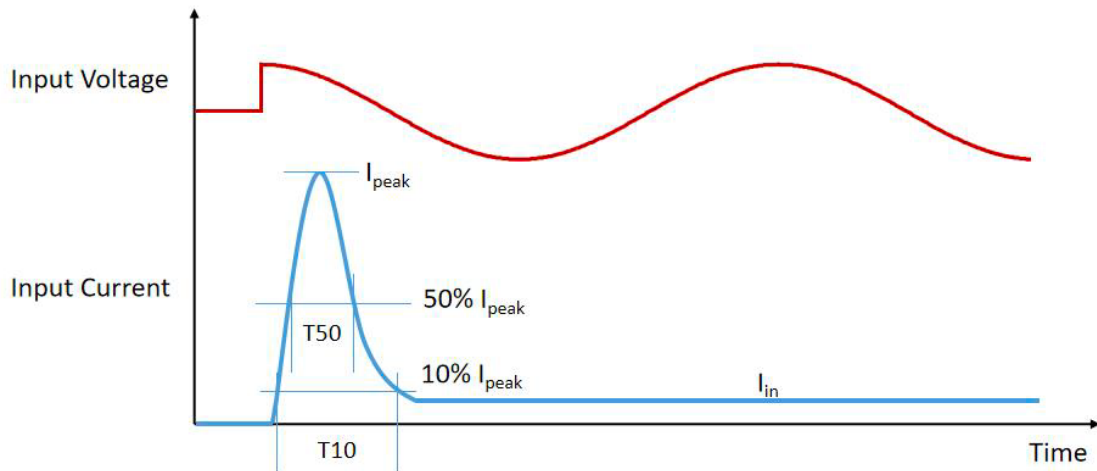
### THD vs. Load



### Efficiency vs. Load



## Inrush Current

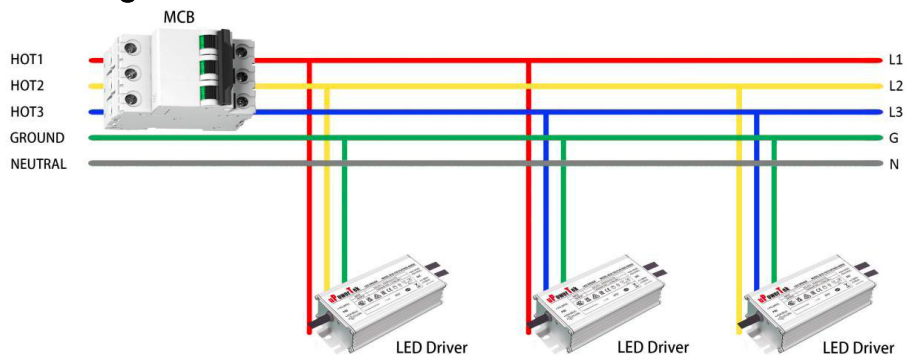


| Input Voltage | I <sub>peak</sub> | 10% -10% T10 Duration | 50% -50% T50 Duration |
|---------------|-------------------|-----------------------|-----------------------|
| 220Vac        | 5.9A              | 18.6ms                | 7.5ms                 |
| 277Vac        | 7.5A              | 19.2ms                | 8.1ms                 |
| 400Vac        | 10.7A             | 18.9ms                | 8.0ms                 |
| 480Vac        | 12.8A             | 17.6ms                | 7.1ms                 |

## MCB Suggestion

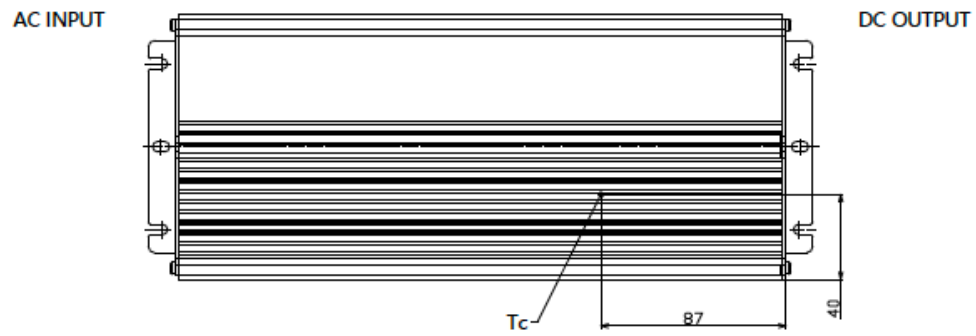
| Type                | B10    | B16    | B25    | B32    | C10    | C16    | C25    | C32    | D10    | D16    | D25    | D32    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Driver Quantity >>> |        |        |        |        |        |        |        |        |        |        |        |        |
| 220Vac              | 1      | 2      | 4      | 5      | 2      | 4      | 7      | 9      | 5      | 8      | 12     | 16     |
| 277Vac              | 1      | 2      | 4      | 5      | 2      | 4      | 7      | 9      | 5      | 8      | 12     | 16     |
| 400Vac              | 1 (x3) | 1 (x3) | 2 (x3) | 3 (x3) | 1 (x3) | 2 (x3) | 3 (x3) | 3 (x3) | 1 (x3) | 2 (x3) | 3 (x3) | 4 (x3) |
| 480Vac              | 1 (x3) | 2 (x3) | 3 (x3) | 4 (x3) | 1 (x3) | 2 (x3) | 3 (x3) | 4 (x3) | 1 (x3) | 2 (x3) | 4 (x3) | 5 (x3) |

## Three Phase Wiring Guideline



## TC Point

*Described on each unit.*



## Dimensions

