

**Part Type** : **LED driver**

**Description** : **42W-1000mA Constant Current**  
**38W-900mA Constant Current**  
**32W-750mA Constant Current**  
**0-10V Dimmable**

**Part Number** : **ELD50-CX1000-V42-UNV-D/S(1000/900/750)**

## 1. Input Requirement

### 1.1 Input Voltage

The nominal input voltage is 120-277VAC  
Operating Range: 108-305VAC

### 1.2 Frequency

The nominal input frequency is 50Hz/60Hz

### 1.3 Current

The maximum input current is 0.43 Amp at 120Vac at max output load of 1000mA.

### 1.4 Efficiency

The typical efficiency (watts out / watts in) is 85% @120V  
and 87% @277 max output load.

### 1.5 Power Factor

@ 277VAC, >0.90  
@ 120VAC, >0.99

### 1.6 Inrush Current

120VAC @ 25 DEG C: <50Amp peak

### 1.7 THD

THD: < 20% @ 25oC 108-305VAC, full load (w/o Dimmer)

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## 2. Output Requirements

### 2.1 Output Current Setting

Set nominal current at this voltage.

Output	Voltage	Current	Tolerance
40W	Max 42VDC	1000mA	+/- 5%
38W	Max 42VDC	900mA	+/- 5%
32W	Max 42VDC	750mA	+/- 5%

### 2.2 Output Voltage Range

Driver must work at these voltages.

Output	Voltage	Current	Tolerance
40W	26-42DC	1000mA	+/- 5%
38W	26-42DC	900mA	+/- 5%
32W	26-42DC	750mA	+/- 5%

### 2.3 Output Line Regulation

With output clamped to below set points, vary input from 108-305VAC.

Output	Voltage Set Point	Current range
40W	42VDC	950-1050mA
38W	42VDC	855-945mA
32W	42VDC	712-788mA

### 2.4 Current Stability

+/- 3% maximum after 8 hours

### 2.5 No Load Voltage

Not to exceed 60VDC.

### 2.6 Ripple Factor

Measured at max rated load and electronic load connecting to the output is see as below :  $V_d=42V$   $R_d=0.1$

Ripple factor < 5% ( $I_{pk-pk}/2/I_{mean}$ ).

### 2.7 Turn on Delay

Measured @ 108-305VAC max rated load: <1 seconds.

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### 3. Protection Requirement

#### 3.1 Short circuit protection:

When operating under any line condition into a short circuit condition for an indefinite period of time, the power supply shall be self recovering when fault condition is removed.

#### 3.2 Over-current protection:

When operating under any line condition into any over load condition for an indefinite period of time, the power supply shall be self recovering when fault condition is removed.

### 4. Environmental Conditions

#### 4.1 Operating

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions:

##### 4.11 Ambient Temperature:

-20 to 55 Deg C. 100% rated power at 55 Deg C.

##### 4.12 Class P

##### 4.13 Relative Humidity:

5 to 95%, non-condensing

##### 4.14 Cooling:

Convection

#### 4.2 Non-Operating

The power supply shall be capable of standing the following environmental conditions extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies.

##### 4.2.1 Ambient Temperature:

-40 to 85 Deg C.

#### 4.3 Shock & Vibration:

MIL-STD-810G Shock Method 516.6 procedure IV and Vibration Method 514.6 Procedure I, Category 4

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## 5. Reliability

### 5.1 MTBF

>300,000hrs calculated to MIL-HDBK217F @ 25 DEG C. rated load.  
Ground Benign.

### 5.2 Product Life

>50000hrs @ Tc= 90 Deg C, rated load.

## 6. EMC

### 6.1 Conducted:

FCC Part 15 Class B

### 6.2 Audible Noise:

Class A sound rating not to exceed 24dBA (audible) when installed in fixture and such fixture is installed in its normal use. The measurement is to be made from a distance not less than 3 feet.

### 6.3 ESD:

IEC 61000-4-2 Level 2: 4KV Air and Contact.

### 6.4 Input Transient Protection

Power supply shall comply with IEEE C.62.41-1991, Class A operation. The line transient shall consist of seven strikes of a 100 kHz ring wave, 2.5 kV level for both common mode and differential mode.

## 7. Safety

### 7.1 Agency Approvals

UL 8750-LED equipment for use in lighting product  
UL1310-CLASS 2 Power units  
CSA C22.2 No. 250.13-12-LED equipment for lighting applications

## 8. Dimmable

### 8.1 0-10V Dimming

0-10V Input Signal: 0.6-10V  
Dimming Range:4-100%

## 9. Mechanical

### 9.1 Materials

Metal case

All material to be ROHs compliant to Directive 2002/95/EC

Wires to be Stranded with UL approval

Input: Black & White : 500mm , 18AWG 105°C 600V Solid Line

Output: Red & Blue&White : 800mm , 20AWG 105°C 600V Solid Line

Dimming: Purple & Gray:800mm , 18AWG 105°C 600V Solid Line

