



# Product Specification Sheet

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

**Description** : **76W-1800mA**

**Constant Current**

**0-10V Dimmable+12Vaux**

**Part Number** : **SIL 80-I1800 120-277 W D1S M**

## 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 0.8 Amp at 120Vac at max output load of 76W.

### 1.4 Efficiency

The typical efficiency (watts out / watts in) is 86% @120V  
and 88% @277V with rated load.

### 1.5 Power Factor

@ 277VAC, >0.90  
@ 120VAC, >0.98

### 1.6 Inrush Current

120VAC @ 25 DEG C: <50Amp peak

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## 2. Output Requirements

### 2.1 Output Current Setting

Set nominal current at this voltage.

Output	Voltage	Current	Tolerance
76W	Max 42VDC	1800mA	+/- 5%
2.4W	12VDC	0-200mA	+/- 5%

### 2.2 Output Voltage Range

Driver must work at these voltages.

Output	Voltage	Current	Tolerance
76W	26-42VDC	1800mA	+/- 5%

### 2.3 Output Line Regulation

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

Output	Voltage Set Point	Current range
76W	42VDC	1710 – 1890mA
Output	Current Set Point	Voltage range
2.4W	200mA	11.4 – 12.6V

### 2.4 Current Stability

+/- 3% maximum after 8 hours

### 2.5 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 < 8% ( $I_{pk-pk}/2/I_{mean}$ ).

### 2.6 No Load Voltage

Not to exceed 60VDC.

### 2.7 Turn on Delay

Measured @ 120VAC max rated load: < 0.75 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 Case Temperature

Class P

##### 4.13 Relative Humidity:

5 to 95%, non-condensing

##### 4.14 Cooling:

Convection

##### 4.15 Notes:

Unless specified, all the test results are measured in 25°C room temperature.

#### 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

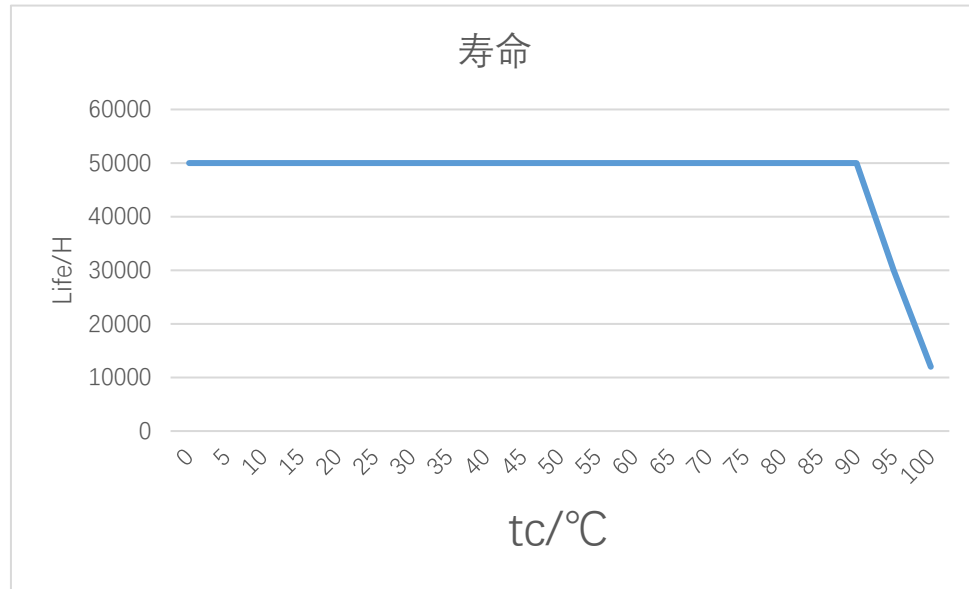
## 5. Reliability

### 5.1 MTBF

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

### 5.2 Product Life

>50000hrs @ tc=90C. ambient, rated load.



## 6. EMC

### 6.1 Conducted&Radiate

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: 2KV Air and Contact.

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#### **6.4 Input Transient Protection**

Power supply shall comply with IEEE C.62.41-1991, Class A operation.  
2.0 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:0-10V (0.5V±0.2 Dim to off)  
Dimming Range:5-100%

### **9. Mechanical**

#### **9.1 Materials**

Metal case

All material to be ROHs compliant to Directive (EU) 2015/863

Wires to be Stranded with UL approval

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

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

Output: Yellow & Brown :510mm , 20AWG 105°C 600V (aux)

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

