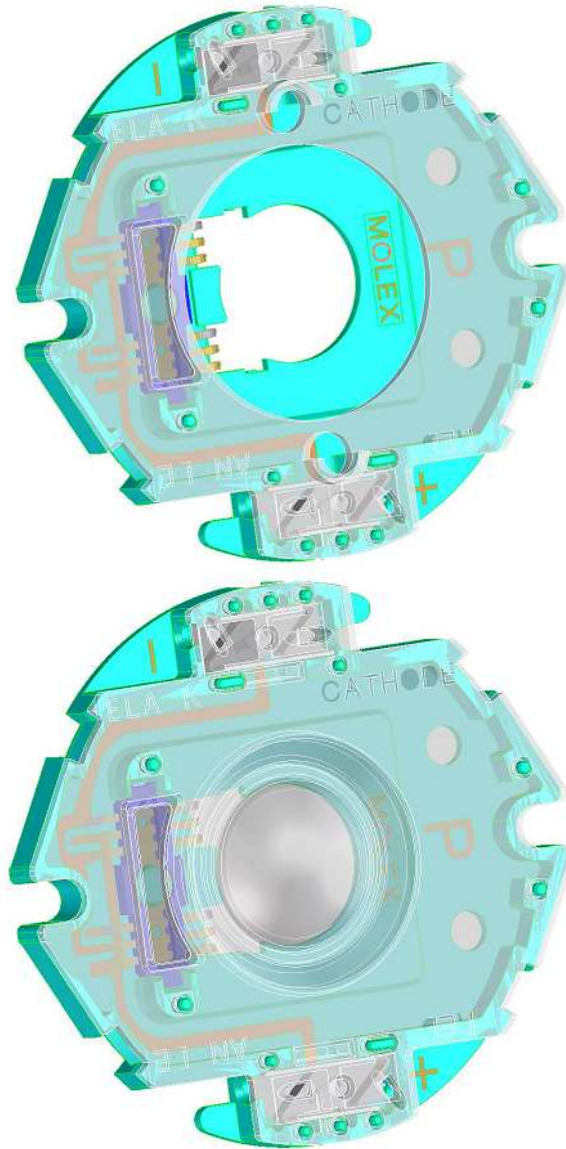




# PRODUCT SPECIFICATION

## PRODUCT SPECIFICATION MOLEX LED HOLDER FOR CREE MPL ARRAY



REVISION: <b>1</b>	ECR/ECN INFORMATION: EC No:10493680 DATE:2/20/2011	TITLE: <b>PRODUCT SPECIFICATION MOLEX LED HOLDER FOR CREE MPL ARRAY</b>	SHEET No. <b>1 of 9</b>
DOCUMENT NUMBER: <b>PS-180160-000</b>	CREATED / REVISED BY: <b>D. McGowan</b>	CHECKED BY: <b>D. Achammer</b>	APPROVED BY: <b>D. McGowan</b>



# PRODUCT SPECIFICATION

## 1.0 SCOPE

The Molex LED Holder for the CREE MPL Array is an electrical connector and mechanical holder to simplify installation of the CREE MPL Array without solder connections. The Holder is available with or without a clear cover to protect the LED Array and in series and parallel wiring options.

## 2.0 PRODUCT DESCRIPTION

### 2.1 MOLEX LED HOLDER PART NUMBERS

This specification covers the performance requirements and test methods for the following products listed by part numbers:

- \* 180160-0000 LED Holder Without Cover (S)
- \* 180160-0001 LED Holder With Cover (S)
- \* 180160-0002 LED Holder Without Cover (P)
- \* 180160-0003 LED Holder With Cover (P)

### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Dimensions: See sales drawing SD-180160-000.  
Material: RoHs compliant materials.

### 2.3 SAFETY AGENCY APPROVALS

UL File Number: Pending

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Refer to the appropriate sales drawings, the website Molex.com and other sections of this specification for the necessary referenced documents and specifications.

- 3.1 SD-180160-000, CREE MPL Holder Sales Drawing

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# PRODUCT SPECIFICATION

## 4.0 RATINGS

### 4.1 VOLTAGE

300 Volts DC maximum

### 4.2 CURRENT

1.0 Amp maximum continuous current

### 4.3 TEMPERATURE

Operating: -40°C to +95°C (including T-Rise from applied current)  
Non-operating: -40°C to +105°C

### 4.4 DURABILITY

5 cycles mate/unmate (wire trap interface)

## 5.0 QUALIFICATION

Laboratory condition and sample selection are in accordance with EIA-364-1000.

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# PRODUCT SPECIFICATION

## 6.0 PERFORMANCE

### 6.1 MECHANICAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
CLEAR COVER RETENTION	APPLY STATIC LOAD UNTIL CLEAR COVER SEPARATES FROM HOLDER	MIN. 20 N VERIFY NO DAMAGE
WIRE TRAP COVER RETENSION	APPLY STATIC LOAD UNTIL COVER SEPARATES FROM HOLDER	MIN. 20 N
WIRE RETENTION	APPLY STATIC LOAD UNTIL WIRE SEPARATES FROM HOLDER	MIN. 10 N
DROP TEST	DROP 3 TIMES (3 DIRECTIONS) FROM HEIGHT OF 1 METER ONTO CONCRETE OR EQUIVALENT SURFACE	NO DAMAGE.

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# PRODUCT SPECIFICATION

## 6.2 ENVIRONMENTAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
TEMPERATURE LIFE (EIA-364-17)	Fasten Holder to Heatsink with LED. Insert Wires in Wire Traps. Expose 180 hours at 105°C	Max. 20 mohm Contact Resistance Change per Interface
TEMPERATURE SHOCK/CYCLIC TEMPERATURE & HUMIDITY (EIA-364-23 & 31)	Fasten Holder to Heatsink with LED. Insert Wires in Wire Traps. Expose to -55/85°C, 30 Minute Dwell, 10 Cycles Expose to Thermal Cycle 25°C/80%RH to 65°C/50%RH. 0.5 Hour Ramp, 1.0 Hour Dwell, 24 Cycles	Max. 20 mohm Contact Resistance Change per Interface
VIBRATION (EIA-364-28)	Fasten Holder to Heatsink with LED. Insert Wires in Wire Traps. Expose to Random 3.1G Vibration, 15 Minutes per Each Axis (X, Y, & Z)	Max. 20 mohm Contact Resistance Change per Interface
THERMAL CYCLING (EIA-364-1000)	Fasten Holder to Heatsink with LED. Insert Wires in Wire Traps. Expose to +15/+85°C, 30 Minute Dwell, 500 Cycles	Max. 20 mohm Contact Resistance Change per Interface
DUST EXPOSURE (EIA-364-91)	Fasten Holder to Heatsink with LED. Insert Wires in Wire Traps. Expose to Dust per EIA-364-91 Table A.1 (Benign). 1 Hr. @ 360 cfm (unmated)	Max. 20 mohm Contact Resistance Change per Interface

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MIXED FLOWED GAS	Fasten holder to heat sink with LED. Insert wires in wire traps. Expose 96 hours at 105C. Expose 10 days (mated) to flowing mixed gas treatment per EIA-364-65 Class IIA.	Max. 20 mohm Contact Resistance Change per Interface
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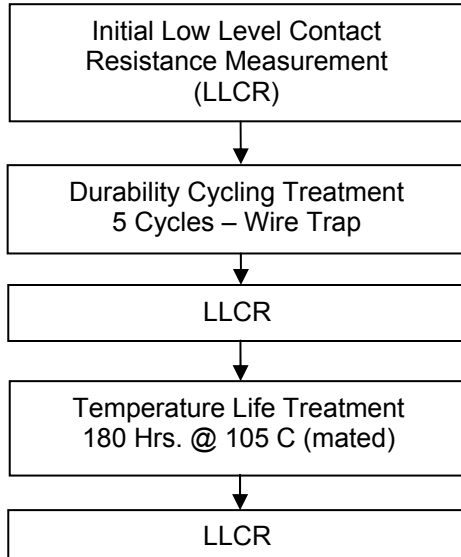


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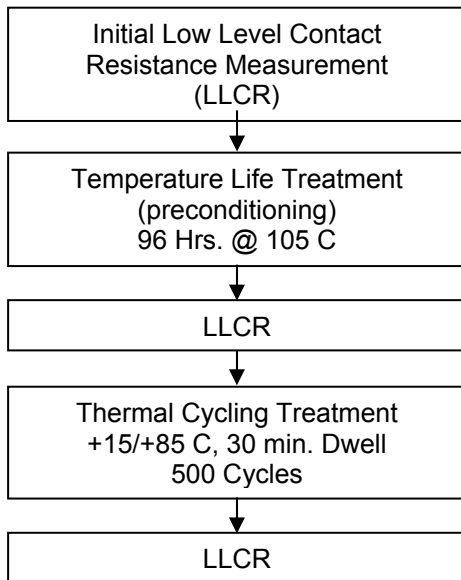
## 7.0 TEST SEQUENCE

### 7.1 Reliability Test Sequences:

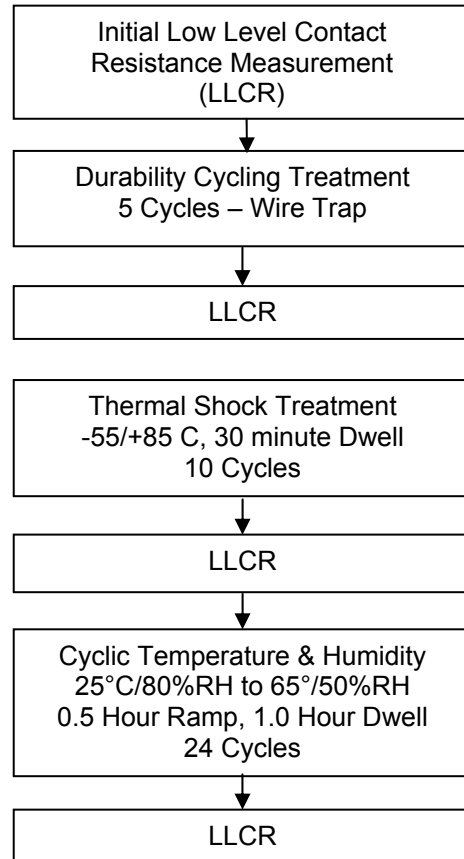
#### Temperature Life



#### Thermal Cycling



#### Temperature Shock/Cyclic Temperature & Humidity



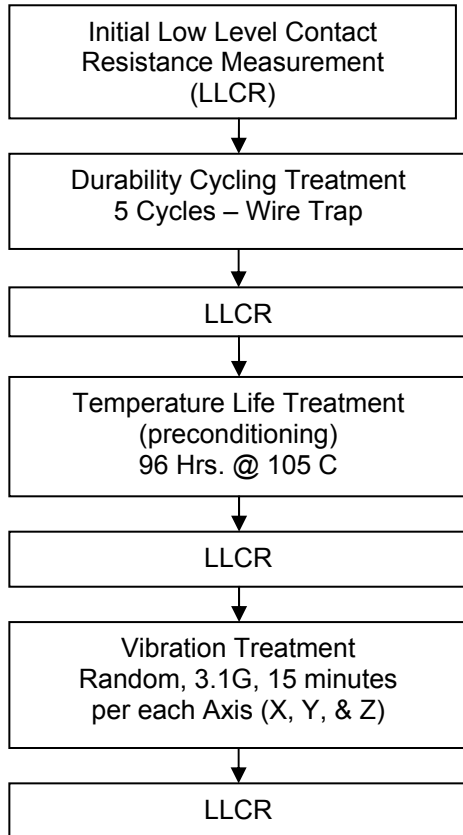
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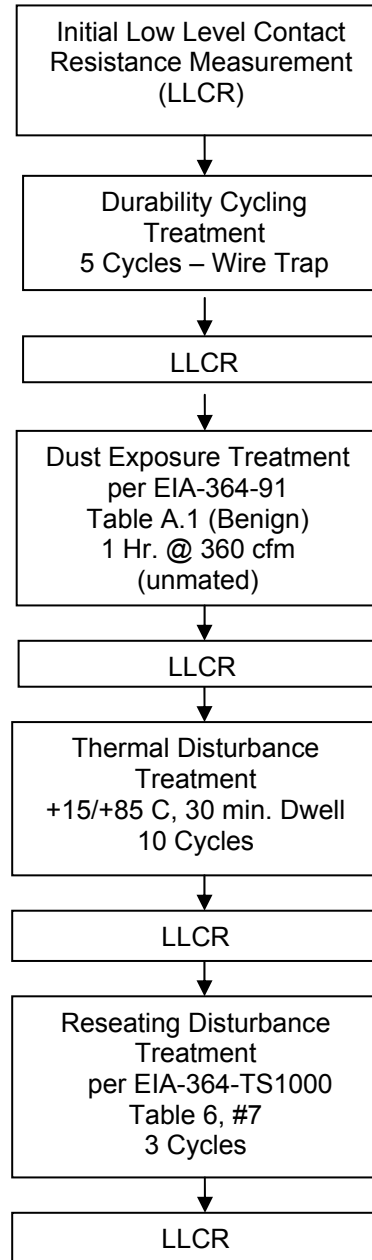
# PRODUCT SPECIFICATION

## 7.1 Reliability Test Sequences (continued):

### Vibration



### Dust Exposure



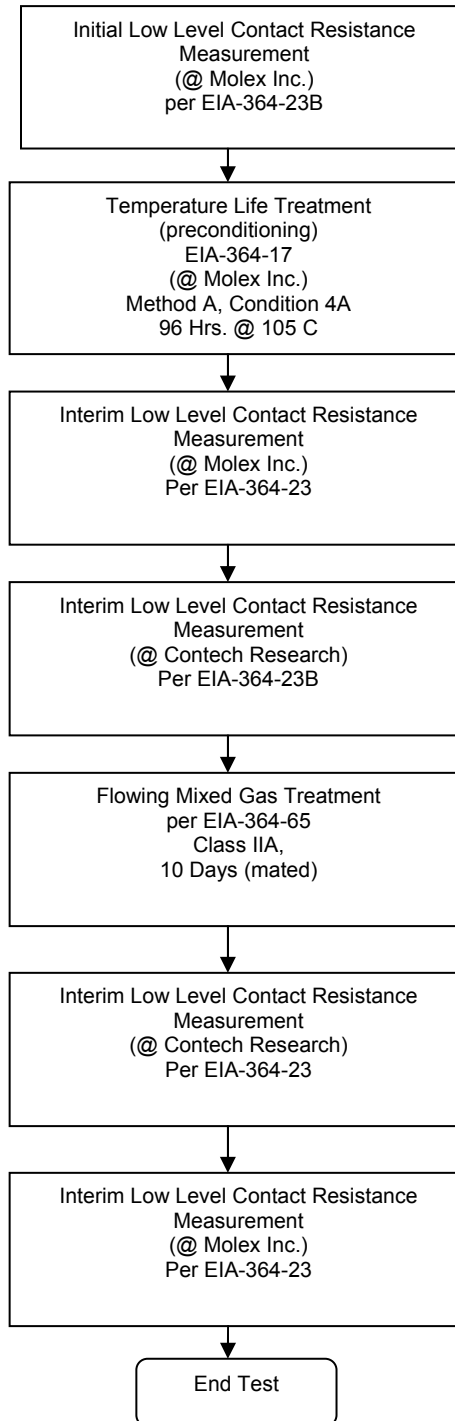
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# PRODUCT SPECIFICATION

## Mixed Flowing Gases



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