

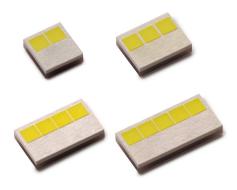
## AUTOMOTIVE



# **LUXEON Altilon SMD**



Automotive forward lighting source



LUXEON Altilon SMD is specifically designed and tested to meet and exceed expectations for reliability, performance, and lifetime in automotive forward lighting applications. It is designed to be assembled with industry standard soldering reflow lines simplifying system integration and lowering assembly costs. LUXEON Altilon SMD provides industry-best thermal performance in LED forward lighting applications, meeting both SAE and ECE color specifications with finer granularity than existing systems. PPAP documentation is available upon request. All LUXEON Altilon SMD LEDs are IEC-60810 gualified.

### FEATURES AND BENEFITS

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|----------------------|------------|----------------|------------------|
| Higher drive current | canability | tor increaced  | thuy nortormanco |
| Higher drive current | Capapility | IUI IIILIEaseu |                  |
|                      |            |                |                  |

Low thermal resistance and power consumption results in simplified thermal management and system cost

High flux output provides flexibility in styling and optical design

Surface mount device to reduce overall costs

### PRIMARY APPLICATIONS

| Adaptive Lighting      |
|------------------------|
| – AFS                  |
| Daytime Running Lights |
| Front Fog              |
| Headlight              |
| – Low Beam             |
| – High Beam            |

- Static Bending Lights

#### LUXEON Altilon SMD Absolute Ratings.

|  | PERFORMANCE   |      |      |      |  |  |
|--|---|------|------|------|--|--|
| PARAMETER  | 1x2   | 1x3  | 1x4  | 1x5  |  |  |
| Minimum DC Forward Current   | 100mA   |      |      |      |  |  |
| Maximum DC Forward Current   | 1500mA  |      |      |      |  |  |
| Operating Case Temperature at 700mA <sup>[1,2]</sup>                       | -40°C to 130°C  |      |      |      |  |  |
| Maximum Junction Temperature <sup>[1, 2]</sup>                             | 150°C   |      |      |      |  |  |
| Operating Case Temperature at Maximum Current                              | -40°C to 125°C  |      |      |      |  |  |
| Maximum Junction Temperature<br>for Short Time Applications <sup>[3]</sup> | 175°C   |      |      |      |  |  |
| Maximum V <sub>f</sub> at 1500mA & -40°C <sup>[1,2]</sup>                  | 7.8   | 11.6 | 15.4 | 19.3 |  |  |
| Minimum V <sub>r</sub> at 1500mA & 150°C                                   | 5.5   | 8.1  | 11.0 | 13.6 |  |  |
| LED Storage Temperature  | -40°C to 130°C  |      |      |      |  |  |
| Soldering Temperature  | JEDEC 020c 260°C  |      |      |      |  |  |
| Allowable Reflow Cycles  | 2   |      |      |      |  |  |
| ESD Sensitivity [4]  | 8kV HBM, 2kV CDM, 400V MM   |      |      |      |  |  |
| Reverse Voltage (V <sub>reverse</sub> )                                    | LUXEON Altilon SMD LEDs are not designed to be driven in reverse bias |      |      |      |  |  |

Notes for Table 3:

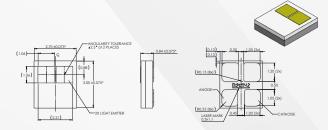
Proper current derating must be observed to maintain junction temperature below the maximum, so that the LED is maintained below the maximum rated operating case temperature. LUXEON Altilon SMD LEDs driven at or above the maximum rated operating case temperature may have shorter lifetime. Please consult with Lumileds for more information on maximum time durations and forward currents for these temperatures.

3. Short time operations of less than 200hrs.

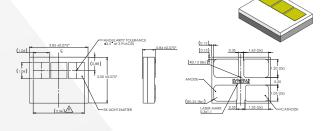
4. Measured using human body model (per JESD22 A114), machine model (per JESD22 A115) and charged device model (per JESD22 C101).

#### Mechanical dimensions for LUXEON Altilon SMD 1x2.

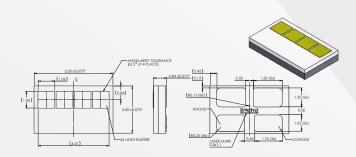
#### Mechanical dimensions for LUXEON Altilon SMD 1x3.



Mechanical dimensions for LUXEON Altilon SMD 1x4.



Mechanical dimensions for LUXEON Altilon SMD 1x5.



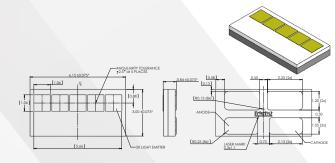
#### Notes:

Drawings are not scale.

2. All dimensions are in millimeters.

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