



LUXEON Altilon H1K PnP

Integrated functionality for headlight solutions



LUXEON Altilon H1K PnP is a fully integrated solution optimized for headlight applications, meeting both SAE and ECE color specifications. This solution minimizes time to market and simplifies supply chain by reducing optical and mechanical design efforts with electrical connectors. Combined with LUXEON Altilon LEDs, LUXEON Altilon H1K PnP provides the same powerful performance guaranteed by LUXEON LEDs.

FEATURES AND BENEFITS

- Easy plug and play design for a reduction in design costs
- Industry's lowest thermal resistance enables smaller heatsinks for smaller designs
- Customizable interface, available with connector, flux bin resistor and thermistor
- Available in 1x4 and 1x5 configuration
- IEC-60810 qualified and PPAP documentation available

PRIMARY APPLICATIONS

- Adaptive Lighting
- Front Fog
- Headlight

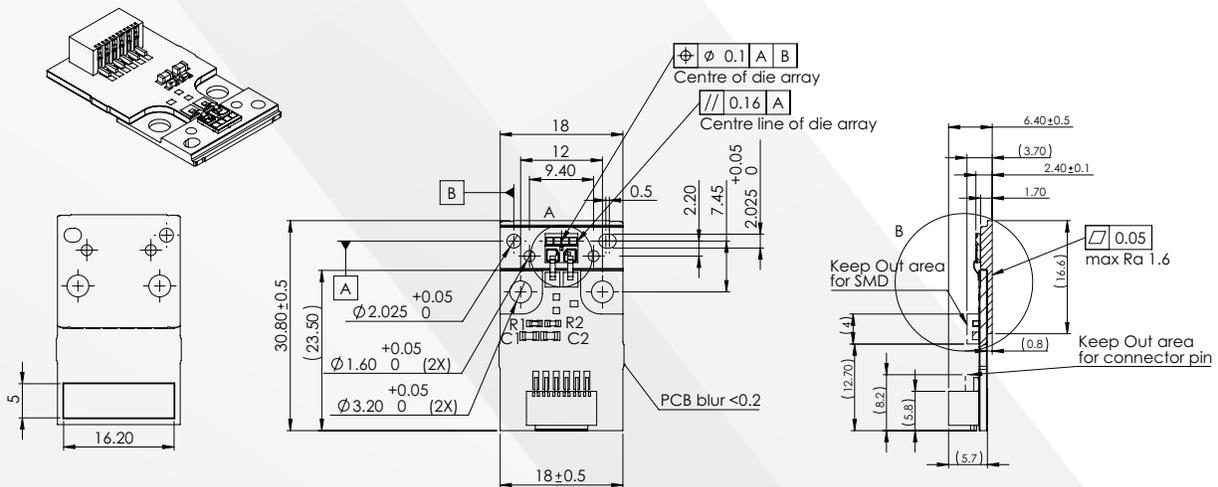
LUXEON Altilon H1K PnP Absolute Ratings.

PARAMETER	PERFORMANCE
Minimum DC Forward Current	100mA
Maximum DC Forward Current	1500mA
Peak Pulsed Forward Current ^[3]	2000mA
Maximum Transient Peak Current	2000mA for ≤10ms
Maximum AC Ripple ^[2]	50mA rms at ≥10kHz
LED Junction Temperature	-40 to 150°C
Maximum Junction Temperature for Short Time Applications (1500mA) ^[1]	175°C
Maximum Operating Case Temperature at Test Current ^[1]	130°C
Maximum Operating Case Temperature at Maximum Current ^[1]	130°C
LED Storage Temperature	130°C
ESD Sensitivity ^[4]	±8kV HBM, ±400V MM, ±2kV CDM
Reverse Voltage ($V_{reverse}$)	LUXEON LEDs are not designed to be driven in reverse bias
Autoclave Conditions	121°C at 2 ATM 100% Relative Humidity for 96 Hours Maximum

Notes:

- Proper current derating must be observed to maintain junction temperature below the maximum allowable. LUXEON Altilon H1K PnP LEDs driven at or above maximum LED case temperature may have a shorter lifetime.
- Residual periodic variations due to power conversion from alternating current (AC) to direct current (DC), also called "ripple," are acceptable if the following conditions are met:
 - The frequency of the ripple current is 100Hz or higher
 - The average current for each cycle does not exceed the maximum allowable DC forward current
 - The maximum amplitude of the ripple does not exceed 15% of the maximum allowable DC forward current
- A 10% duty cycle with pulse width of 10ms.
- Measured using human body model (per JESD22 A114), machine model (per JESD22 A115) and charged device model (per JESD22 C101).

Mechanical Dimensions.



Notes:

- Drawings are not scale.
- All dimensions are in millimeters.

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