

Cree XTE-HV Series

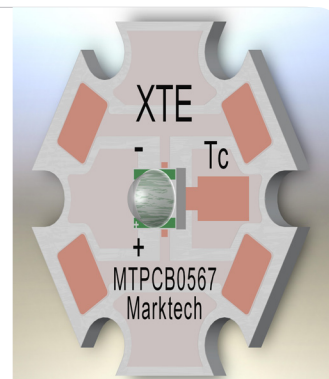
Optimized for non-directional and small LED replacement lamps such as B10 candelabra, E17, GU10 and A19 bulbs, the XLamp XTE High-Voltage White LED delivers both high lumen output and high efficacy in a small footprint.

FEATURES

- > Typical $V_F = 46V @ 22mA$, Maximum $I_F=66mA$
- > Wide Viewing Angle: 115°
- > Low Thermal Resistance: $6.5^\circ C/W$
- > Maximum Junction Temperature: $150^\circ C$

APPLICATIONS

- > Lighting
- > Small Bulbs
 - > E17, GU10, A19, B10



Flux Characteristics ($T_j=85^\circ C$ --White)



| COLOR TEMPERATURE | CCT (TYP.)(°K)* | MIN.FLUX (LM) @22MA | KIT USED |
|-------------------|-----------------|---------------------|----------|
| Cool White | 6000--6500 | 107 | LD51 |
| Neutral White | 4750--5000 | 100 | LCE3 |
| Warm White | 3000--3250 | 80.6 | L9E7 |

*See Cree Specifications

*Absolute Maximum Ratings (Note 1)

| ITEMS | SYMBOL | RATING | UNIT |
|---|-----------|---------|----------------|
| Forward Current (Note 2) | I_F | 66 | mA |
| Forward Voltage (@22mA, $85^\circ C$) | V_F | 55 | V |
| Reverse Current | I_R | 0.1 | mA |
| Temperature Coefficient of Forward Voltage | V_{TC} | -37 | mV/ $^\circ C$ |
| Operating Temperature at T_C Point (Note 2&3) | T_{OPR} | 115 | $^\circ C$ |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| ESD Classification (HBM per MIL-STD-883D) | -- | Class 2 | -- |

* Exceeding maximum ratings may damage the LED and cause potential safety hazards.

* Elevated operating temperatures can be expected to negatively impact the service life (lumen output)

* All data is related to entire assembly. Data reflects statistical mean values. Actual data may differ depending on variances in the manufacturing process.

* End users need to take into account the lumen depreciation as the temperature rises with various thermal solutions installed.

* It is highly recommended for the user to review the CREE XTE-HV Series page for additional and most recent technical data at <http://www.cree.com/led-components-and-modules/products/xlamp/discrete-directional/xlamp-xte-hvw>

Note 1: Using continuously under elevated loads (i.e. the application of high temperature/current/voltage or a significant change in temperature, etc.) may cause this product to significantly decrease in reliability even if the operating conditions are within the absolute maximum ratings.

Note 2: The thermal resistance from the LED junction to ambient temperature, $R_{th(j-a)}$, should be kept below 10°C/W so that the LED is not exposed to a condition beyond the absolute maximum ratings.

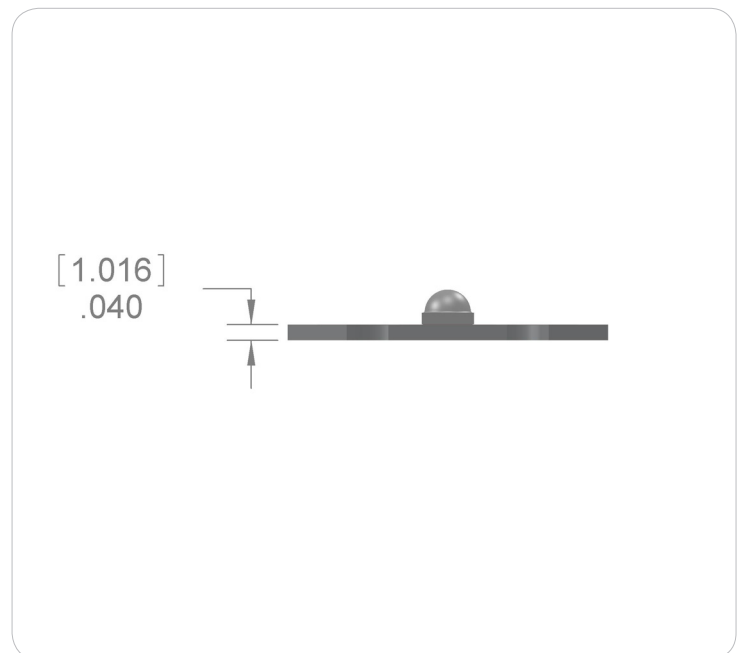
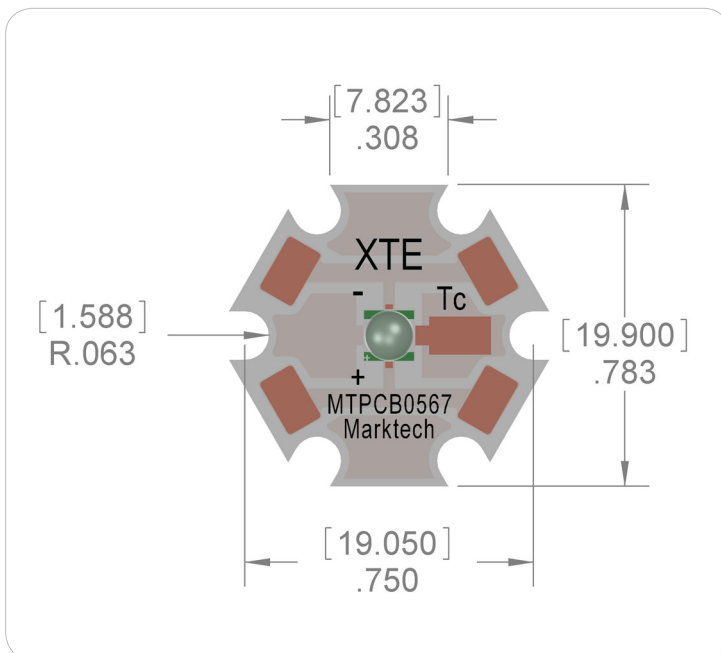
Note 3: The temperature of the LED assembly must be measured at the T_c -point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

Hardware (not included)

- > Mount with #4 Machine Screws.
- > 16AWG Maximum Wire Gauge.
- > Use only with constant current power supplies.

PCB Fabrication

- > Layer Count: 1
- > Core Material: 6061-T6 Aluminum
- > Single Layer Copper Weight: 1oz
- > Solder Mask: White
- > Finishing Plating: Pb Free HASL



The information contained herein is subject to change without notice.

2012-04-18