

Cree XTE-HV Series

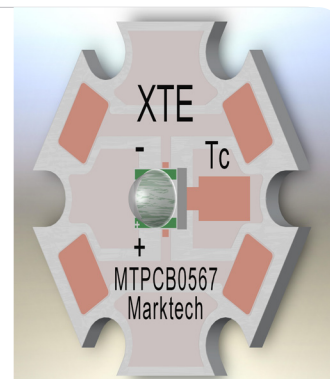
Optimized for non-directional and small LED replacement lamps such as B10 candelabra, E17, GU10 and A19 bulbs, the XLamp XTE High-Voltage White LED delivers both high lumen output and high efficacy in a small footprint.

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.

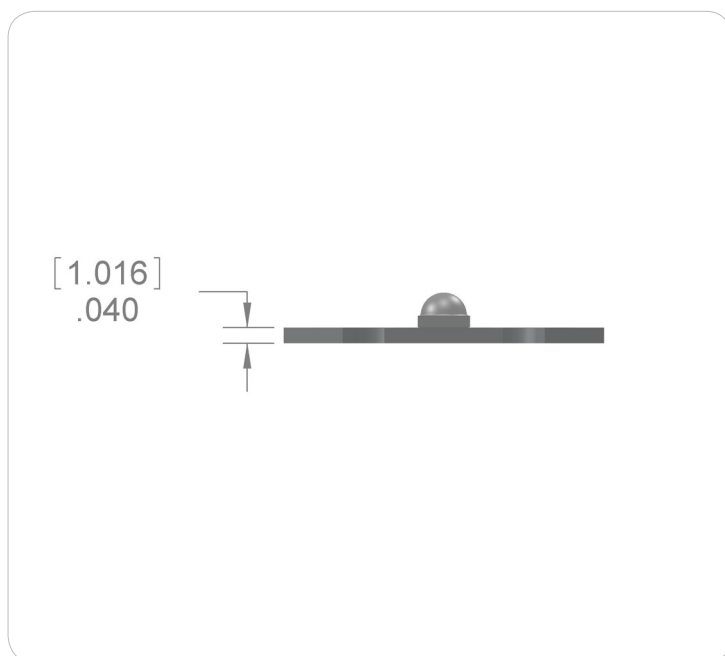
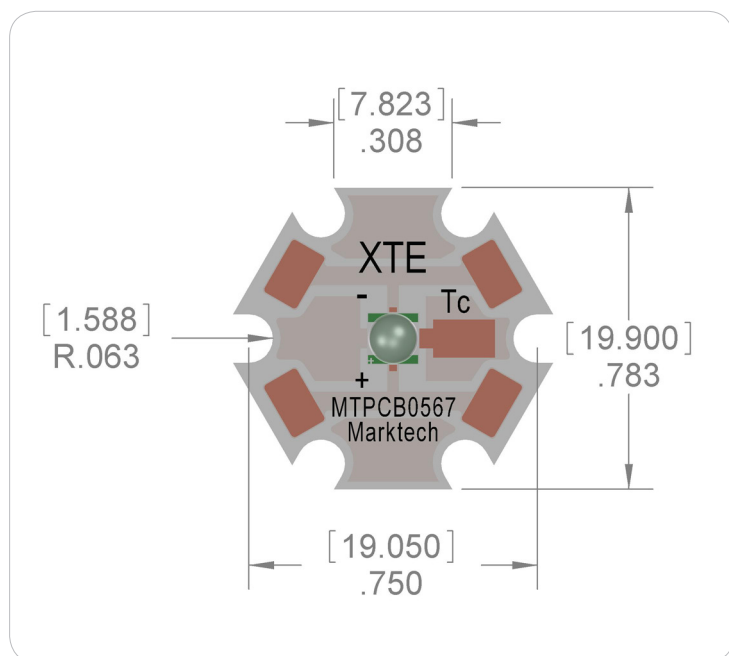
Note 3: The temperature of the LED assembly must be measured at the T_c -point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

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