



# 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°C/W
- > Maximum Junction Temperature: 150°C

### **APPLICATIONS**

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



Flux Characteristics (T <sub>i</sub> =85°CWhite)				
(TYP.)(°K)*	MIN.FLUX (LM) @22MA	KIT USED		
06500	107	LD51		
05000	100	LCE3		
03250	80.6	L9E7		
	(TYP.)(°K)* )6500 )5000	(TYP.)(°K)* MIN.FLUX (LM) @22MA 06500 107 05000 100	(TYP.)(°K)*         MIN.FLUX (LM) @22MA         KIT USED           06500         107         LD51           05000         100         LCE3	

\*See Cree Specifications

*Absolute Maximum Ratings (Note 1)					
ITEMS	SYMBOL	RATING	UNIT		
Forward Current (Note 2)	I <sub>F</sub>	66	mA		
Forward Voltage (@22mA, 85°C)	$V_{F}$	55	V		
Reverse Current	I <sub>R</sub>	0.1	mA		
Temperature Coefficient of Forward Voltage	$V_{_{ m TC}}$	-37	mV/°C		
Operating Temperature at $T_{\rm c}$ Point (Note 2&3)	T <sub>OPR</sub>	115	°C		
Junction Temperature	$T_{J}$	150	°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

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- 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, Rth(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.

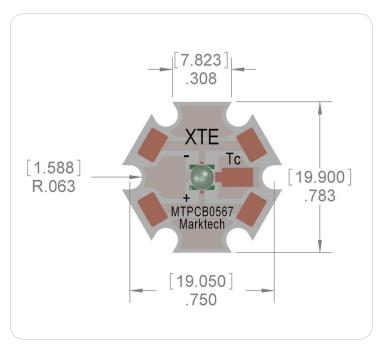
#### **PCB** Fabrication

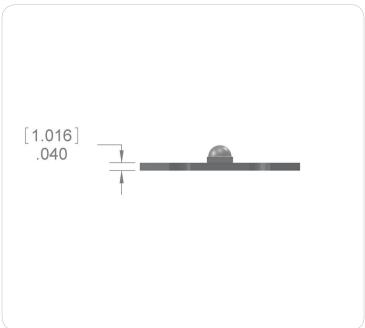
> Layer Count: 1

Core Material: 6061-T6 AluminumSingle Layer Copper Weight: 1oz

> Solder Mask: White

> Finishing Plating: Pb Free HASL





The information contained herein is subject to change without notice.

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