



# 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  $I_F = 66mA$ 

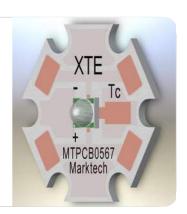
\*Absolute Maximum Ratings (Note 1)

ESD Classification (HBM per MIL-STD-883D)

- > 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)			
COLOR TEMPERATURE	CCT (TYP.)(°K)*	MIN.FLUX (LM) @22MA	KIT USED
Cool White	60006500	107	LD51
Neutral White	47505000	100	LCE3
Warm White	30003250	80.6	L9E7

\*See Cree Specifications

Absolute Maximum hattings (Note 1)				
ITEMS	SYMBOL	RATING	UNIT	
Forward Current (Note 2)	l <sub>F</sub>	66	mA	
Forward Voltage (@22mA, 85°C)	V <sub>F</sub>	55	V	
Reverse Current	l <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)	$T_{OPR}$	115	°C	
Junction Temperature	T,	150	°C	

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.

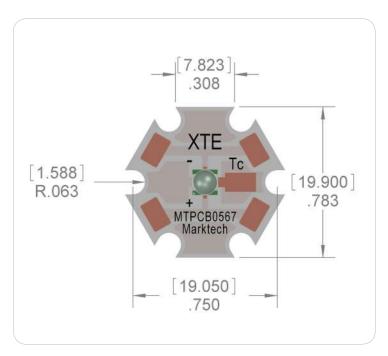
#### **PCB** Fabrication

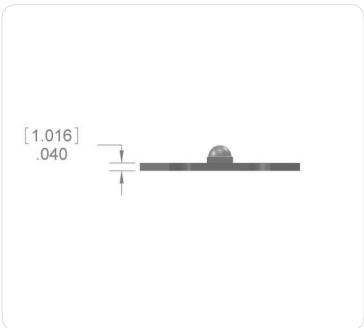
> Layer Count: 1

> Core Material: 6061-T6 Aluminum > Single 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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