

### Cree ML-B White Series

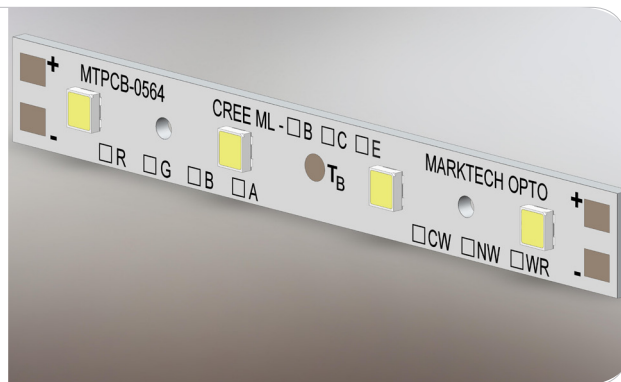
The lighting class 1/4-watt XLamp ML-B LED brings high performance and a smooth look to a wide range of lighting applications, including linear lighting, LED replacement lamps, fluorescent retrofits and retail-display lighting.

#### FEATURES

- > Wide Viewing Angle: 120°
- > Thermal Resistance: 25°C/W
- > Maximum Drive Current: 0.175A

#### APPLICATIONS

- > Linear Lighting
- > Fluorescent Retrofits
- > Retail Display



### Flux Characteristics ( $T_j=25^{\circ}\text{C}$ --White)(per LED)



COLOR TEMPERATURE	CCT(TYP.)(°K)*	MIN.FLUX (LM) @80MA	KIT USED
Cool White	4750--5250	23.5	OWA1
Neutral White	3700--4300	18.1	OVE5
Warm White	2800--3200	18.1	OVZ7

\*See Cree Specifications

### \*Absolute Maximum Ratings (Note 1)

ITEMS	SYMBOL	RATING	UNIT
Forward Current - (Note 2)	$I_F$	175	mA
Forward Voltage (TYPICAL)(@80mA)	$V_F$	13.2	V
Reverse Voltage	$V_R$	-5.0	V
Operating Temperature at $T_B$ Point (Note 2&3))	$T_{OPR}$	100	°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 ML-B Series page for additional and most recent technical data at <http://www.cree.com/led-components-and-modules/products/xlamp/discrete-nondirectional/xlamp-mlb>

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 30°C/W (all colors) so that the LED is not exposed to a condition beyond the absolute maximum ratings.

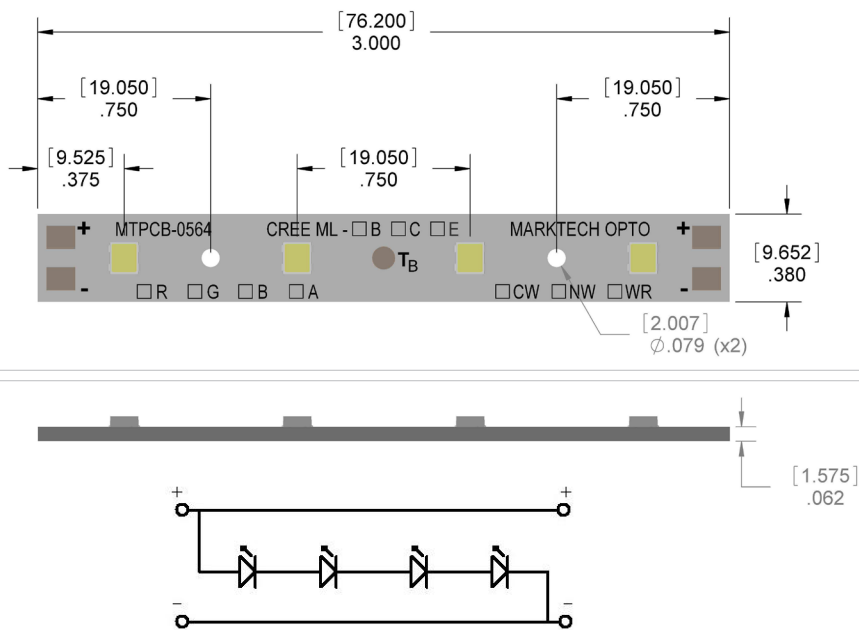
Note 3: The temperature of the LED assembly must be measured at the  $T_B$ -point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

### Hardware (not included)

- > Mount with M1.6 Machine Screws.
- > 18AWG 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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