Marktech Optoelectronics

Cree ML-C White Series on Linear Board

Cree ML-C White Series

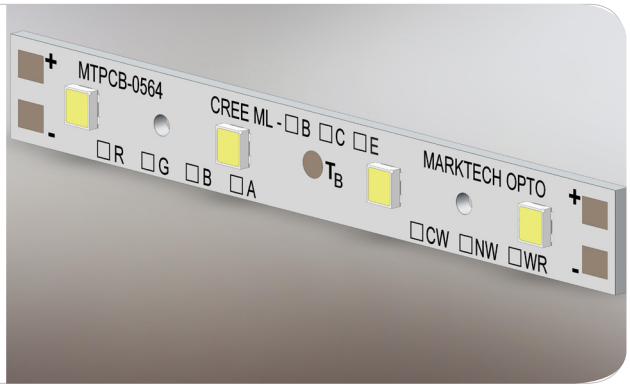
The lighting class 1/3-watt XLamp ML-C LED brings high performance and a smooth look to a wide range of lighting applications, including linear lighting, LED replacement lamps, fluorescent retrofits and retail-display lighting.

FEATURES

> Wide Viewing Angle: 120^0
> Thermal Resistance: 13^{0}C/W
> Maximum Drive Current: 0.35A for MLCAWT
0.175A for MLCSWT

APPLICATIONS

> Linear Lighting
> Fluorescent Retrofits
> Retail Display



Flux Characteristics (T_j=25^{0}C--White)(per LED)

COLOR TEMPERATURE	CCT(TYP.)(^{0}K)*	MIN.FLUX (LM) @100MA	KIT USED
Cool White	4750--5250	30.6	00DZ
Neutral White	3700--4300	26.8	0XE5
Warm White	2800--3200	26.8	0XE7

*See Cree Specifications

*Absolute Maximum Ratings (Note 1)

ITEMS	SYMBOL	RATING	UNIT
Forward Current - MLCAWT Series (Note 2)	I_F	350	mA
Forward Current - MLCSWT Series (Note 2)	I_F	175	mA
Forward Voltage - MLCAWT Series (TYPICAL)(@100mA)	V_F	12.8	V
Forward Voltage - MLCSWT Series (TYPICAL)(@50mA)	V_F	25.6	V
Reverse Voltage	V_R	-5.0	V
Operating Temperature at T_B Point (Note 2&3))	T_{OPR}	100	^{0}C
Junction Temperature	T_J	150	^{0}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-C Series page for additional and most recent technical data at http://www.cree.com/led-components-and-modules/products/xlamp/discrete-nondirectional/xlamp-mlc

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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 20°C/W (all colors) so that the LED is not exposed to a condition beyond the absolute maximum ratings.

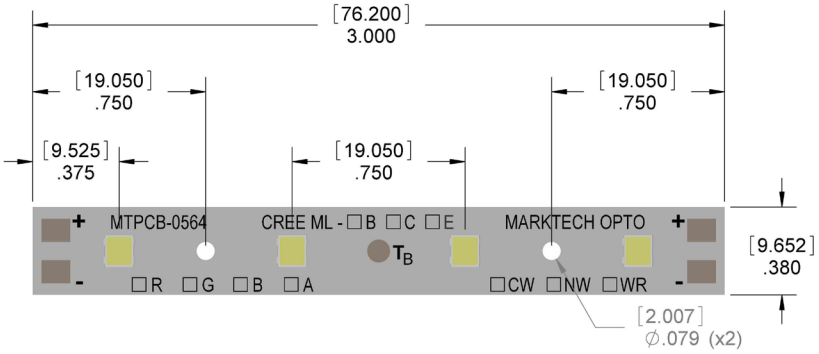
Note 3: The temperature of the LED assembly must be measured at the T_B-point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

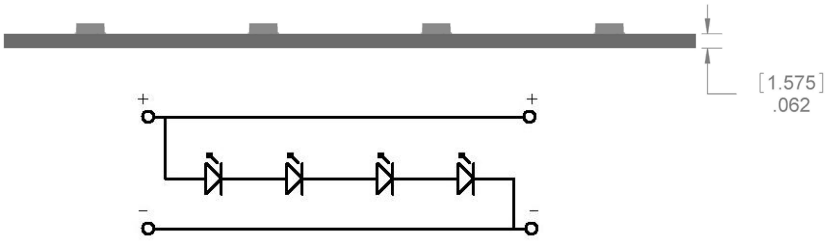
Hardware (not included)

> 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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