Cree ML-E Color Series on Linear Board

The lighting class ½-watt XLamp ML-E 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

> Available in royal blue, blue, green, amber & red
> Wide Viewing Angle: 125°
> Electrically Neutral Thermal Path

APPLICATIONS

> Vehicle
> Landscape
> Consumer Portable
> High End Portable
> Architectural

FLUX CHARACTERISTICS (per LED)

COLOR	DWL (nm)	MIN.FLUX (LM) @150MA	KIT USED
Blue	465-485	10.7	0T01
Green	520-535	30.6	O001
Red	620-630	18.1	0V01
Amber	585-595	30.6	O001
Royal Blue	450-465	175mW (@150 mA)	O502

CHARACTERISTICS	UNIT	MINIMUM	TYPICAL	MAXIMUM
Thermal Resistance, Junction to Solder Point- white, royal, blue	°C/W		11	
Thermal Resistance, Junction to Solder Point- green, red	°C/W		15	
Thermal Resistance, Junction to Solder Point- amber	°C/W		24	
Viewing angle (FWHM)- royal, blue, green, amber, red	degrees		125	
Temperature coefficient of voltage- royal, blue	mV/°C		-3.3	
Temperature coefficient of voltage- green	mV/°C		-4	
Temperature coefficient of voltage- red	mV/°C		-1.8	
Temperature coefficient of voltage- amber	mV/°C		-1	
ESD classification (HBM per Mil-Std-883D)			Class 2	
DC forward current- royal, blue, green, red	mA			350
DC forward current- amber	mA			250
Reverse voltage	V			-5
Forward voltage (@ 150 mA)- royal, blue	V		3.2	
Forward voltage (@ 150 mA)- green	V		3.45	
Forward voltage (@ 150 mA)- red	V		2.2	
Forward voltage (@ 150 mA)- amber	V		2.4	
LED junction temperature	°C			150

It is highly recommended for the user to review the CREE Series page for additional and most recent technical data at:
http://www.cree.com/led-components-and-modules/products/xlamp/discrete-directional/xlamp-mle

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* 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.

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 100C/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 TC-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