Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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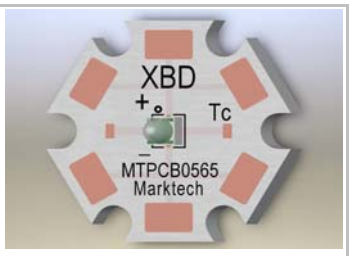
Marktech Optoelectronics

Cree XB-D Color Series on Board

Cree XB-D Color Series

Cree XLamp XB-D color LEDs extend the double lumens-per-dollar performance of the XB package to color LEDs, delivering up to 40% higher maximum light output than XP-E color LEDs. The combination of performance and small size of XB-D color LEDs enable better color mixing and lower system cost.



FEATURES

> Cree's smallest lighting class LED: 2.45 x 2.45 mm
> 1A Maximum Drive Current
> Wide viewing angle: 115°(white) to 140° (red)
> Electrically Neutral Thermal Path

APPLICATIONS

> Non-Directional
> Directional
> Downlight
> Consumer Portable

FLUX CHARACTERISTICS @ 85°C

COLOR	DWL (nm)	MIN.FLUX (LM) @350MA	KIT USED
Blue	465-485	35.2	0Z01
Green	520-535	93.9	0B01
Red-Orange	610-620	80.6	O901
Red	620-630	67.2	O701

CHARACTERISTICS	UNIT	MINIMUM	TYPICAL	MAXIMUM
Thermal resistance, junction to solder point - white, royal blue, blue	°C/W		6.5	
Thermal resistance, junction to solder point - green	°C/W		11	
Thermal resistance, junction to solder point - amber	°C/W		7	
Thermal resistance, junction to solder point - red-orange, red	°C/W		5	
Viewing angle (FWHM) - white	degrees		115	
Viewing angle (FWHM) - royal blue, blue, green	degrees		135	
Viewing angle (FWHM) - amber, red-orange, red	degrees		140	
Temperature coefficient of voltage - white	mV/°C		-2.5	
Temperature coefficient of voltage - royal blue, blue, green	mV/°C		-3.3	
Temperature coefficient of voltage - amber, red-orange, red	mV/°C		-2	
ESD classification (HBM per Mil-Std-883D)			Class 2	
DC forward current	mA			1000
Reverse voltage	V			-5
Forward voltage (@ 350 mA, 85 °C) - white	V		2.9	3.5
Forward voltage (@ 350 mA, 25 °C) - royal blue, blue	V		3.1	3.7
Forward voltage (@ 350 mA, 25 °C) - green	V		3.3	3.9
Forward voltage (@ 350 mA, 25 °C) - amber, red-orange, red	V		2.25	2.6
LED junction temperature	°C			150

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

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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 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 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