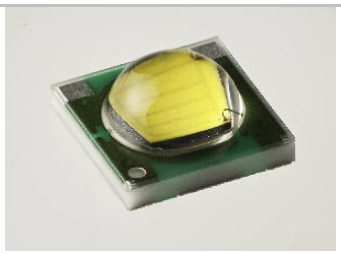
Cree XP-G Color Series on Board



Optimized for high lumen directional lighting applications, the XLamp XP-G LED set a new standard for light output and efficacy in a small form factor LED. The XLamp XP-G LED is capable of delivering up to 493 lumens at 93 lumens per watt when driven at 1.5 A. Others have tried to match its performance but no one has come close. Now, the XLamp XP-G LED is even brighter.

FEATURES

> Maximum drive current: 1500mA
> Low thermal resistance: 4 °C/W
> Wide viewing angle: 125°

APPLICATIONS

> Directional
> High-End Portable
> Low & High Bay
> Roadway & Parking

FLUX CHARACTERISTICS

COLOR	CCT (TYP.)	MIN.FLUX (LM) @350MA	KIT USED
Cool White	6000K	139	0H53
Neutral White	4000K	114	0EE5
Warm White	3000K	100	0CE7

CHARACTERISTICS	UNIT	MINIMUM	TYPICAL	MAXIMUM
Viewing angle (FWHM)	degrees		125	
Effective Thermal Resistance, Junction to Solder Point	°C/W		4	
ESD classification (HBM per Mil-Std-883D)			Class 2	
DC forward current	mA			1500
Reverse voltage	V			5
Forward voltage (@ 350 mA, 25 °C)	V		2.9	3.25
Forward voltage (@ 700 mA, 25 °C)	V		3.05	
Forward voltage (@ 1000 mA, 25 °C)	V		3.15	
Forward voltage (@ 1500 mA, 25 °C)	V		3.25	
Temperature coefficient of voltage (6V)	mV/°C		-2.1	

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-xpg

* 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