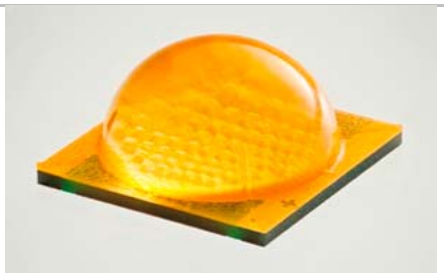
Marktech Optoelectronics

Cree MT-G2 Series on Board

Cree MT-G2 Series

The first EasyWhite LED array built on the SC³ Technology Platform, Cree's XLamp MT-G2 LED pushes performance limits to redefine lumen levels and efficacy while delivering the industry's best color consistency and superior optical control. The MT-G2 LED delivers up to 1987 lumens in cool white and 1735 lumens in warm white, both at 18.5 watts, 85°C.



FEATURES

> Cree EasyWhite color temp from 2700K to 5000K
> 85°C binning and characterization
> UL- recognized component (E349212)
> Electrically Neutral Thermal Path

APPLICATIONS

> Directional
> Downlight

FLUX CHARACTERISTICS @ 85°C

COLOR	CCT (TYP.)	MIN.FLUX (LM) @350MA	KIT USED
Warm White	2700K	600	J027F
Neutral White	5000K	750	N050F

CHARACTERISTICS	UNIT	MINIMUM	TYPICAL	MAXIMUM
Viewing angle (FWHM)	degrees		115	
Effective Thermal Resistance, Junction to Solder Point	°C/W		1.5	
ESD classification (HBM per Mil-Std-883D)			Class 2	
LED junction temperature	°C			150
DC forward current (6V)	mA			3000
DC forward current (9V)	mA			2000
DC forward current (36V)	mA			500
Forward voltage (6V, 1000 mA, 85 °C)	V		5.7	
Forward voltage (6V, 1000 mA, 25 °C)	V			7
Forward voltage (9V, 735 mA, 85 °C)	V		8.55	
Forward voltage (9V, 735 mA, 25 °C)	V			10.5
Forward voltage (36V, 185 mA, 85 °C)	V		34.2	
Forward voltage (36V, 185 mA, 25 °C)	V			42
Temperature coefficient of voltage (6V)	mV/°C		-4	
Temperature coefficient of voltage (9V)	mV/°C		-6	
Temperature coefficient of voltage (36V)	mV/°C		-26	
Reverse voltage	V			-5
Reverse Current	A			0.1

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/arrays-directional/xlamp-mtg2-easywhite

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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