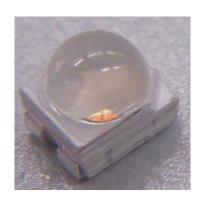


Cree® PLCC4 1-in-1 SMD LED CLM2B-REW/AEW



PRODUCT DESCRIPTION

SMD LEDs is packaged in the industry standard package. These LEDs have high reliability performance and are designed to work under a wide range of environmental conditions.

This high reliability feature makes them ideally suited to be used under illumination application conditions.

Its wide viewing angle makes these LEDs ideally suited for channel letter, or general backlighting and illumination applications.

FEATURES

- Size (mm):3.2 x 2.7
- Color and Typical Dominant Wavelength: Red (624nm) Amber(591nm)
- Luminous Intensity (mcd)
 CLM2B-REW:(2240 5600)
 CLM2B-AEW:(2800 9000)
- Lead-Free
- RoHS Compliant

APPLICATIONS

- Light Strip
- Channel Letter
- Architectural Lighting



ABSOLUTE MAXIMUM RATINGS $(T_A = 25^{\circ}C)$

Items	Symbol	Absolute Maximum Rating	Unit	
		Red/Amber		
Forward Current	$I_{_{\rm F}}$	70	mA	
Peak Forward Current Note	$I_{_{FP}}$	200	mA	
Reverse Voltage	V_R	5	V	
Power Dissipation	P_{D}	210	mW	
Operation Temperature T _{opr}		-40 ~ +100	°C	
Storage Temperature	age Temperature T_{stg}		°C	
Junction Temperature	T ₁	110	°C	
Junction/Ambient	Junction/Ambient R _{THJA}		°C/W	
Junction/Solder Point	R _{THJS}	150	°C/W	
Electrostatic Discharge Classification(MIL-STD-883E)	ESD	Class 2		

Note: Pulse width ≤ 0.1 msec, duty $\leq 1/10$.

TYPICAL ELECTRICAL & OPTICAL CHARACTERISTICS $(T_A = 25^{\circ}C)$

Characteristics	Color	Symbol	Condition	Unit	Minimum	Typical	Maximum	
Forward Voltage	Red/Amber	V _F	$I_F = 50 \text{ mA}$	V		2.5	3.0	
Reverse Current	Red/Amber	I_R	I_R $V_R = 5 V$ μA				10	
Dominant Wavelength	Red	$\lambda_{_{D}}$	$I_F = 50 \text{ mA}$	nm	618	624	630	
	Amber	$\lambda_{_{ m D}}$	$I_F = 50 \text{ mA}$	nm	584	591	599	
Luminous Intensity	Red	I_{v}	$I_F = 50 \text{ mA}$	mcd	2240	3700		
	Amber	I_{v}	$I_F = 50 \text{ mA}$	mcd	2800	5000		



INTENSITY BIN LIMIT ($I_F = 50 \text{ mA}$)

Red (CLM2B-REW)

•	,	
Bin Code	Min. (mcd)	Max. (mcd)
Xb	2240	2800
Ya	2800	3550
Yb	3550	4500
Z0	4500	5600

Amber (CLM2B-AEW)

•	•	
Bin Code	Min. (mcd)	Max. (mcd)
Ya	2800	3550
Yb	3550	4500
Z0	4500	5600
A0	5600	7100
В0	7100	9000

Tolerance of measurement of luminous intensity is $\pm 10\%$.

COLOR BIN LIMIT ($I_F = 50 \text{ mA}$)

Red (CLM2B-REW)

Bin Code	Min. (nm)	Max. (nm)		
RA	618	630		

Amber (CLM2B-AEW)

Bin Code	Min. (nm)	Max. (nm)
A2	584	587
A3	587	590
A4	590	593
A5	593	596
A6	596	599

Tolerance of measurement of dominant wavelength is ± 1 nm.



ORDER CODE TABLE*

Color	Kit Number	Luminous Intensity (mcd)		Dominant Wavelength			
		Min.	Max.	Color Bin	Min.(nm)	Color Bin	Max.(nm)
Red	CLM2B-REW-CXbZ0AA3	2240	5600	RA	618	RA	630
Red	CLM2B-REW-CYaZ0AA3	2800	5600	RA	618	RA	630

Color Kit Number	Luminous Intensity (mcd)		Dominant Wavelength				
	Min.	Max.	Color Bin	Min.(nm)	Color Bin	Max.(nm)	
Amber	CLM2B-AEW-CYaB0263	2800	9000	A2	584	A6	599
Amber	CLM2B-AEW-CYbB0263	3550	9000	A2	584	A6	599

Notes

- 1. The above kit numbers represent order codes that include multiple intensity-bin and color-bin codes. Only one intensity-bin code and one color-bin code will be shipped on each bulk. Single intensity-bin code and single color-bin codes will not be orderable.
- 2. Please refer to the "Cree LED Lamp Reliability Test Standards" document for reliability test conditions.
- 3. Please refer to the "Cree LED Lamp Soldering & Handling" document for information about how to use this LED product safely.



GRAPHS

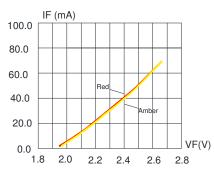


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

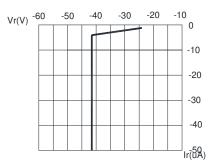


FIG.3 RED&AMBER REVERSE CURRENT VS. REVERSE VOLTAGE.

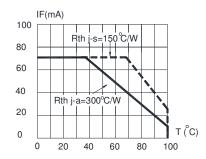


FIG.5 RED&AMBER MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE (Tjmax=110 $^{\circ}\text{C})$

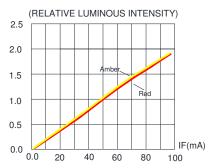


FIG.2 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

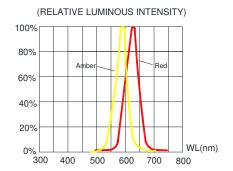
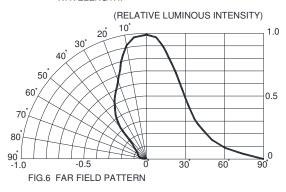


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

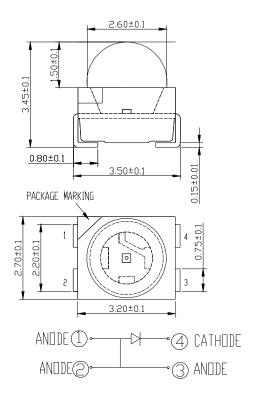


The above data are collected from statistical figures that do not necessarily correspond to the actual parameters of each single LED. Hence, these data will be changed without further notice.



MECHANICAL DIMENSIONS

All dimensions are in mm.



NOTES

RoHS Compliance

The levels of environmentally sensitive, persistent biologically toxic (PBT), persistent organic pollutants (POP), or otherwise restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), as amended through April 21, 2006.

Vision Advisory Claim

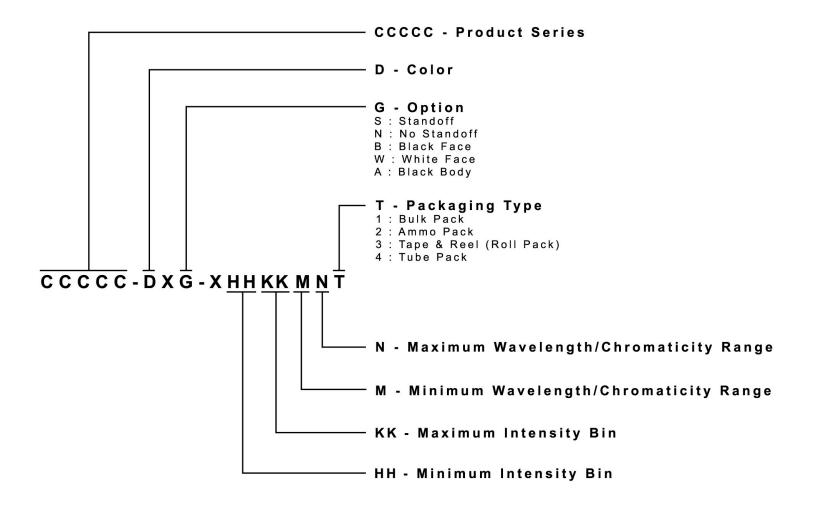
Users should be cautioned not to stare at the light of this LED product. The bright light can damage the eye.



KIT NUMBER SYSTEM

Cree LED lamps are tested and sorted into performance bins. A bin is specified by ranges of color, forward voltage, and brightness. Sorted LEDs are packaged for shipping in various convenient options. Please refer to the "Cree LED Lamp Packaging Standard" document for more information about shipping and packaging options.

Cree LEDs are sold by order codes in combinations of bins called kits. Order codes are configured in the following manner:





PACKAGING

- The boxes are not water resistant and they must be kept away from water and moisture.
- The LEDs are packed in cardboard boxes after packaging in normal or anti-electrostatic bags.
- Cardboard boxes will be used to protect the LEDs from mechanical shocks during transportation.
- The reel pack is applied in SMD LED.
- Max 700 pcs per reel.

