

Cree® 3-mm Round LED

Model # LC374TWR1-65Q-A1

Data Sheet

65-degree, 3-mm round LED lamp in warm white color with water-transparent lens and no stopper

Applications

- Advertising Signs
- Indicators
- LCD Backlight
- Illuminations

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$)

Items	Symbol	Absolute Maximum Rating	Unit
Forward Current	I_F	25	mA
Peak Forward Current ^{Note}	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	100	mW
Operation Temperature	T_{opr}	-40 ~ +95	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T_{sol}	Max. 260°C for 3 sec. max. (3 mm from the base of the epoxy bulb)	

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

Typical Electrical & Optical Characteristics ($T_A = 25^\circ\text{C}$)

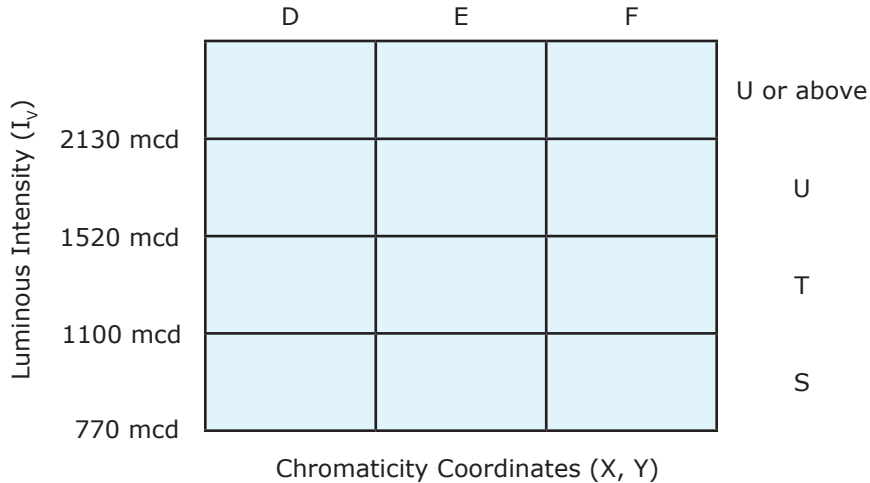
Characteristics	Symbol	Condition	Unit	Minimum	Typical	Maximum
Forward Voltage	V_F	$I_F = 20$ mA	V		3.4	4.0
Forward Voltage	V_F	$I_F = 1.0$ μA	V	1.7		2.5
Reverse Current	I_R	$V_R = 5$ V	μA			100
Luminous Intensity	I_v	$I_F = 20$ mA	mcd	770	1300	
Chromaticity Coordinates	x	$I_F = 20$ mA			0.426	
	y	$I_F = 20$ mA			0.393	
Color Temperature	CCT	$I_F = 20$ mA	K		3000	
50% Power Angle	$2\theta_{1/2H-H}$	$I_F = 20$ mA	deg		65	

Standard Bins for LC374TWR1-65Q-A1 ($I_F = 20 \text{ mA}$)

Lamps are sorted to luminous intensity (I_v) and chromaticity coordinates (x,y) bins shown.

Orders for LC374TWR1-65Q-A1 may be filled with any or all bins contained as below.

All luminous intensity (I_v) and chromaticity coordinates (x,y) values shown and specified are at $I_F = 20 \text{ mA}$.

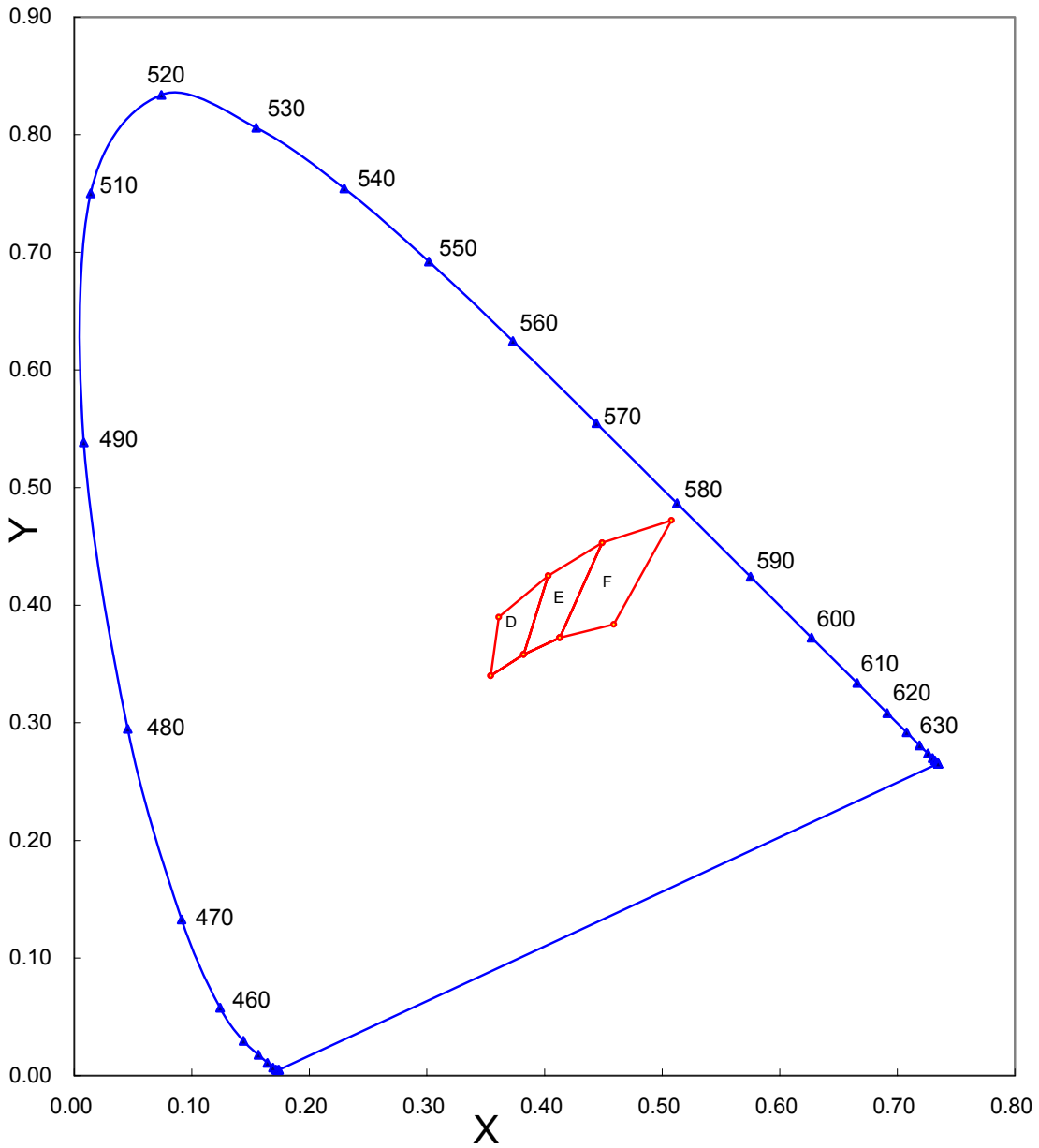


Rank		D				E				F			
Chromaticity Coordinates	x	0.3541	0.3610	0.4030	0.3822	0.3822	0.4030	0.4490	0.4129	0.4129	0.4490	0.5080	0.4588
	y	0.3401	0.3900	0.4250	0.3580	0.3580	0.4250	0.4530	0.3725	0.3725	0.4530	0.4720	0.3838

Important Notes:

1. All ranks will be included per delivery; rank ratio will be based on the dice distribution.
2. Pb content <1000 ppm.
3. Tolerance of measurement of luminous intensity is $\pm 15\%$.
4. Tolerance of measurement of the color coordinates is ± 0.01 .
5. Tolerance of measurement of V_F is $\pm 0.05 \text{ V}$.
6. Packaging methods are available for selection; please refer to the "Cree LED Lamp Packaging Standard" document.
7. Please refer to the "Cree LED Lamp Reliability Test Standards" document for reliability test conditions.
8. Please refer to the "Cree LED Lamp Soldering & Handling" document for information about how to use this LED product safely.

CIE Chromaticity Diagram



Graphs

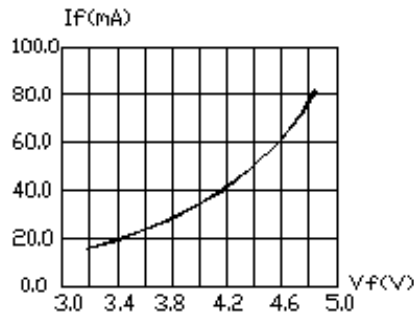


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE

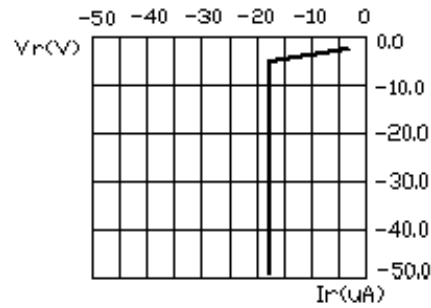


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE

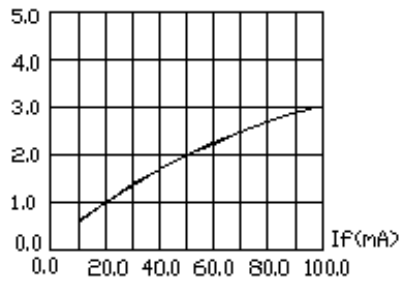


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

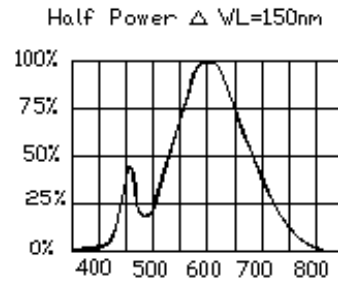


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

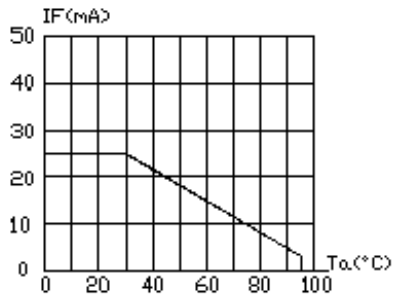


FIG.5 MAXIMUM FORWARD CURRENT VS. AMBIENT TEMPERATURE (Tjmax=105°C)

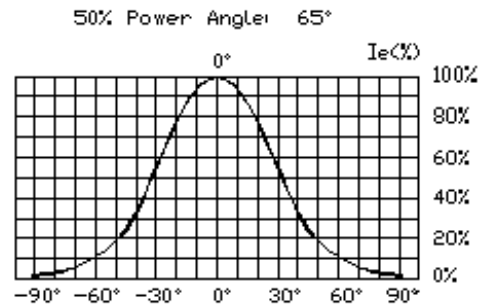
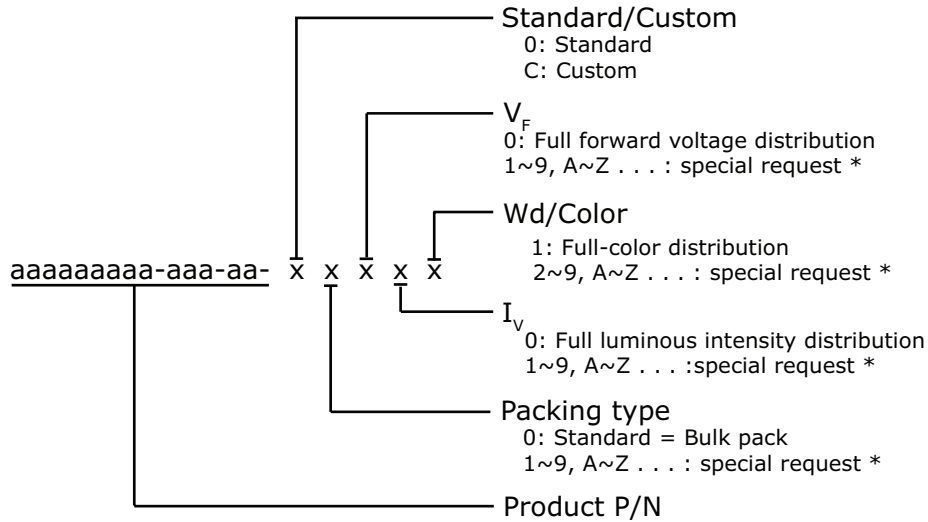


FIG.6 FAR FIELD PATTERN

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:



* Contact your Cree sales representative for ordering information.

Standard Available Kits*

Kit Number	Description
LC374TWR1-65Q-A1-00001	3 mm Round 25 Warm White, FULL RANK, Bulk Pack

* Please contact your Cree representative about the availability of non-standard kits.