



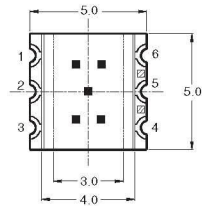
SURFACE MOUNT LED LAMP FLASH LED

FOLF516CIWTR

White

PACKAGE DIMENSIONS

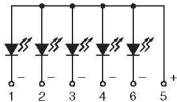
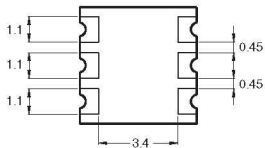
Top View:



Side View:



Bottom View:



NOTE:

Dimensions for all drawings are in mm.
Tolerance = ± 0.1 mm unless specified.

Applications

- Auxiliary lighting for camera
- Flash lighting for camera with CMOS sensor

Description

This compact six-pin surface mount LED emits white light. Its multi-dice configuration offers high light output, making this LED an ideal choice for auxiliary lighting or flashing lighting in camera phones with CMOS sensor. This device utilizes InGaN/sapphire technology.

Features

- InGaN/Sapphire technology
- Footprint – 5.0(L) X 5.0(W) X 0.85(H) mm
- Typical viewing angle of 120°
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 800 units per reel



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ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +85	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Lead Soldering Time	T_{SOL}	260 for 5 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	150	mA
Peak Forward Current (Duty Factor = 10%, $t_p = 0.1$ ms)	I_{FM}	250	mA
Reverse Voltage ($I_R = 100 \mu\text{A}$)	V_R	5	V
Power Dissipation	P_D	600	mW

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Part Number	Min.	Typ.	Max.	Condition
Luminous Intensity (mcd)	2000	2400	2800	$I_F = 100\text{mA}$
Forward Voltage (V)	2.7	3.3	3.7	$I_F = 100\text{mA}$
Chromaticity coordinate	See page 3			$I_F = 100\text{mA}$
Reverse Current (μA)	-	-	250	$V_R = 10\text{V}$
Typical Viewing Angle ($^\circ$)	-	120	-	$I_F = 100\text{mA}$

Luminous intensity tolerance = $\pm 10\%$

Forward voltage tolerance = $\pm 0.1\text{V}$



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Color Ranks

($I_F = 20\text{mA}$, $T_a = 25^\circ\text{C}$)

	Bin a0			
x	0.280	0.264	0.283	0.296
y	0.248	0.267	0.305	0.276

	Bin b5			
x	0.296	0.311	0.307	0.287
y	0.276	0.294	0.315	0.295

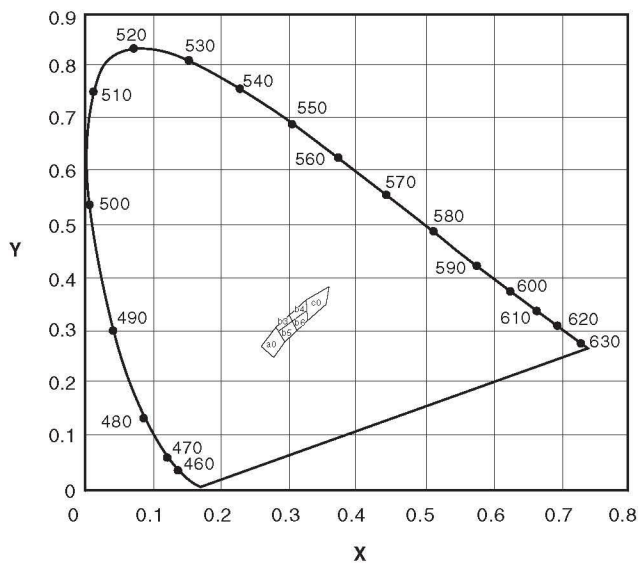
	Bin b3			
x	0.307	0.287	0.304	0.283
y	0.315	0.295	0.330	0.305

	Bin b6			
x	0.311	0.307	0.330	0.330
y	0.294	0.315	0.318	0.339

	Bin b4			
x	0.307	0.330	0.330	0.304
y	0.315	0.339	0.360	0.330

	Bin c0			
x	0.330	0.330	0.361	0.356
y	0.318	0.360	0.385	0.351

Chromaticity Diagram





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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

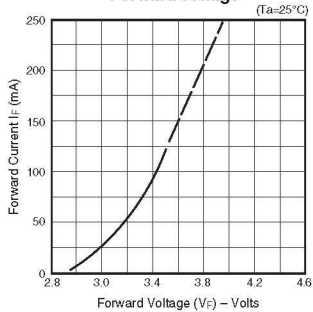


Fig. 2 Luminous Intensity vs. Forward Current

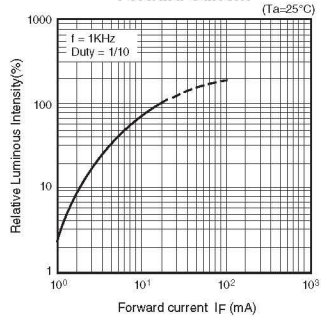


Fig. 3 Forward Current Derating Curve

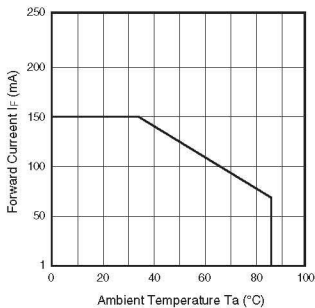


Fig. 4 Spectrum Distribution

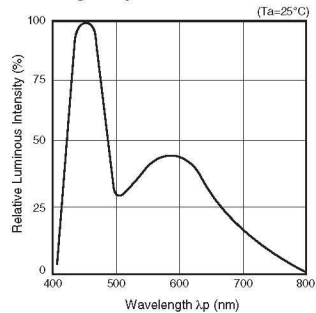
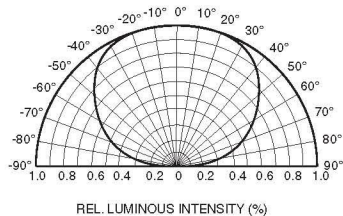


Fig. 5 Radiation Diagram





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TYPICAL PERFORMANCE CURVES

Fig. 6 Luminance Incidence

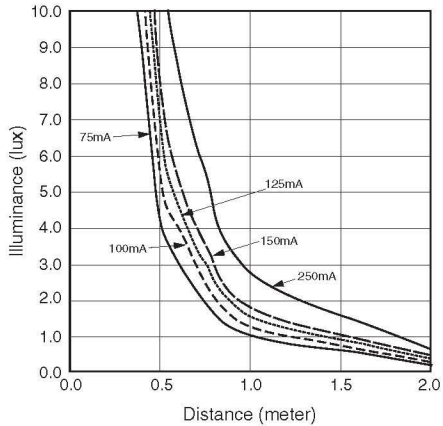
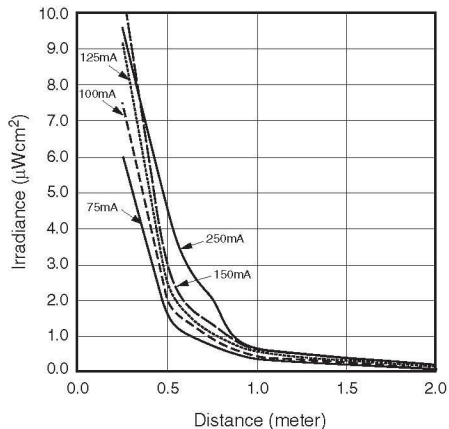


Fig. 7 Radiant Flux Density





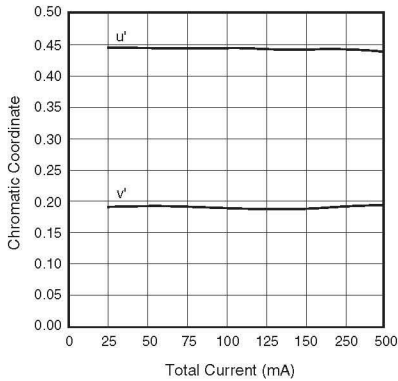
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TYPICAL PERFORMANCE CURVES

**Fig. 8 Colorimetry –
u'v' Chromaticity space**



**Fig. 9 Colorimetry –
X, Y, Z Tristimulus System**

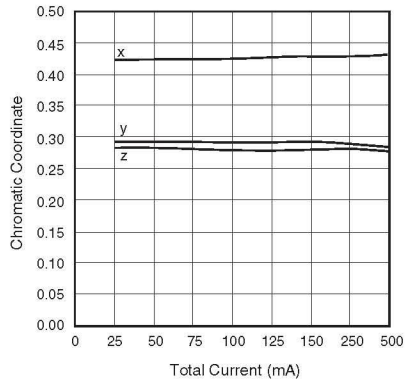
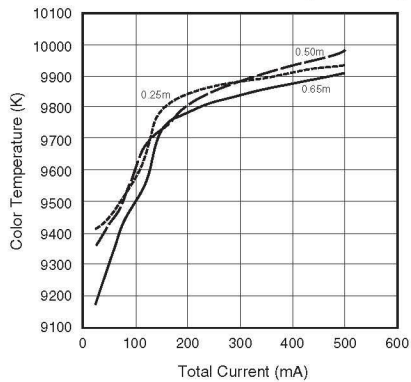


Fig. 10 Correlated Color Temperature (CCT)



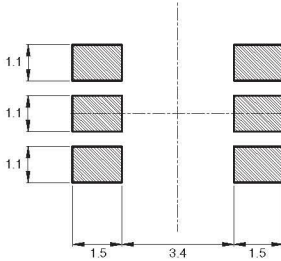


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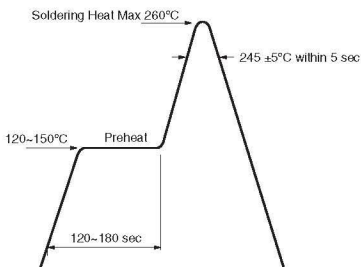
White

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

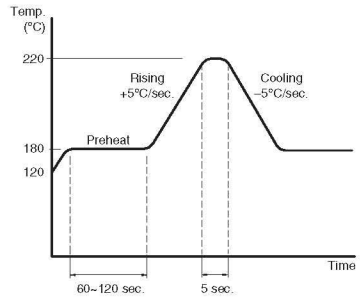


RECOMMENDED IR REFLOW SOLDERING PROFILE

Soldering Heat



Reflow Solder Test



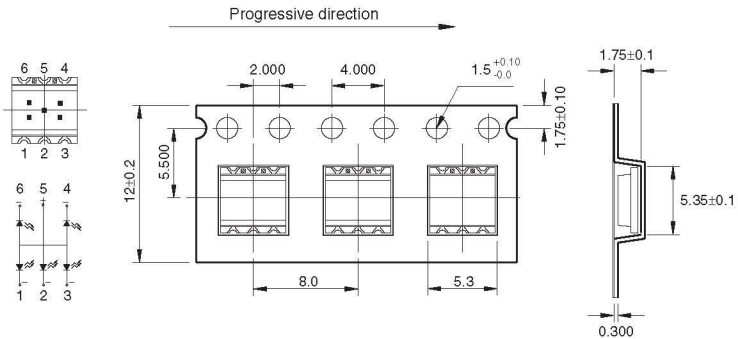
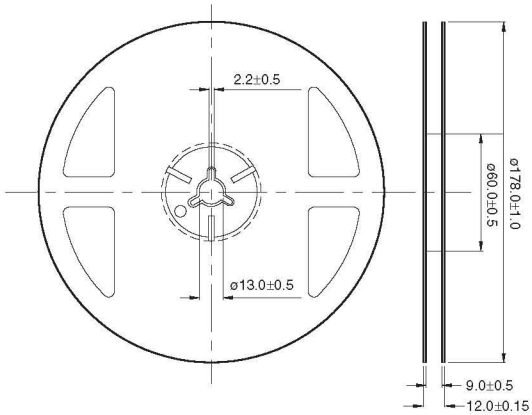


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TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm



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FOLF516CIWTR**White**

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