



FOLF596CIWTR Surface Mount LED Lamp, Flash LED, White

Features

- InGaN/Sapphire technology
- Diffused optics
- Footprint – 5.0(L) X 5.0(W) X 1.5(H) mm
- Typical viewing angle of 60°
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 800 units per reel

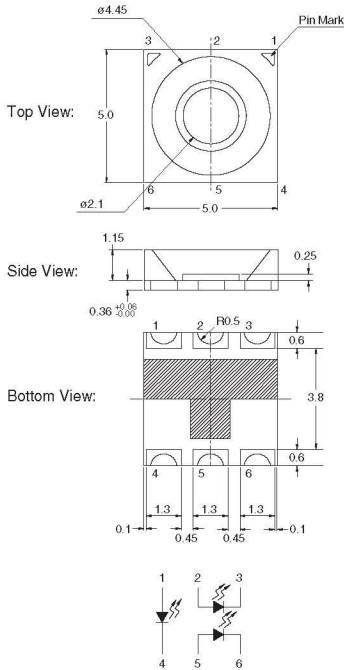
Description

This compact six-pin surface mount LED emits white light. Its silver-coated funnel design 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.

Applications

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

Package Dimensions



NOTE:
Dimensions for all drawings are in mm.

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 ⁽¹⁾	I_F	90	mA
Peak Forward Current ⁽¹⁾ (Duty Factor = 10%, $t_p = 0.1$ ms)	I_{FM}	300	mA
Reverse Voltage ($I_R = 100 \mu\text{A}$)	V_R	5	V
Power Dissipation ⁽¹⁾	P_D	315	mW
Electrostatic discharge	ESD	150	V

(1) Total for 3 dice

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

Part Number	Min.	Typ.	Max.	Condition
Luminous Intensity (mcd)	2000	3300	–	$I_F = 60\text{mA}^{(2)}$
Forward Voltage (V)		3.5	4.0	$I_F = 20\text{mA}^{(3)}$
Chromaticity coordinate		See page 3		$I_F = 60\text{mA}^{(2)}$
Reverse Current (μA)	–	–	50	$V_R = 5\text{V}$
Typical Viewing Angle ($^\circ$)	–	60	–	$I_F = 60\text{mA}^{(2)}$

(2) Equivalent to 20mA per die

(3) For each die

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

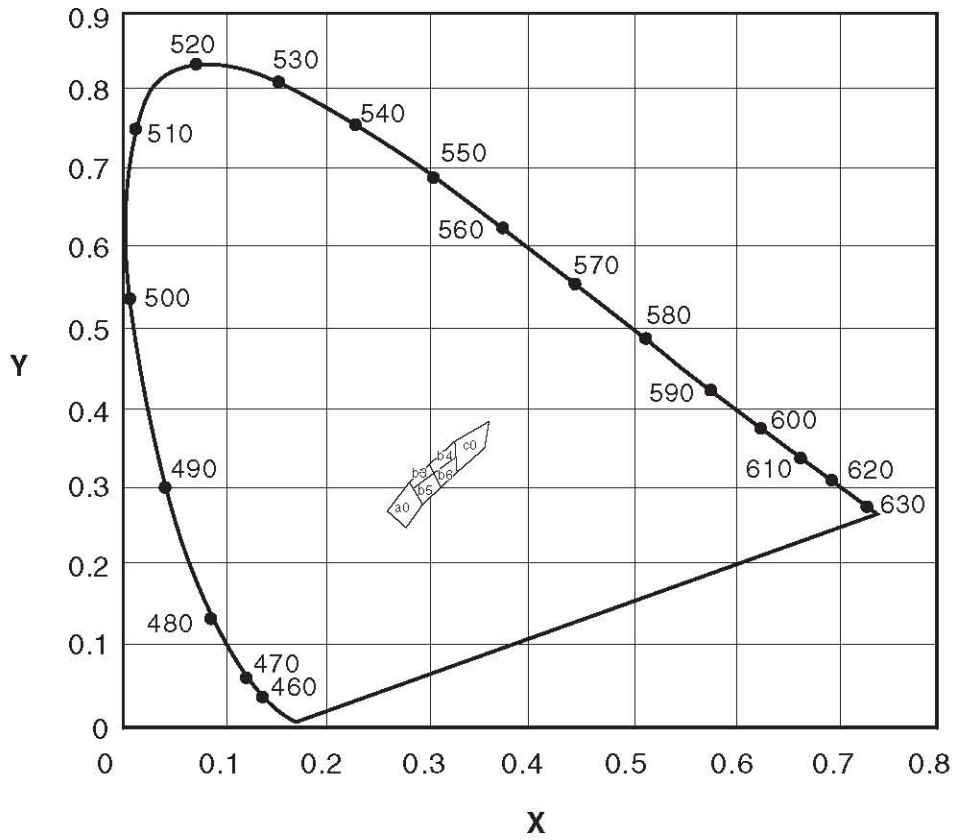
Bin b3				
x	0.307	0.287	0.304	0.283
y	0.315	0.295	0.330	0.305

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



Typical Performance Curves

Fig. 1 Forward Current vs. Forward Voltage

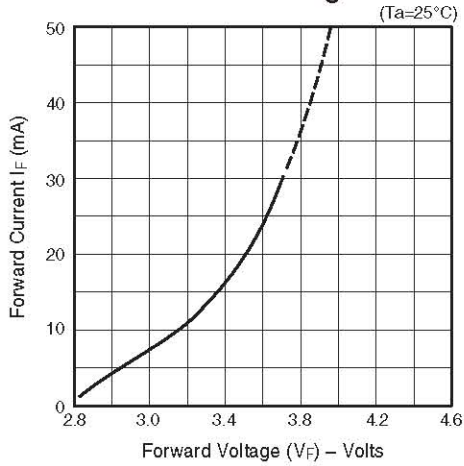


Fig. 2 Luminous Intensity vs. Forward Current

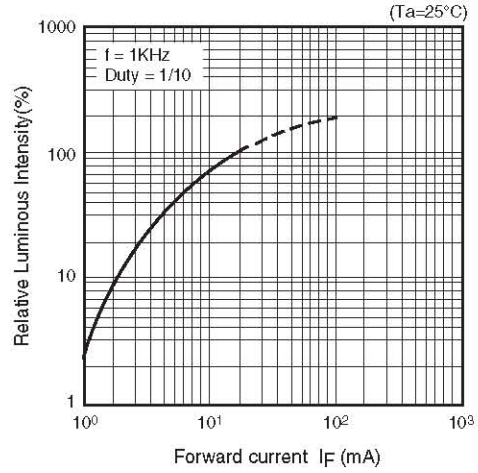


Fig. 3 Forward Current Derating Curve

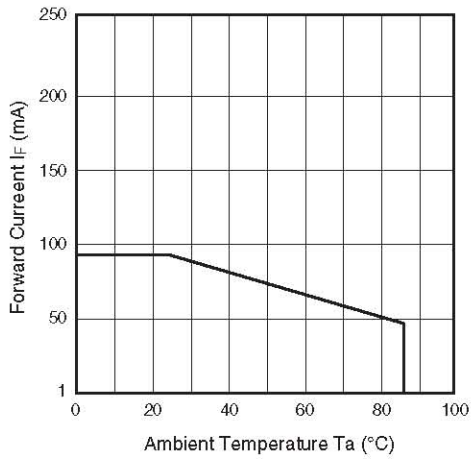


Fig. 4 Spectrum Distribution

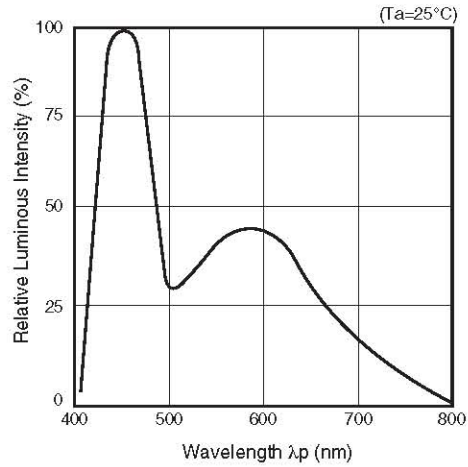
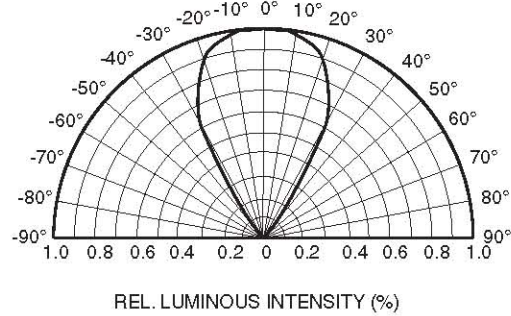


Fig. 5 Radiation Diagram



Typical Performance Curves

Fig. 6 Luminance Incidence

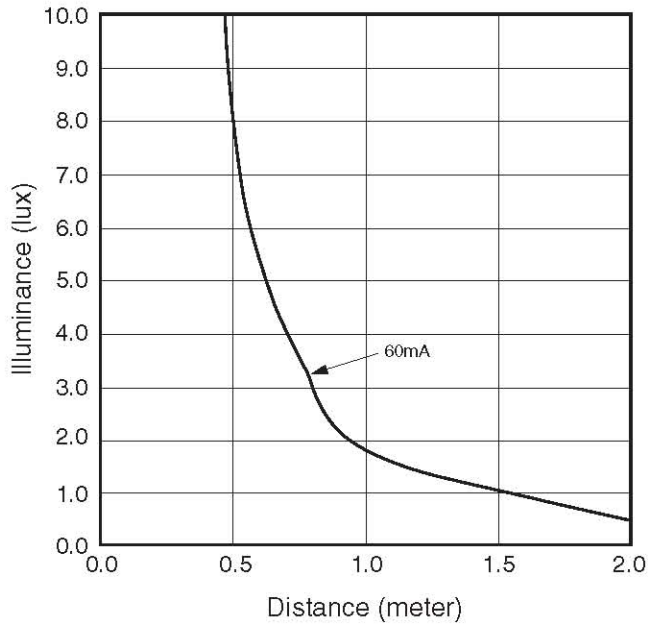
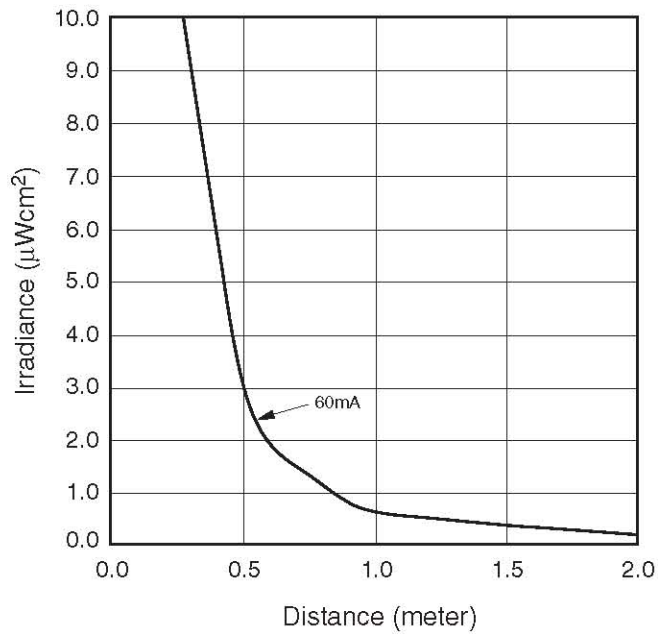
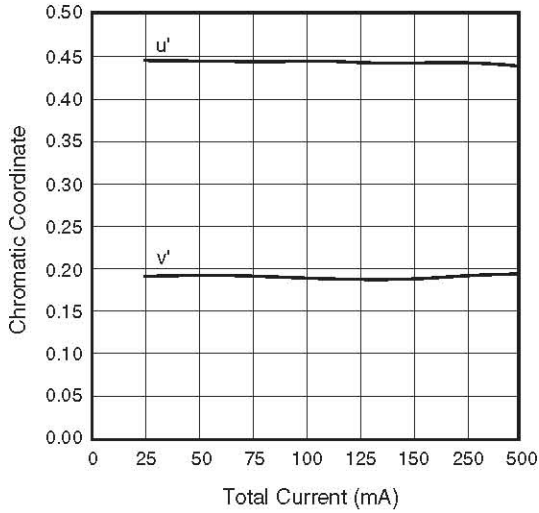


Fig. 7 Radiant Flux Density



Typical Performance Curves

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



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

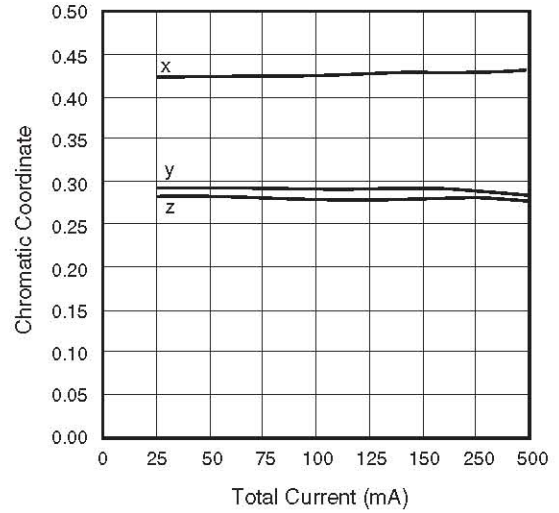
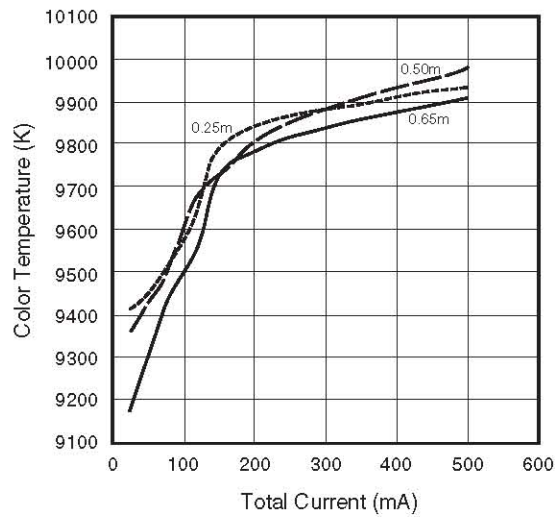
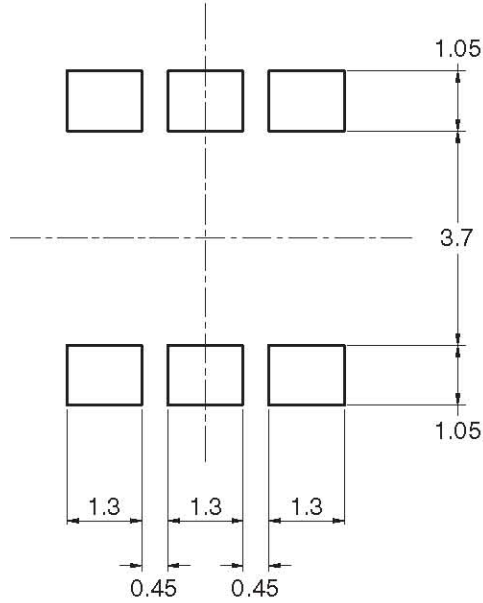


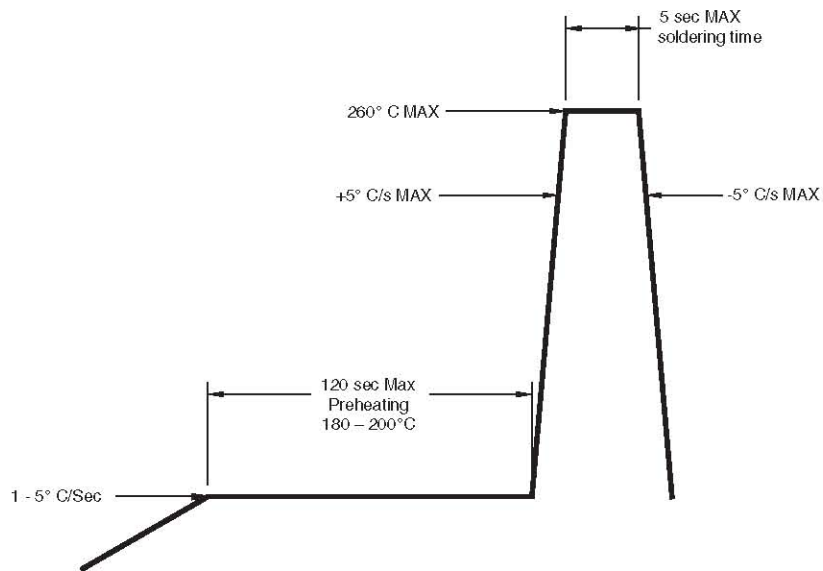
Fig. 10 Correlated Color Temperature (CCT)



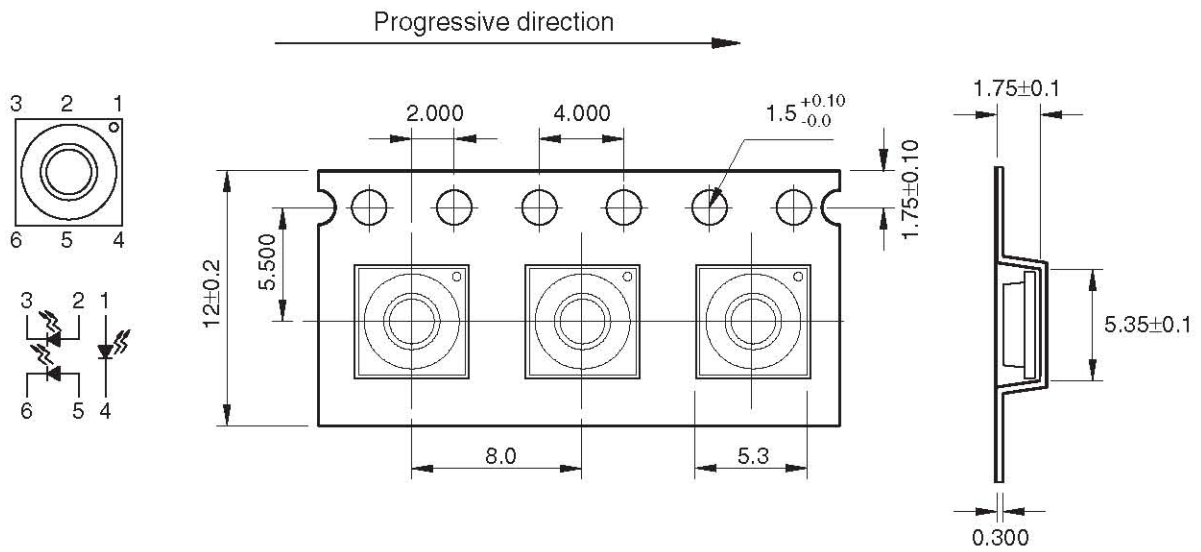
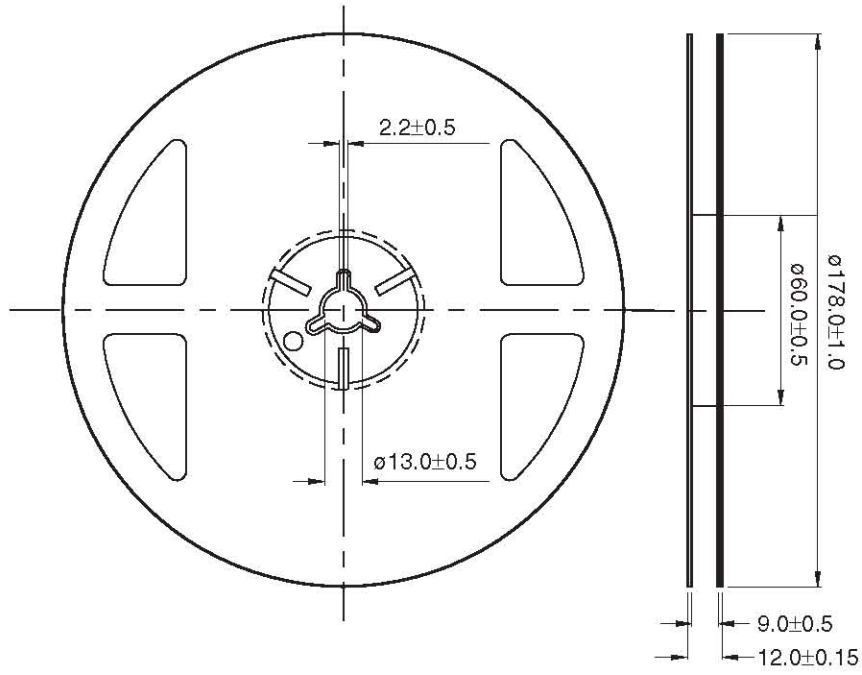
Recommended Printed Circuit Board Pattern



Recommended IR Reflow Soldering Profile



Tape and Reel Dimensions



Dimensional tolerance is ± 0.1 mm unless otherwise specified
 Angle: ± 0.5
 Unit: mm

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