



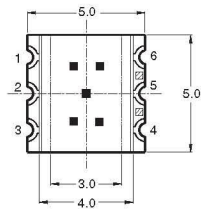
SURFACE MOUNT LED LAMP FLASH LED

FOLF515CIWTR

White

PACKAGE DIMENSIONS

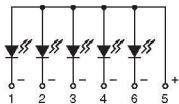
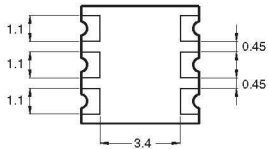
Top View:



Side View:



Bottom View:



NOTE:

Dimensions for all drawings are in mm.

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 ($I_R = 100$ μA) | 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 |

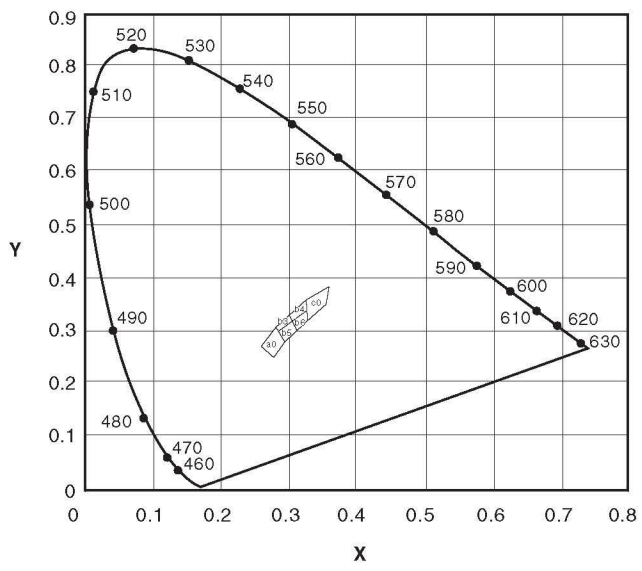
| | Bin b3 | | | |
|---|--------|-------|-------|-------|
| x | 0.307 | 0.287 | 0.304 | 0.283 |
| y | 0.315 | 0.295 | 0.330 | 0.305 |

| | 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

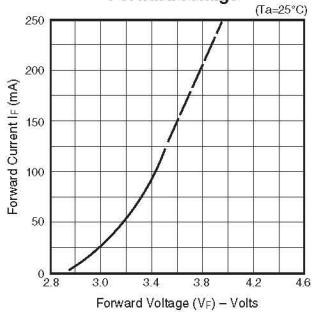


Fig. 2 Luminous Intensity vs. Forward Current

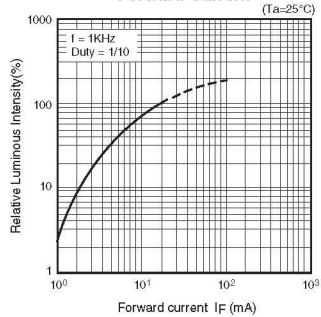


Fig. 3 Forward Current Derating Curve

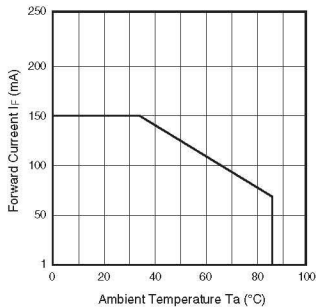


Fig. 4 Spectrum Distribution

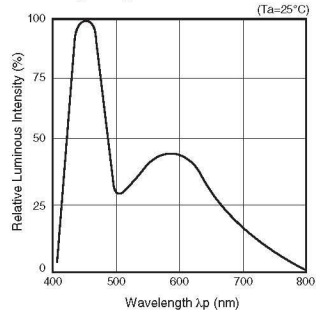
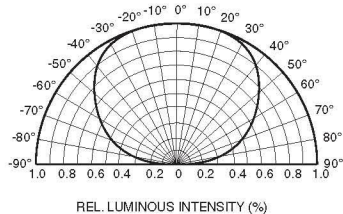


Fig. 5 Radiation Diagram





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TYPICAL PERFORMANCE CURVES

Fig. 6 Luminance Incidence

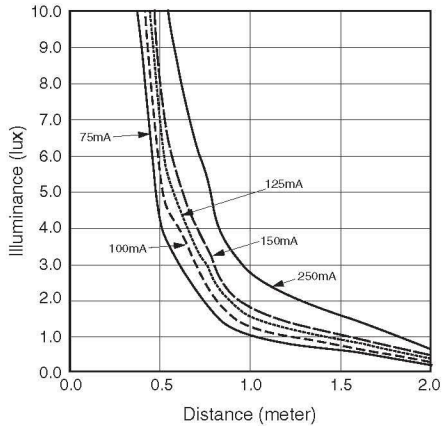
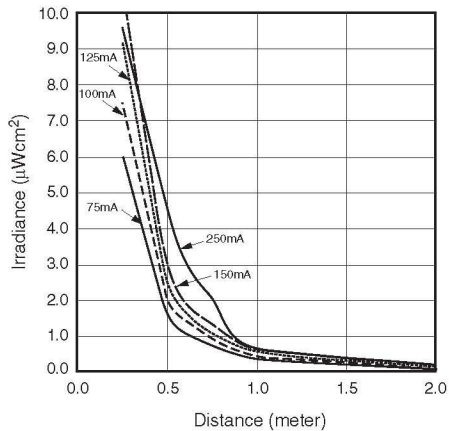


Fig. 7 Radiant Flux Density





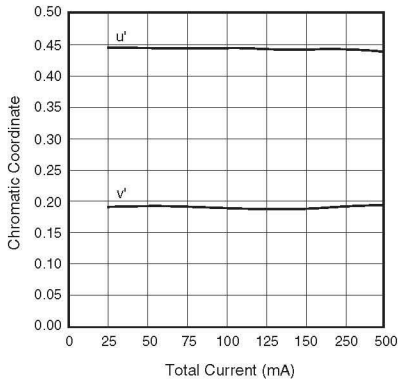
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TYPICAL PERFORMANCE CURVES

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



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

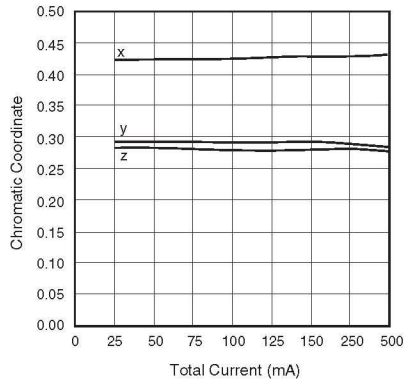
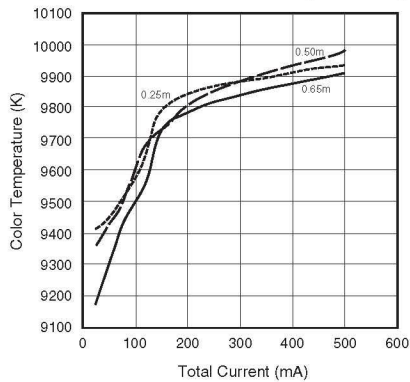


Fig. 10 Correlated Color Temperature (CCT)



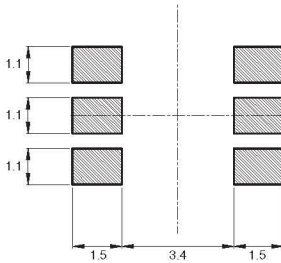


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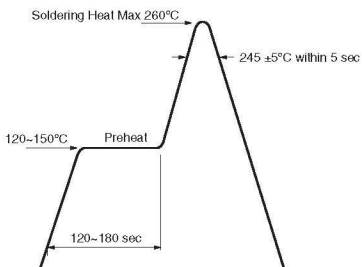
White

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

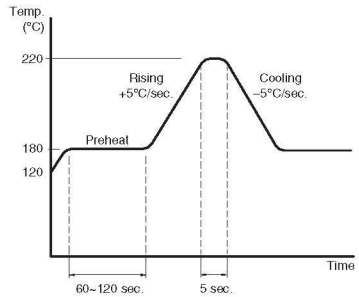


RECOMMENDED IR REFLOW SOLDERING PROFILE

Soldering Heat



Reflow Solder Test



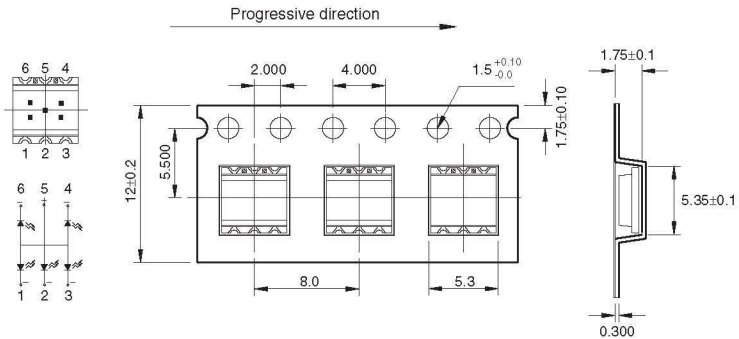
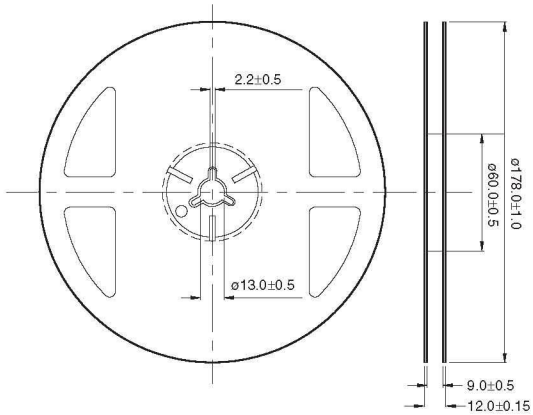


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TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm



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