

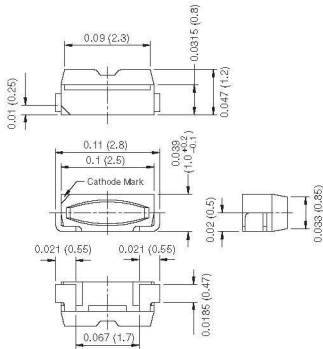


SURFACE MOUNT LED LAMP SUPER BRIGHT RIGHT ANGLE LED

FOL215WTR_7904D

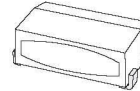
White

PACKAGE DIMENSIONS



NOTE:

Dimensions of all drawings are in inches (mm).
Tolerance = $\pm 0.1\text{mm}$



APPLICATIONS

- Keypad Backlighting
- LCD Backlighting
- Push Button Backlighting
- Digital Camera Backlighting

DESCRIPTION

This right angle surface mount chip LED emits light in the lateral direction. Miniature size and wide viewing angle makes this LED an ideal choice for edge-lighting LCD displays.

FEATURES

- InGaN/Sapphire technology
- Dimension – 2.8(L) x 1.0(W) x 1.2(H) mm
- Wide viewing angle of 110°
- Moisture-proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel



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

| Parameter | Symbol | FOL215W | Units |
|--|-----------|---------------|------------------|
| Continuous Forward Current | I_F | 25 | mA |
| Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10) | I_{FM} | 100 | mA |
| Reverse Voltage | V_R | 5 | V |
| Power Dissipation | P_D | 110 | mW |
| Operating Temperature | T_{OPR} | -40 to +85 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -40 to +100 | $^\circ\text{C}$ |
| Lead Soldering Time | T_{SQL} | 260 for 5 sec | $^\circ\text{C}$ |

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

| Part Number | Symbol | FOL215W | Condition |
|-------------------------------|----------------------------|--|--------------------|
| Luminous Intensity (mcd) | I_v | 360 – 500 | $I_F = \text{TBD}$ |
| Bin R | | 500 – 720 | |
| Bin S | | 720 – 1000 | |
| Bin T | | | |
| Forward Voltage (V) | V_F | 3.5 | $I_F = \text{TBD}$ |
| V_F Max | | | |
| Chromaticity Coordinate (Typ) | — | X = 0.264 – 0.361 Y = 0.248 – 0.385 | $I_F = \text{TBD}$ |
| Wavelength (nm) | λ_P λ_D | — | $I_F = \text{TBD}$ |
| Peak Dominant | | — | |
| Viewing Angle ($^\circ$) | $2\Theta_{1/2}$ | 110 | $I_F = \text{TBD}$ |

Luminous Intensity tolerance = $\pm 15\%$

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 |

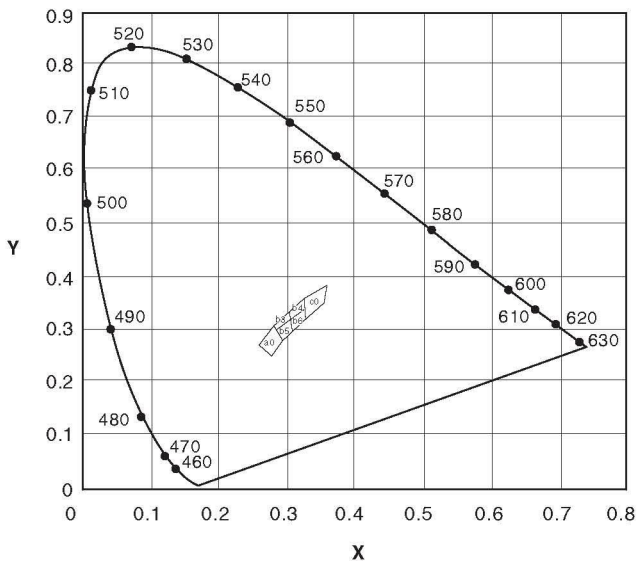
| | Bin b3 | | | |
|---|--------|-------|-------|-------|
| x | 0.307 | 0.287 | 0.304 | 0.283 |
| y | 0.315 | 0.295 | 0.330 | 0.305 |

| | 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

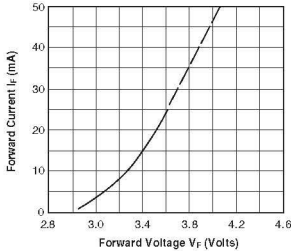


Fig. 2 Luminous Intensity vs. Forward Current

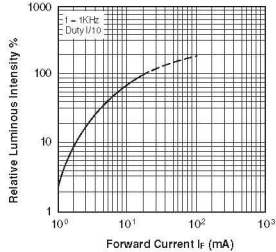


Fig. 3 Relative Intensity vs. Peak Wavelength

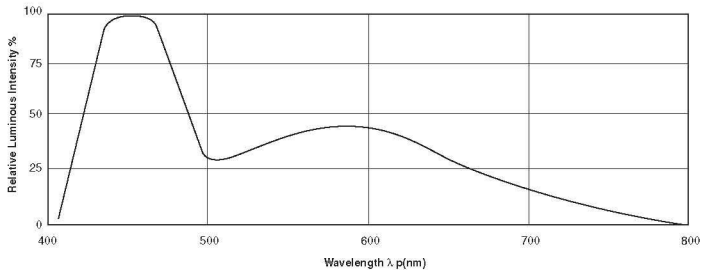


Fig. 4 Radiation Diagram

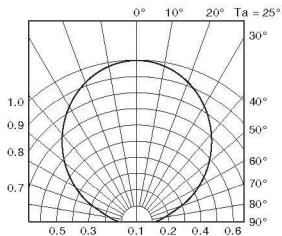
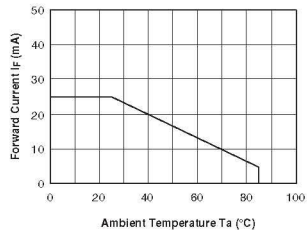


Fig. 5 Maximum Forward Current vs. Ambient Temperature



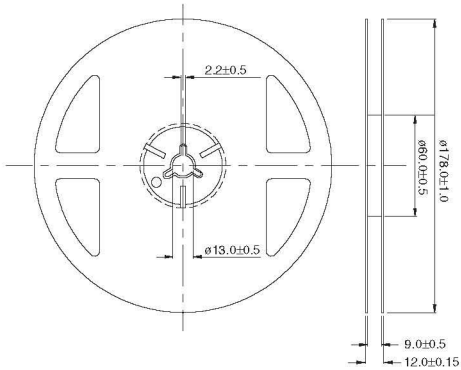


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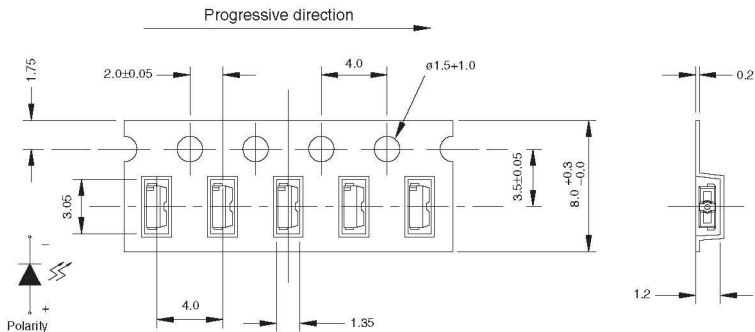
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TAPE AND REEL DIMENSIONS



Note: The tolerances unless mentioned is ± 0.1 mm, Angle $\pm 0.5^\circ$, Unit = mm



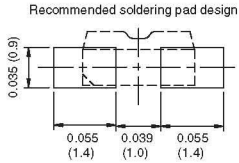


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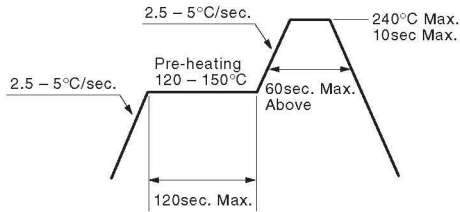
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

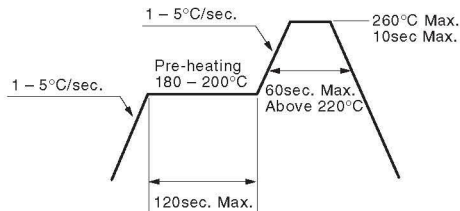


RECOMMENDED REFLOW SOLDERING PROFILE

Lead Solder



Lead Free Solder





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