



**THE DATASHEET OF
QTLP611CEBTR**



QTL611CEB Low V_F Blue Surface Mount LED Lamp, Compact Right Angle

Features

- Miniature footprint – 2.1(L) X 1.0(W) X 0.6(H) mm
- Wide viewing angle of 130°
- Water clear optics
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

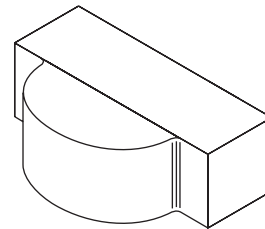
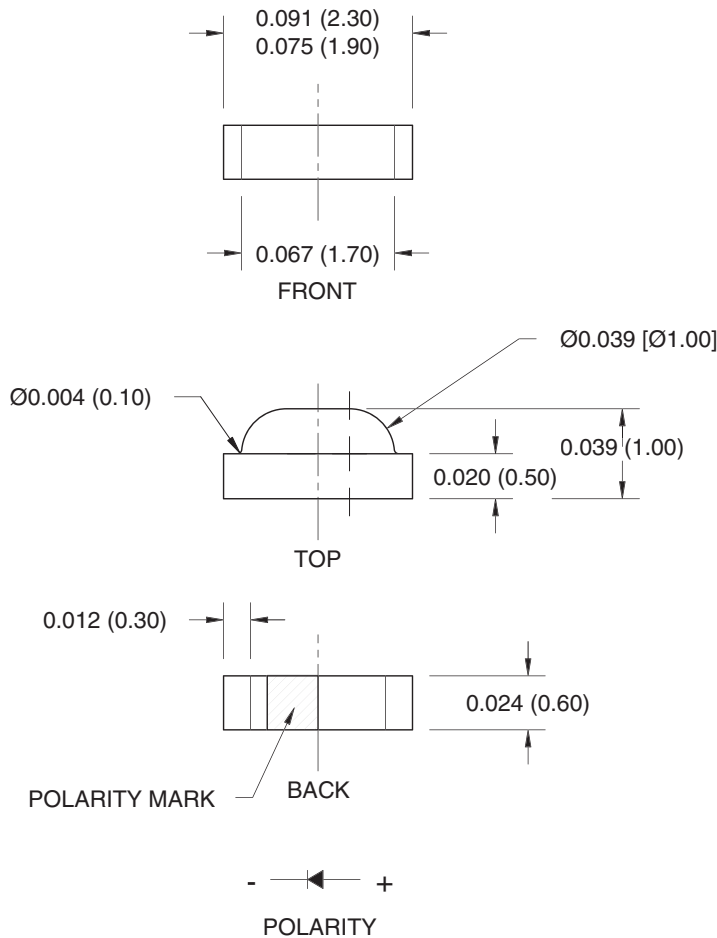
Description

This compact right angle surface mount chip LED emits light in the lateral direction. Miniature size and wide viewing angle make this LED an ideal choice for edge-lighting LCD displays. This device utilizes an InGaN/Sapphire blue LED.

Applications

- LCD edge-lighting
- Edge card lighting

Package Dimensions



Note:

Dimensions for all drawings are in inches (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 +90 | $^\circ\text{C}$ |
| Lead Soldering Time | T_{SOL} | 260 for 5 sec | $^\circ\text{C}$ |
| Continuous Forward Current | I_F | 30 | mA |
| Peak Forward Current ($f = 1.0\text{ KHz}$, Duty Factor = 1/10) | I_{FM} | 100 | mA |
| Reverse Voltage | V_R | 5 | V |
| Power Dissipation | P_D | 80 | mW |

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

| Part Number | QTLP611CEB | Condition |
|-------------------------------|-------------|--------------------|
| Luminous Intensity (mcd) | | |
| Bin I2 | 8 – 16 | $I_F = 5\text{mA}$ |
| Bin I3 | 13 – 26 | |
| Forward Voltage (V) | | |
| Bin V1 | 2.75 – 2.95 | $I_F = 5\text{mA}$ |
| Bin V2 | 2.95 – 3.15 | |
| Dominant Wavelength (nm) | | |
| Bin W2 | 470 – 475 | $I_F = 5\text{mA}$ |
| Bin W3 | 475 – 480 | |
| Spectral Line Half Width (nm) | 35 | $I_F = 5\text{mA}$ |
| Viewing Angle ($^\circ$) | 130 | $I_F = 5\text{mA}$ |

Typical Performance Curves

Fig. 1 Forward Current vs. Forward Voltage

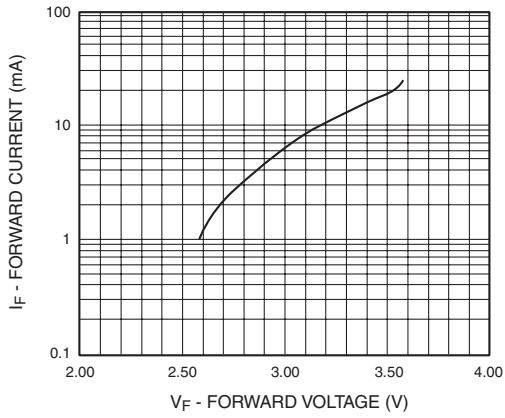


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

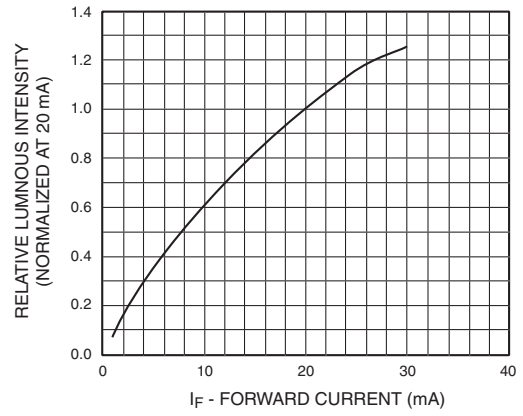


Fig. 3 Relative Intensity vs. Peak Wavelength

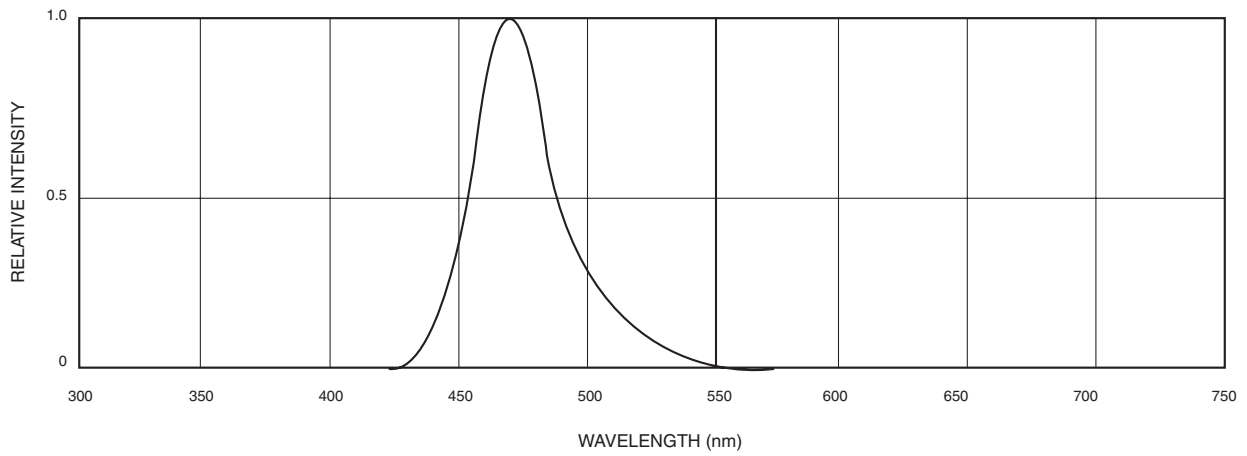


Fig.4 Radiation Diagram

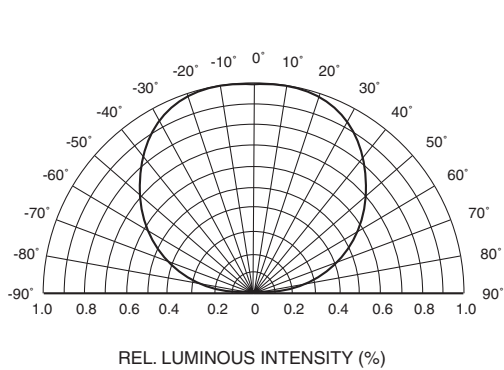
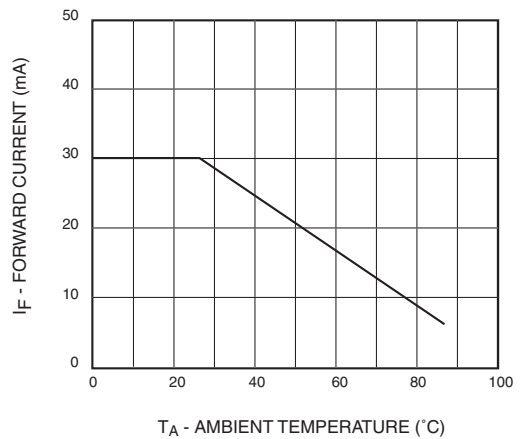
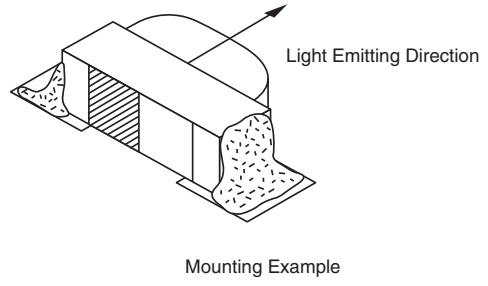
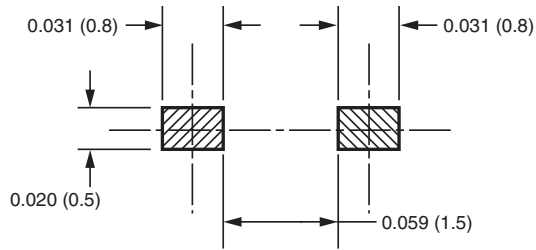


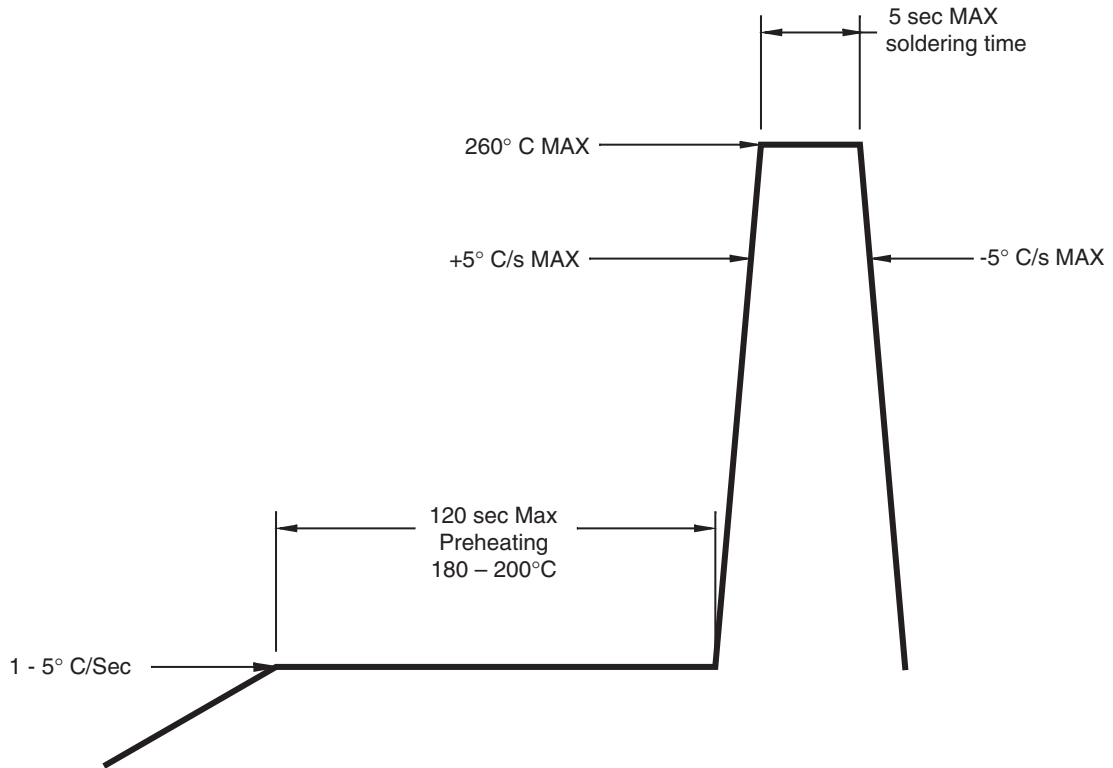
Fig.5 Maximum Forward Current vs. Ambient Temperature



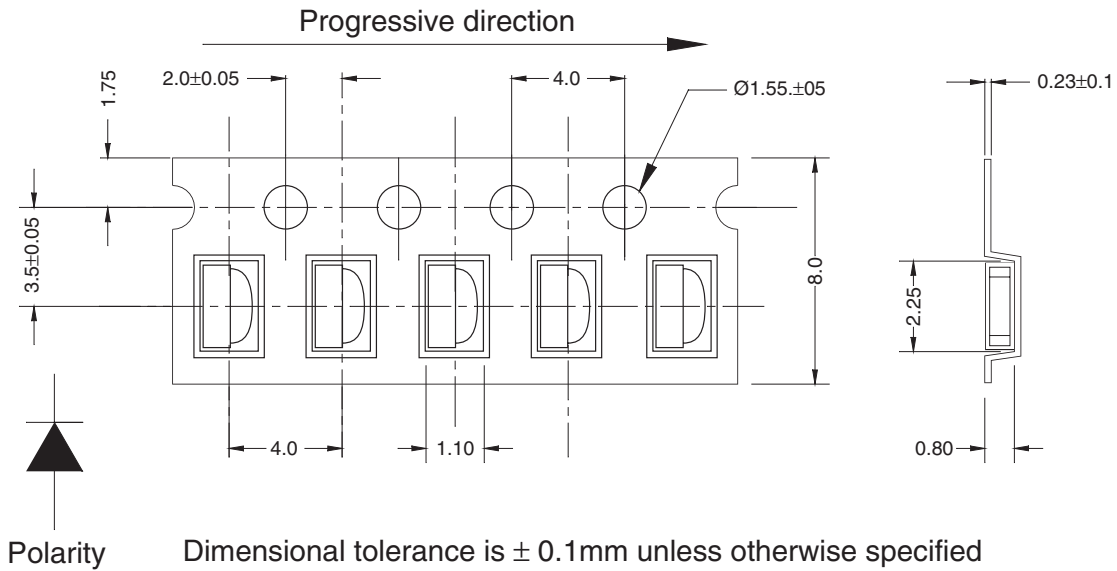
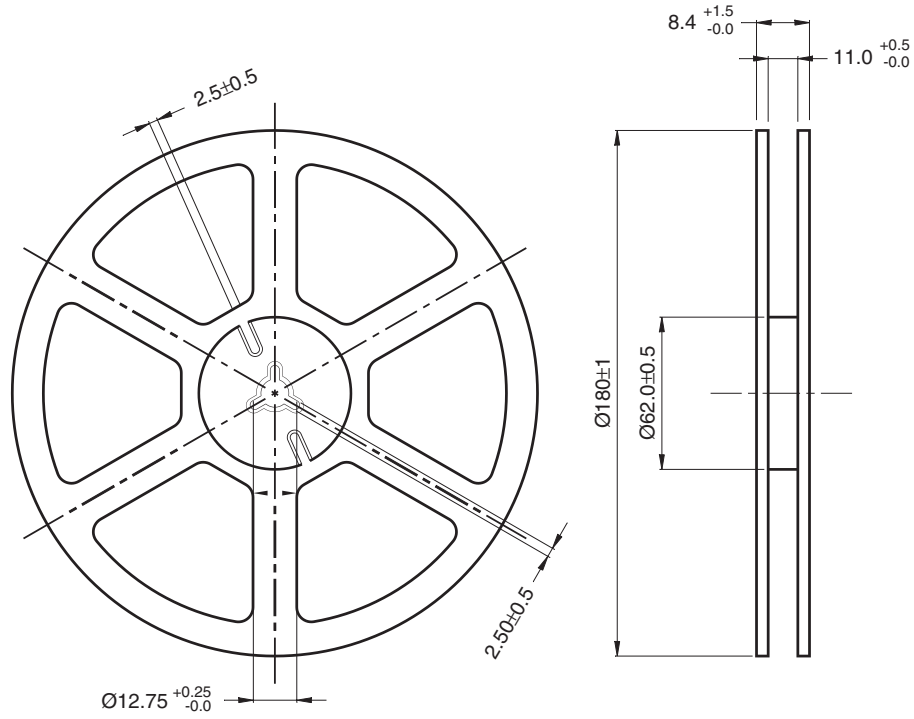
Recommended Printed Circuit Board Pattern



Recommended IR Reflow Soldering Profile



TAPE AND REEL DIMENSIONS



Polarity

Dimensional tolerance is $\pm 0.1\text{mm}$ unless otherwise specified

Angle: ± 0.5

Unit: mm

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|--------------------------|------------------------|---|
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