

## 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

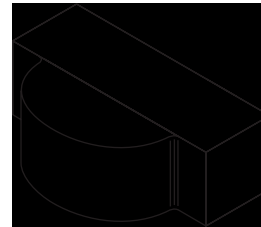
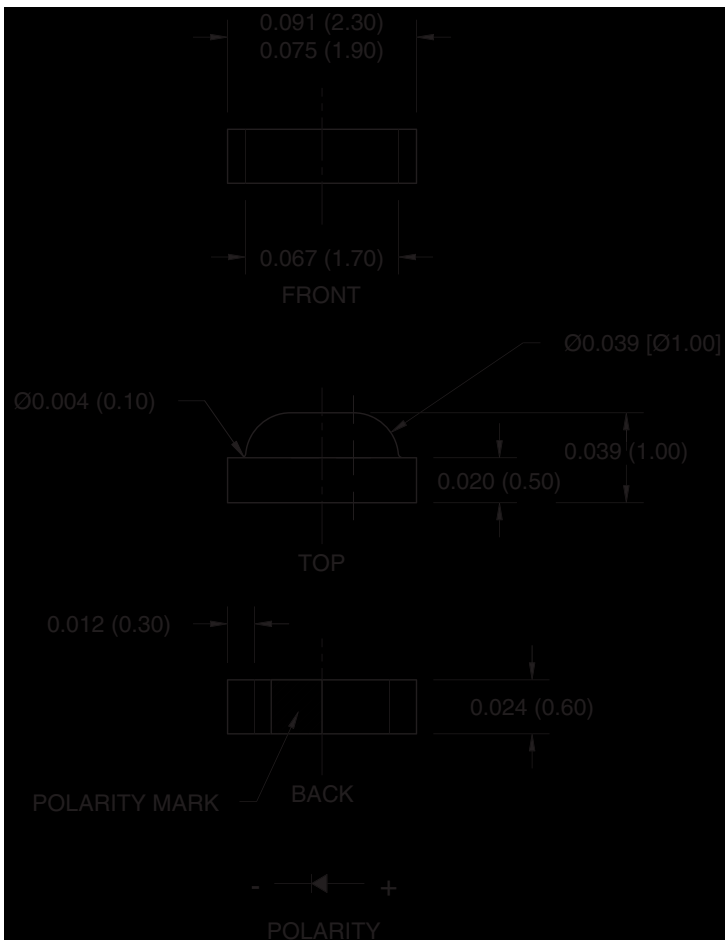
### Applications

- LCD edge-lighting
- Edge card lighting

### 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.

### Package Dimensions



#### Note:

Dimensions for all drawings are in inches (mm).

**Absolute Maximum Ratings** ( $T_A = 25^\circ\text{C}$  Unless otherwise specified)

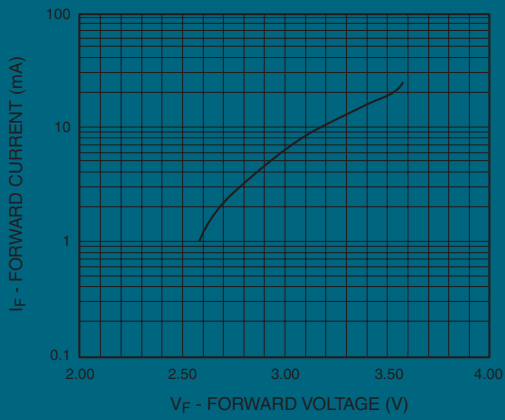
| Parameter   | Symbol    | Rating        | Unit             |
|---|-----------|---------------|------------------|
| Operating Temperature   | $T_{OPR}$ | -40 to +85    | $^\circ\text{C}$ |
| Storage Temperature   | $T_{STG}$ | -40 to +90    | $^\circ\text{C}$ |
| Lead Soldering Time   | $T_{SOL}$ | 260 for 5 sec | $^\circ\text{C}$ |
| Continuous Forward Current  | $I_F$     | 30            | mA               |
| Peak Forward Current<br>( $f = 1.0 \text{ KHz}$ , Duty Factor = 1/10) | $I_{FM}$  | 100           | mA               |
| Reverse Voltage   | $V_R$     | 5             | V                |
| Power Dissipation   | $P_D$     | 80            | mW               |

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

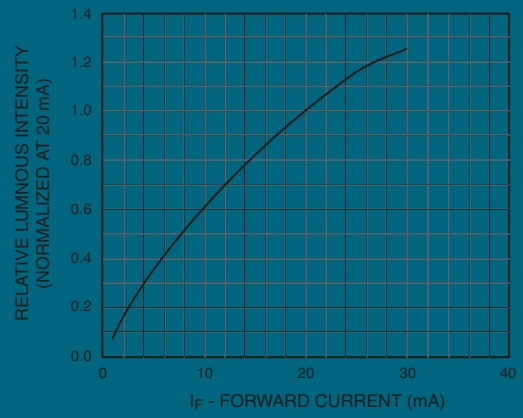
| Part Number                   | QTLP611CEB  | Condition          |
|-------------------------------|-------------|--------------------|
| Luminous Intensity (mcd)      |             |                    |
| Bin I2                        | 8 – 16      | $I_F = 5\text{mA}$ |
| Bin I3                        | 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

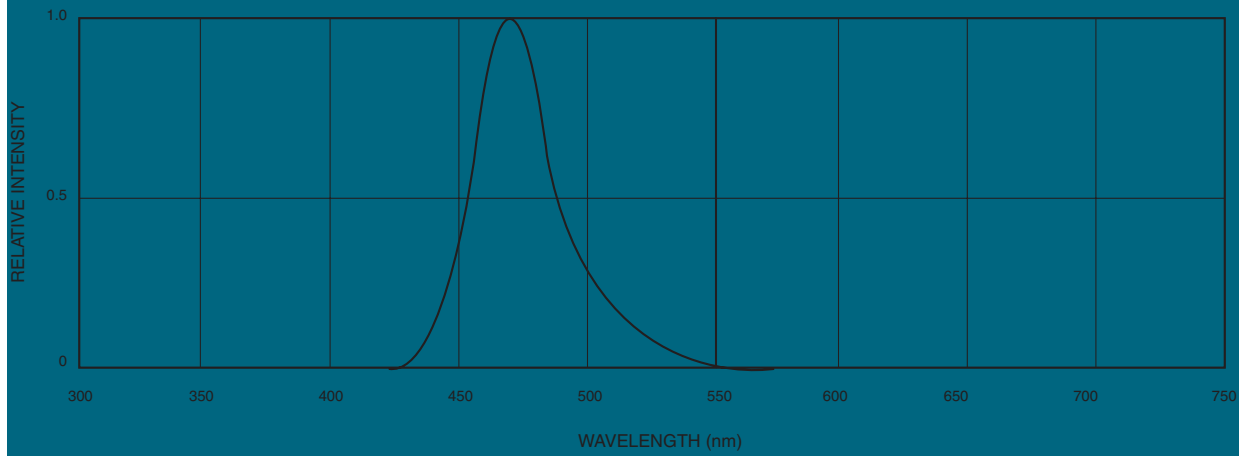
**Fig. 1 Forward Current vs. Forward Voltage**



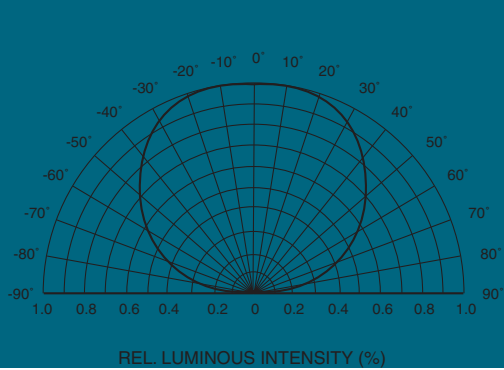
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



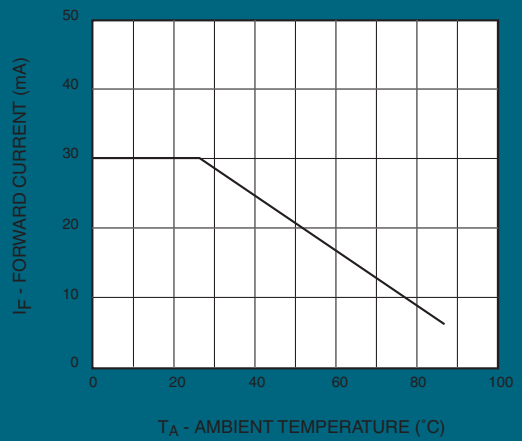
**Fig. 3 Relative Intensity vs. Peak Wavelength**



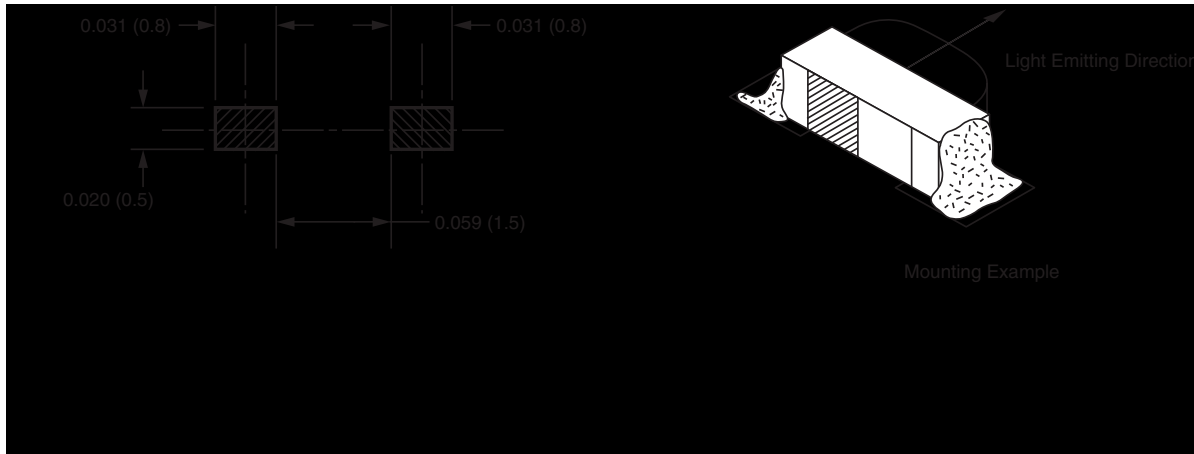
**Fig.4 Radiation Diagram**



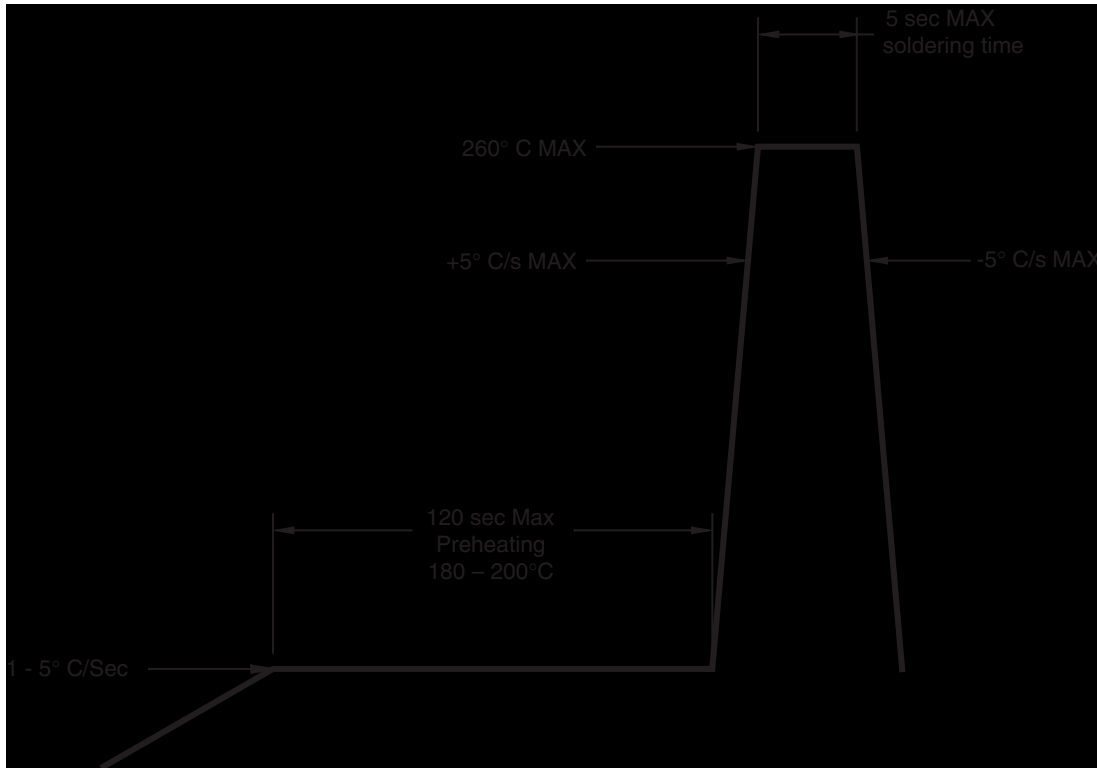
**Fig.5 Maximum Forward Current vs. Ambient Temperature**



### Recommended Printed Circuit Board Pattern



### Recommended IR Reflow Soldering Profile



TAPE AND REEL DIMENSIONS

