

# 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

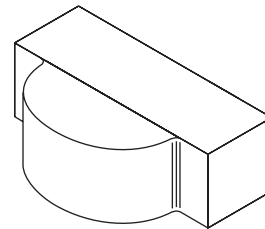
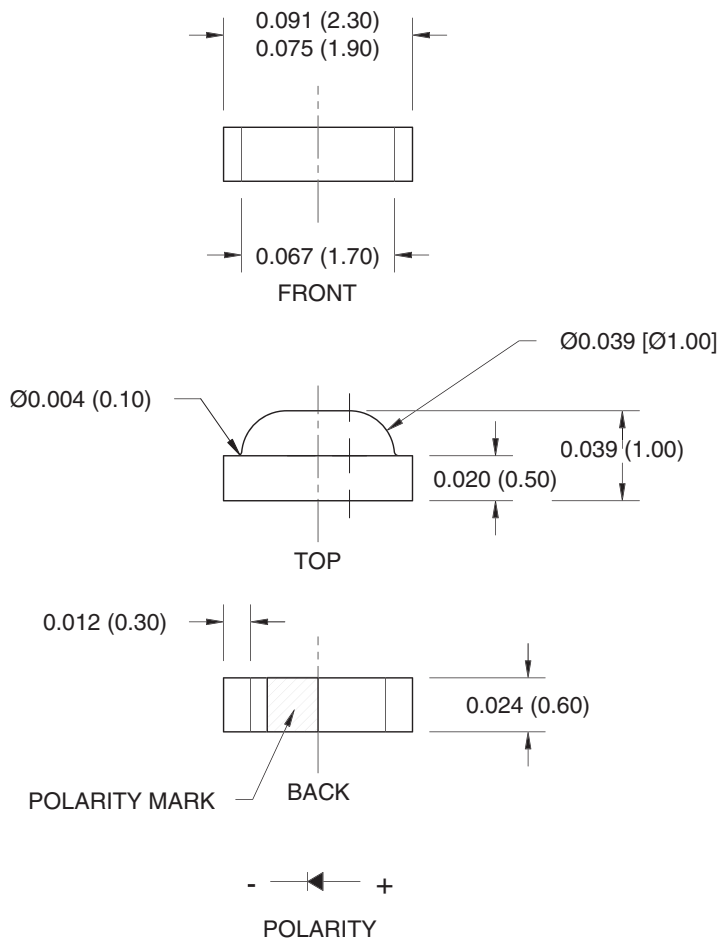
## Description

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)

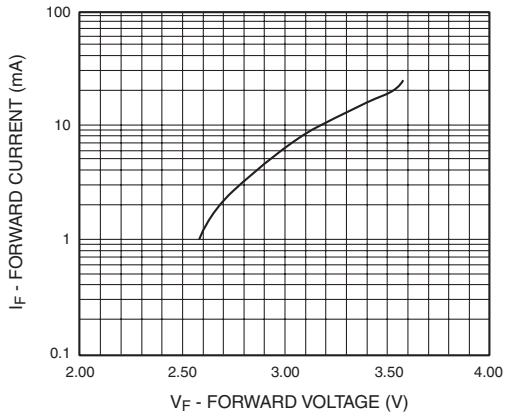
Parameter	Symbol	Rating	Unit
Operating Temperature	$T_{OPR}$	-40 to +85	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 to +90	$^\circ\text{C}$
Lead Soldering Time	$T_{SOL}$	260 for 5 sec	$^\circ\text{C}$
Continuous Forward Current	$I_F$	30	mA
Peak Forward Current ( $f = 1.0$ KHz, Duty Factor = 1/10)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

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

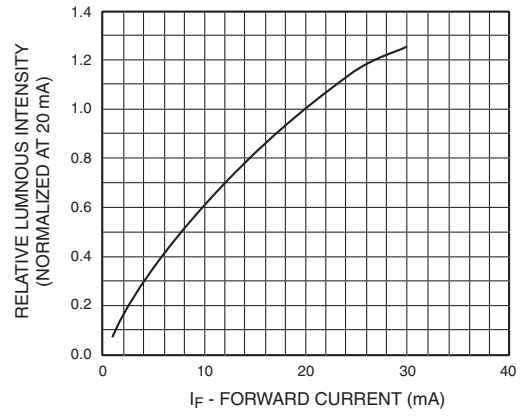
Part Number	QTLP611CEB	Condition
Luminous Intensity (mcd)		
Bin I2	8 – 16	$I_F = 5\text{mA}$
Bin I3	13 – 26	
Forward Voltage (V)		
Bin V1	2.75 – 2.95	$I_F = 5\text{mA}$
Bin V2	2.95 – 3.15	
Dominant Wavelength (nm)		
Bin W2	470 – 475	$I_F = 5\text{mA}$
Bin W3	475 – 480	
Spectral Line Half Width (nm)	35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

## Typical Performance Curves

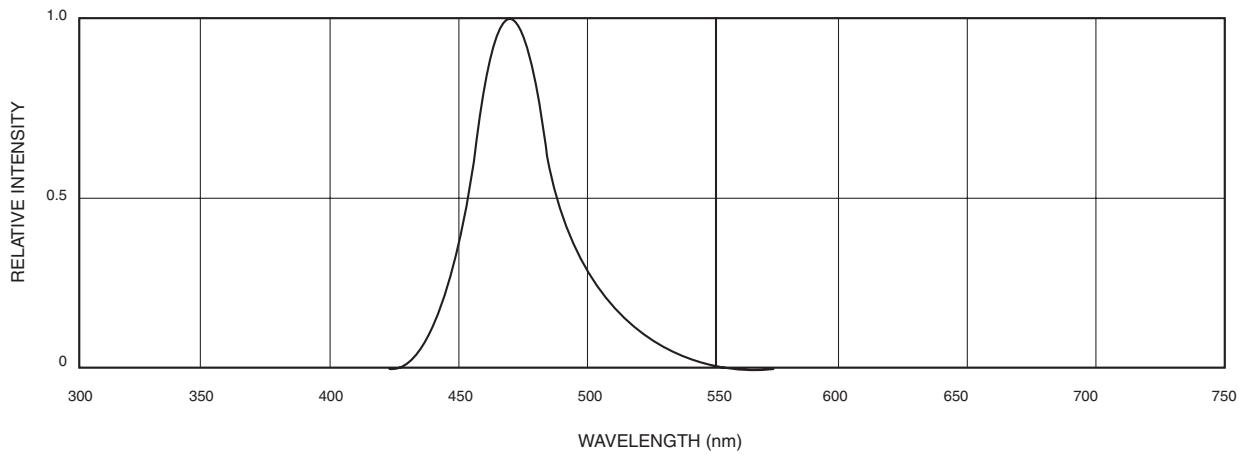
**Fig. 1 Forward Current vs. Forward Voltage**



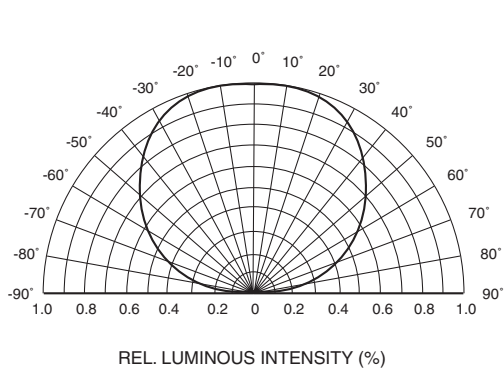
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



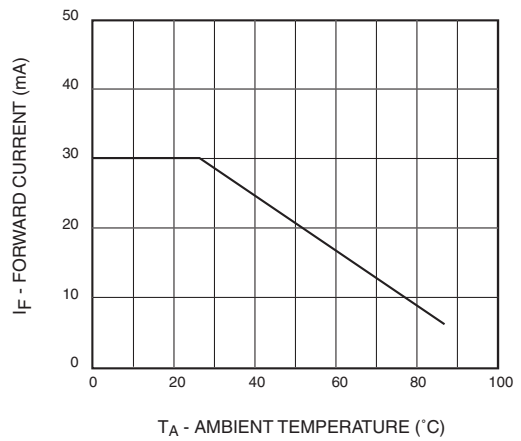
**Fig. 3 Relative Intensity vs. Peak Wavelength**



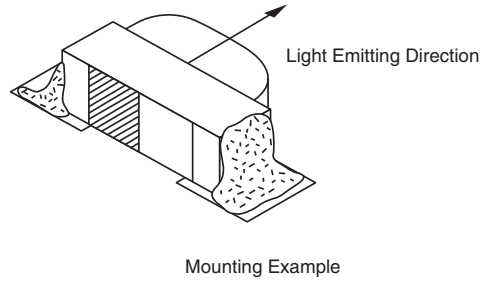
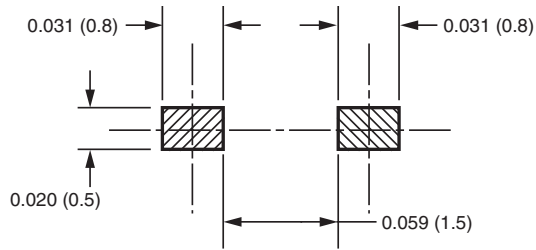
**Fig.4 Radiation Diagram**



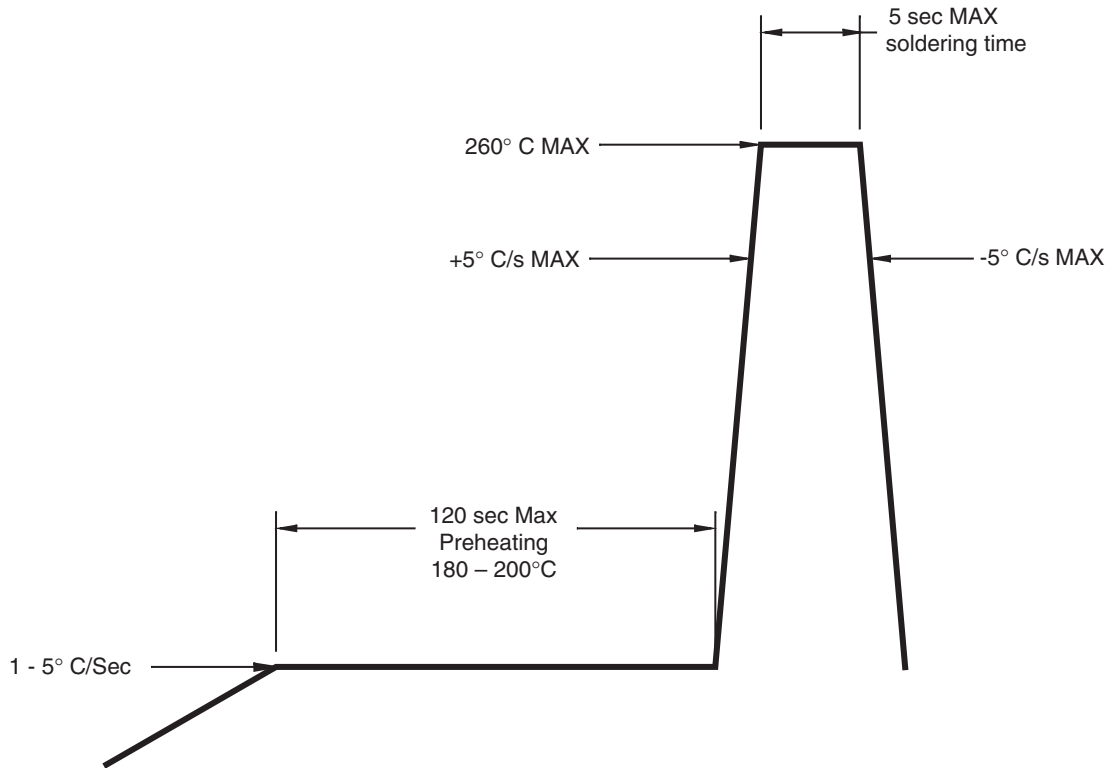
**Fig.5 Maximum Forward Current vs. Ambient Temperature**



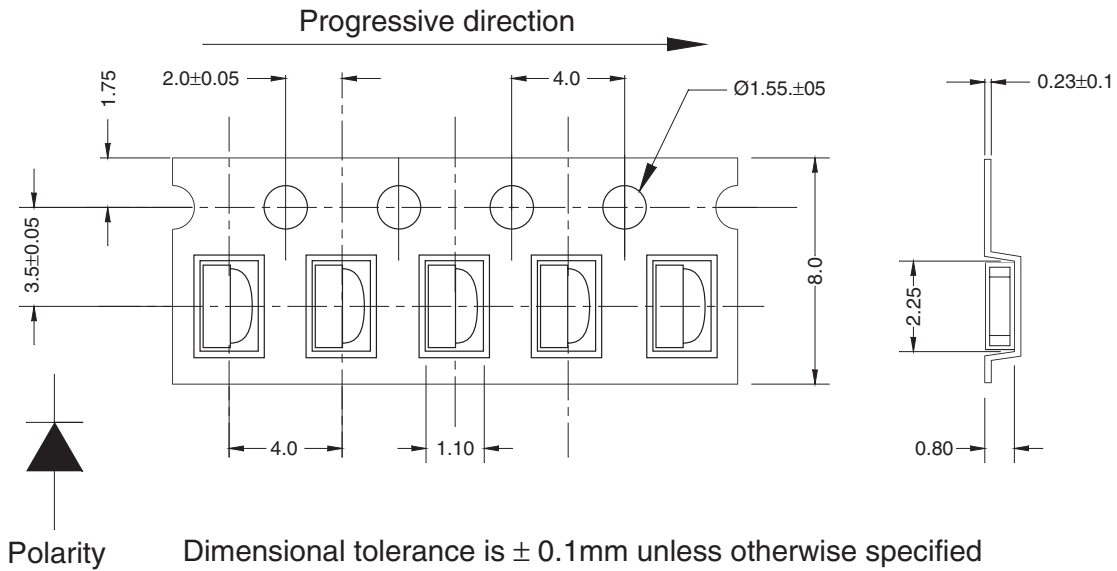
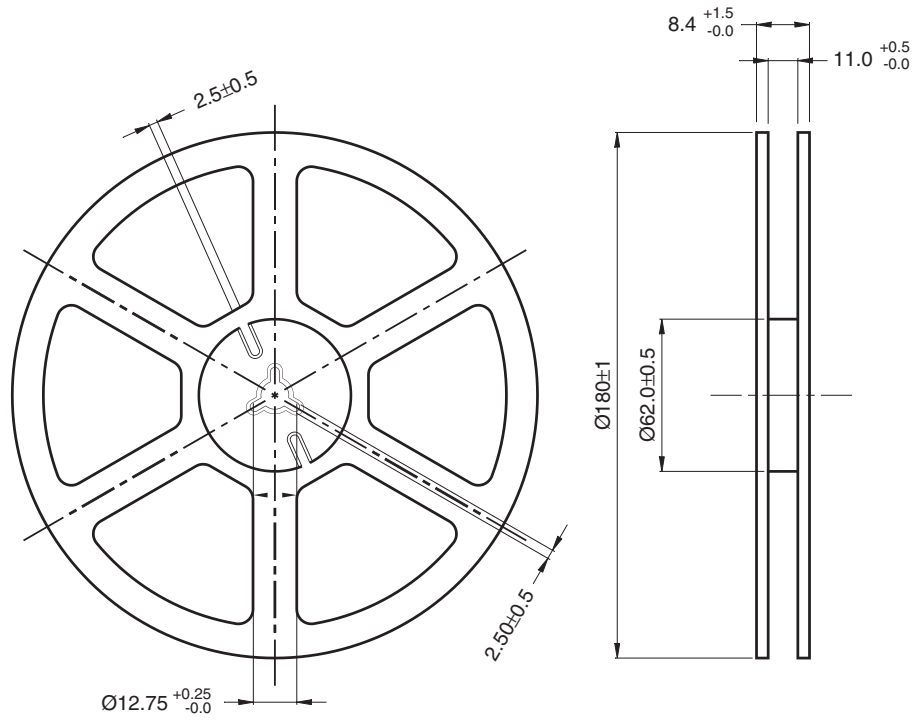
### Recommended Printed Circuit Board Pattern



### Recommended IR Reflow Soldering Profile



**TAPE AND REEL DIMENSIONS**



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

Angle:  $\pm 0.5$

Unit: mm

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