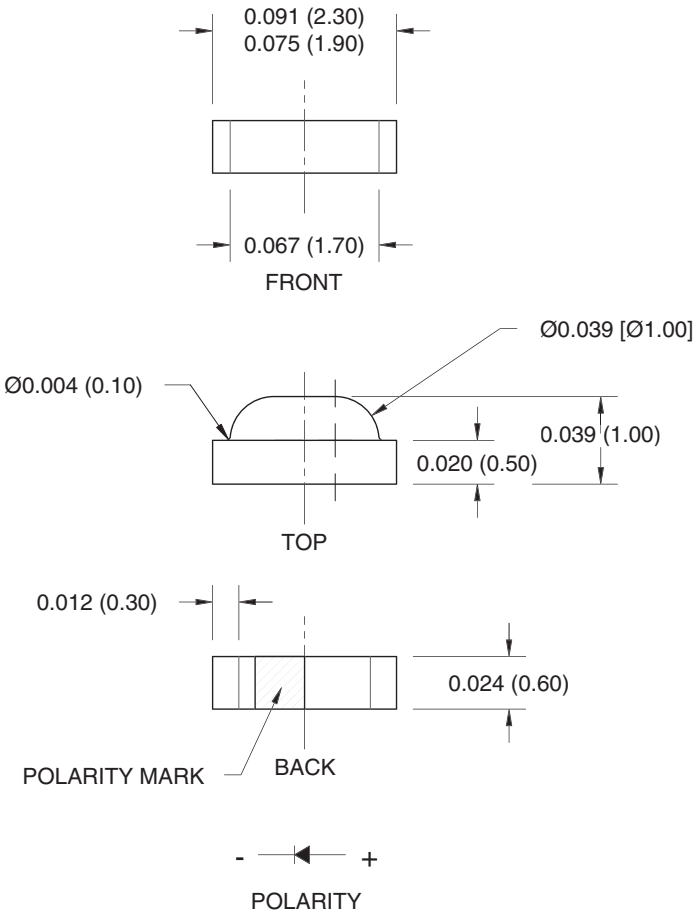
FAIRCHILD
SEMICONDUCTOR®

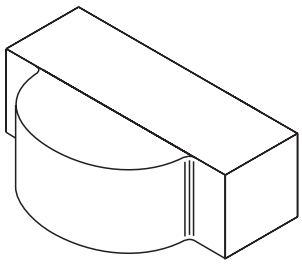
SURFACE MOUNT LED LAMP
COMPACT RIGHT ANGLE

Low V_F Blue **QTLP611C-EB**

PACKAGE DIMENSIONS



NOTE:
Dimensions for all drawings are in inches (mm).



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.

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

ABSOLUTE MAXIMUM RATINGS (T_A =25°C Unless otherwise specified)			
Parameter	**Symbol**	**Rating**	**Unit**
Operating Temperature	T_{OPR}	-40 to +85	°C
Storage Temperature	T_{STG}	-40 to +90	°C
Lead Soldering Time	T_{SOL}	260 for 5 sec	°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°C)		
Part Number	**QTLP611C-EB.7773D**	**Condition**
Luminous Intensity (mcd) Bin I2 Bin I3	 8 - 16 13 - 26	I_F = 5mA
Forward Voltage (V) Bin V1 Bin V2	 2.75 - 2.95 2.95 - 3.15	I_F = 5mA
Dominant Wavelength (nm) Bin W2 Bin W3	 470 - 475 475 - 480	I_F = 5mA
Spectral Line Half Width (nm)	35	IF = 5mA
Viewing Angle (°)	130	IF = 5mA

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

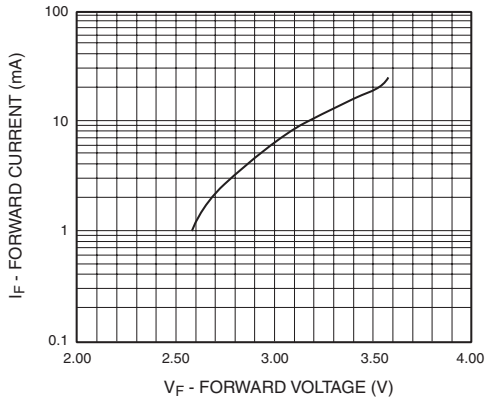


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

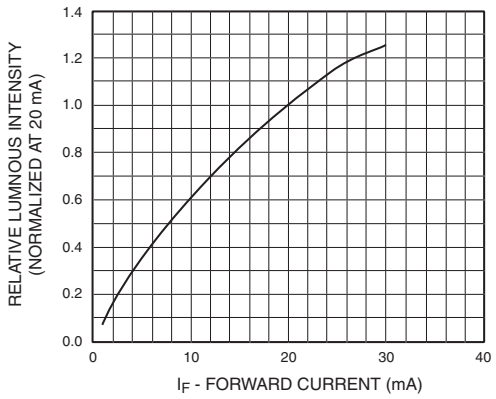


Fig. 3 Relative Intensity vs. Peak Wavelength

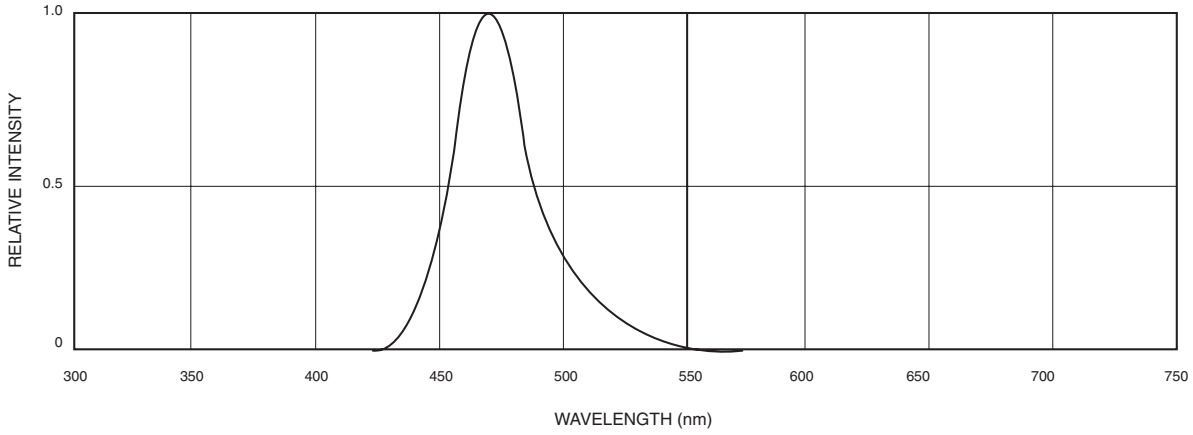


Fig.4 Radiation Diagram

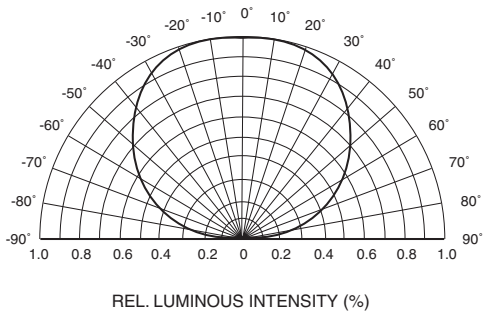
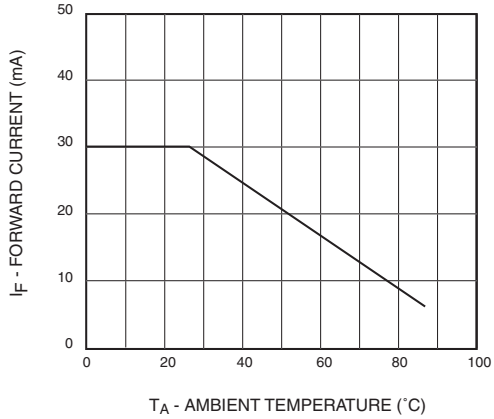
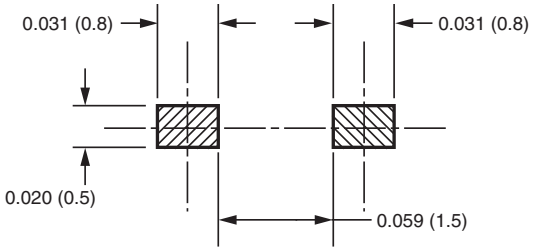
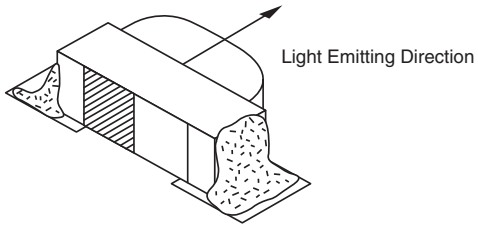


Fig.5 Maximum Forward Current vs. Ambient Temperature



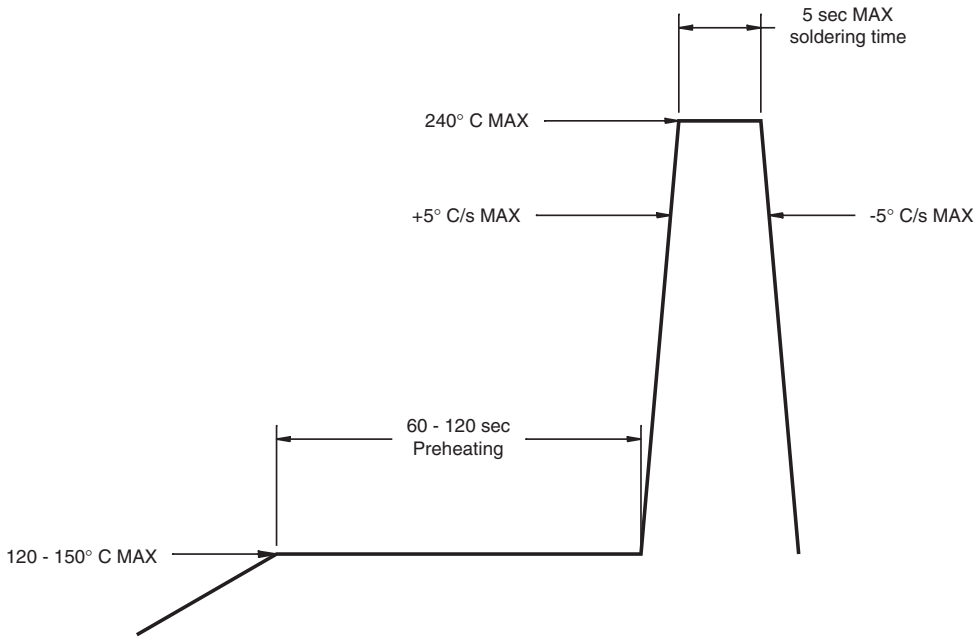
RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



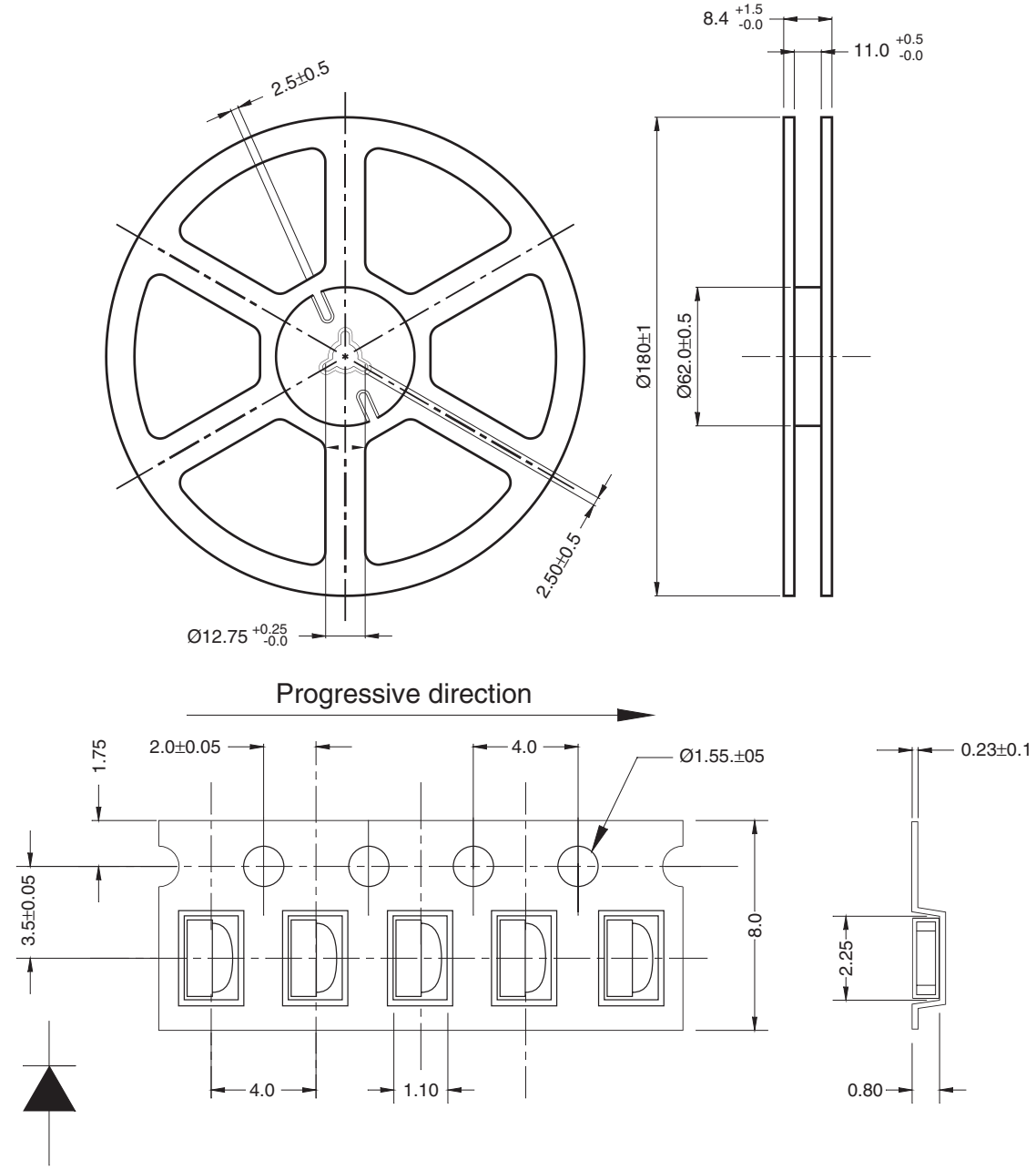


Mounting Example

RECOMMENDED IR REFLOW SOLDERING PROFILE



TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1mm unless otherwise specified

Angle: ± 0.5

Unit: mm

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.