

FAIRCHILD
SEMICONDUCTOR®

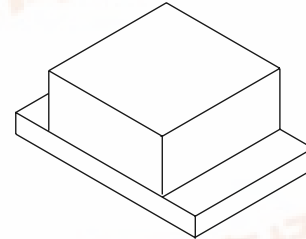
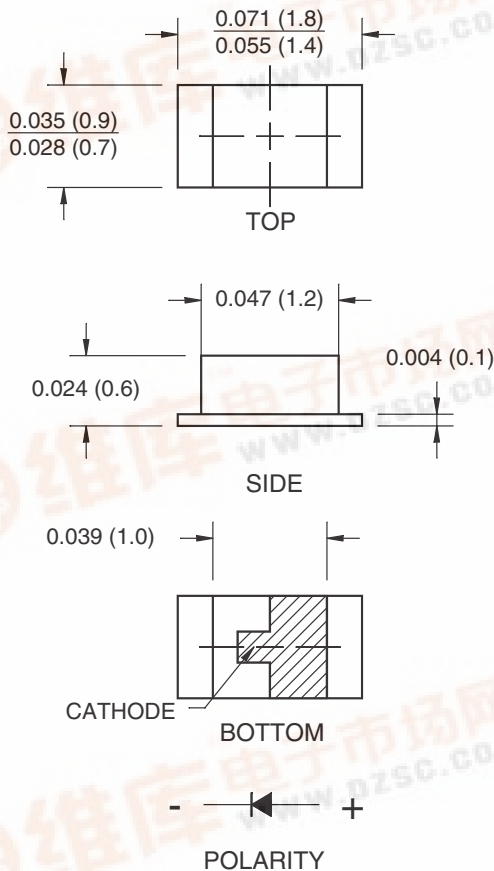
SURFACE MOUNT LED LAMP

0603 (0.6 mm Height)

Low V_F Blue

QTLP601C-EB

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).

APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

DESCRIPTION

This surface mount chip LED is designed to fit industry standard footprint. Small size, low profile and wide viewing angle make this LED an ideal choice for backlighting applications and panel illumination. This device utilizes an InGaN/Sapphire blue LED.

FEATURES

- Miniature footprint - 1.6(L) X 0.8(W) X 0.6(H) mm
- Wide viewing angle of 100°
- Water clear optics
- Moisture proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel



Low V_F Blue

QTLP601C-EB

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	QTLP601CEB.7778D	Condition
Luminous Intensity (mcd)		
Bin I1	8 - 16	$I_F = 5\text{ mA}$
Bin I2	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 W1	465 - 470	$I_F = 5\text{ mA}$
Bin W2	470 - 475	
Bin W3	475 - 480	
Spectral Line Half Width (nm)	35	$I_F = 5\text{ mA}$
Viewing Angle ($^\circ$)	120	$I_F = 5\text{ mA}$

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

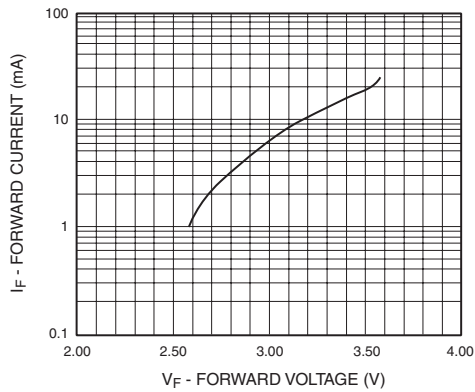


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

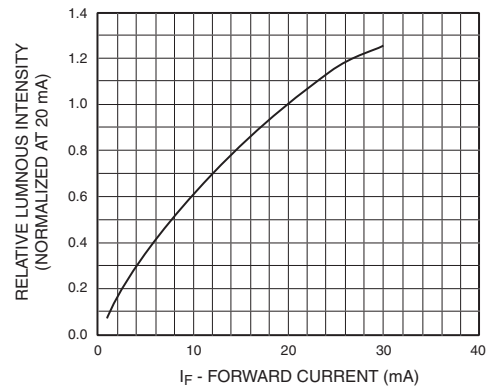


Fig. 3 Relative Intensity vs. Peak Wavelength

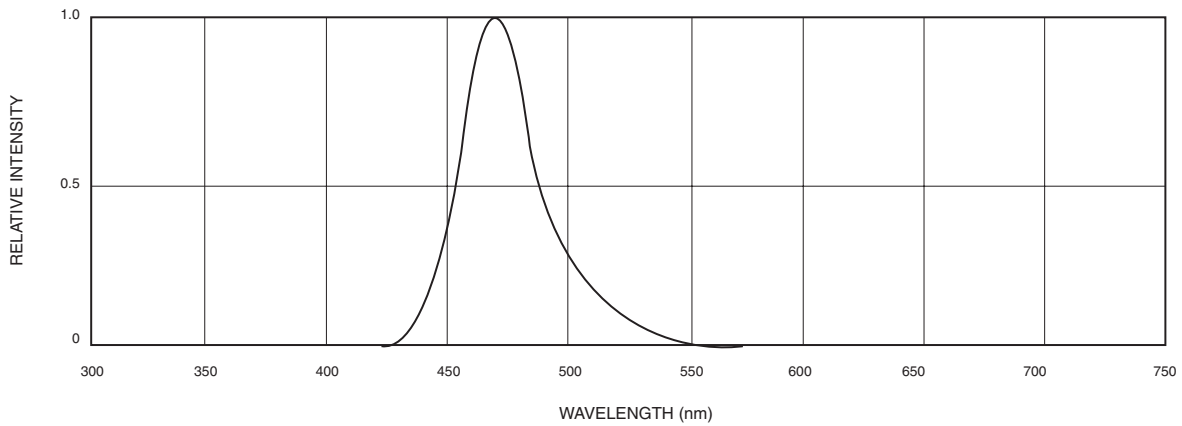


Fig. 4 Radiation Diagram

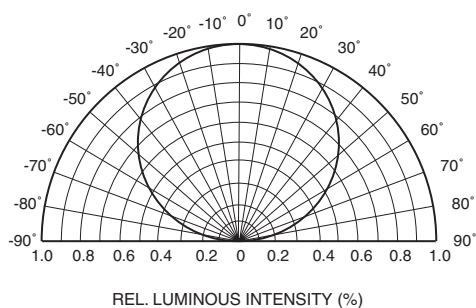
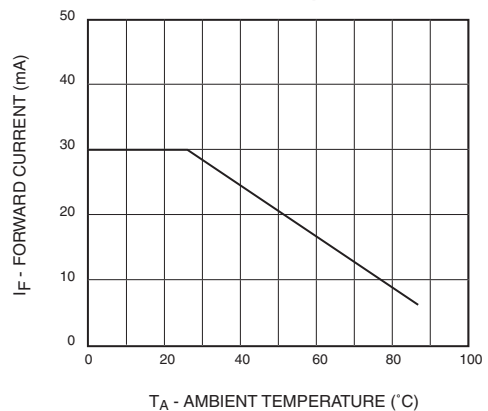


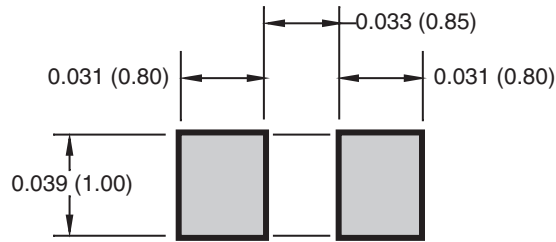
Fig. 5 Maximum Forward Current vs. Ambient Temperature



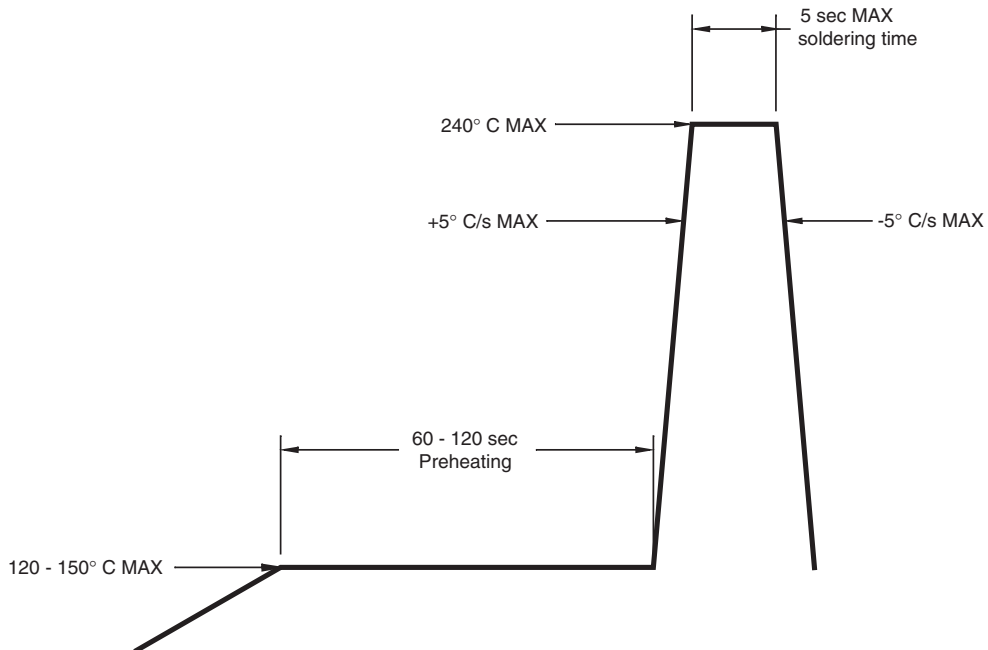
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



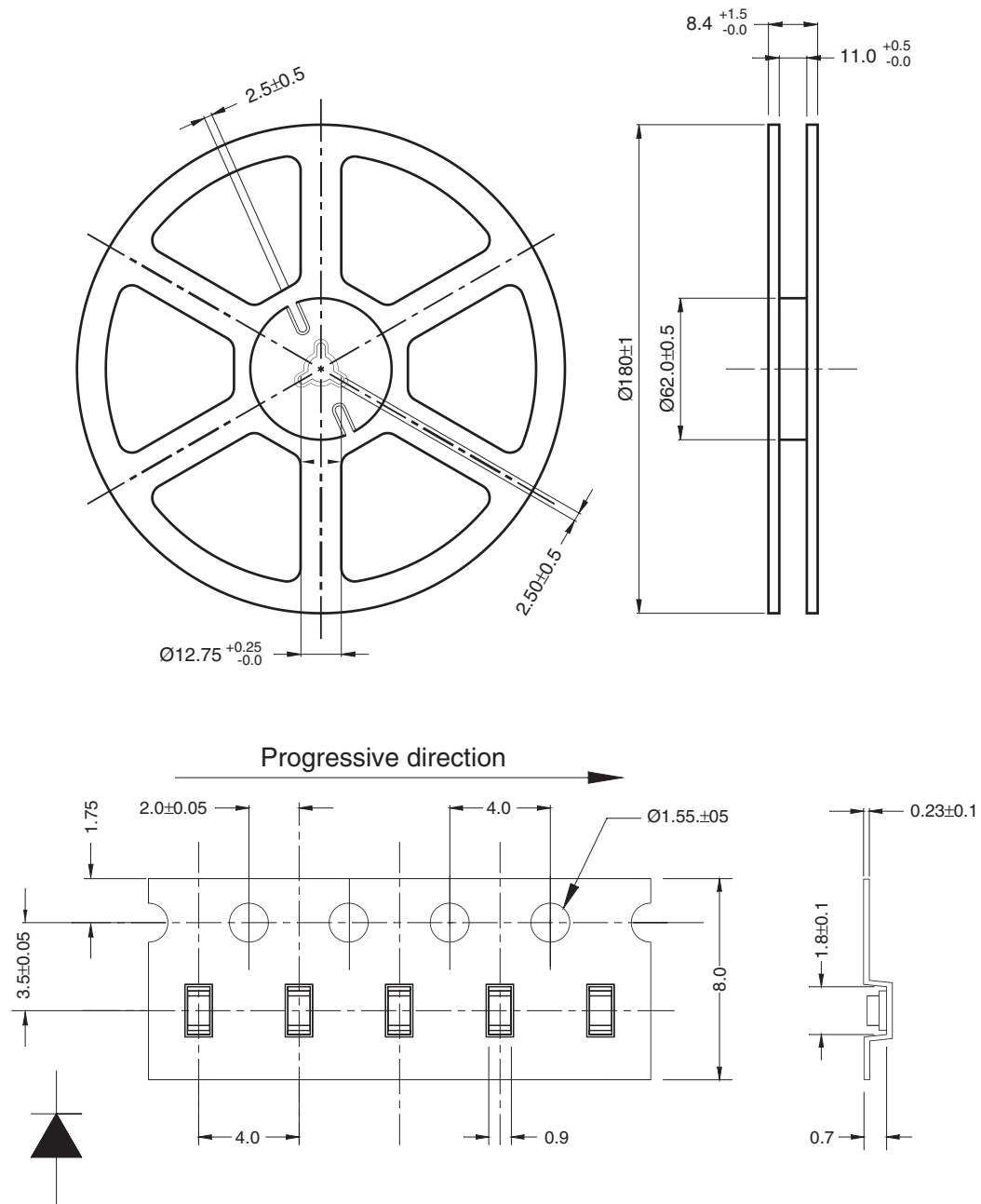
RECOMMENDED IR REFLOW SOLDERING PROFILE



Low V_F Blue

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TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

Polarity



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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.