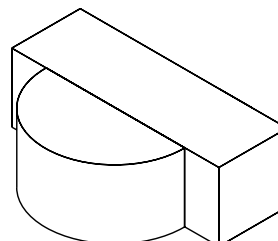
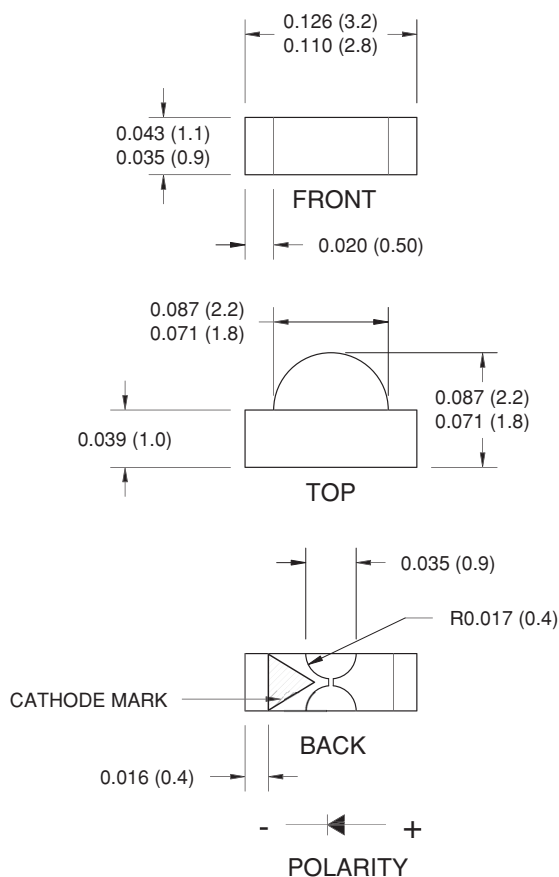


Low V_F Blue

QTL P610CEBTR

PACKAGE DIMENSIONS



APPLICATIONS

- LCD edge-lighting
- Edge card lighting

DESCRIPTION

This right angle surface mount chip LED emits light in the lateral direction. Small 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

- Small footprint - 3.0(L) X 2.0(W) X 1.0(H) mm
- Wide viewing angle of 120°
- Water clear optics
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

Low V_F Blue

QTLP610CEBTR

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	QTLP610CEBTR	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 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 ($^\circ$)	120	$I_F = 5\text{ mA}$
Reverse Current (μA)	50 max	$V_R = 5\text{ V}$

Tolerance: Luminous Intensity = $\pm 11\%$
 Forward Voltage = $\pm 0.1\text{ V}$
 Wavelength = $\pm 1\text{ nm}$

Low V_F Blue

QTLP610CEBTR

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

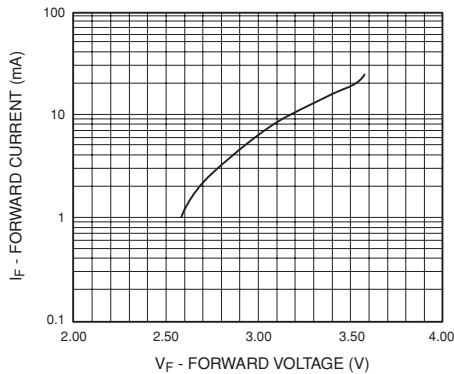


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

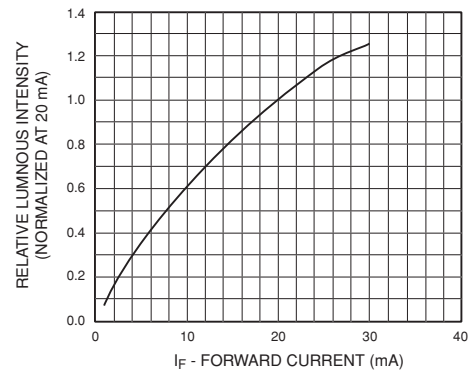


Fig. 3 Relative Intensity vs. Peak Wavelength

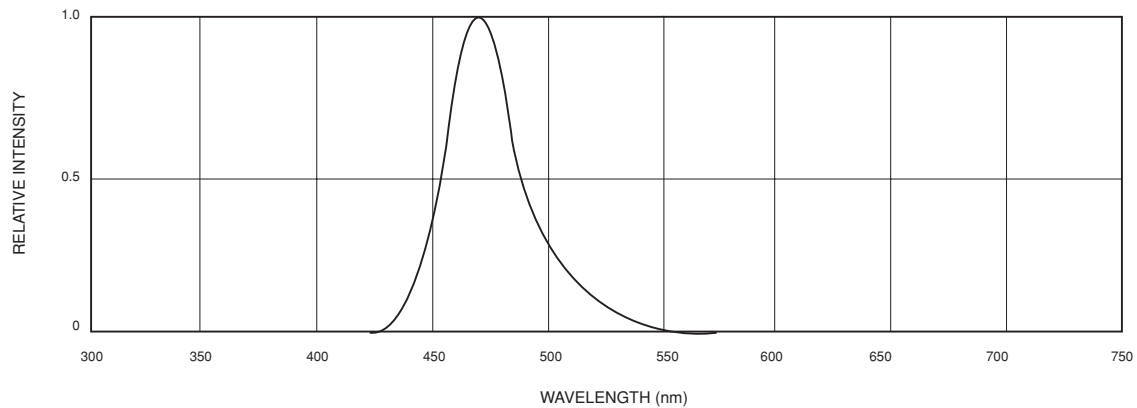


Fig.4 Radiation Diagram

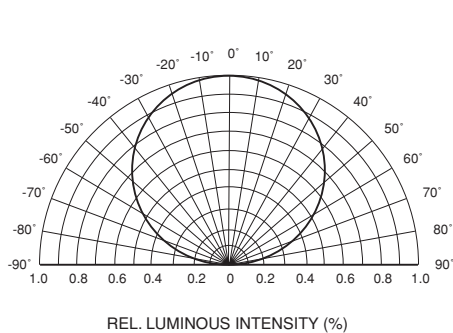
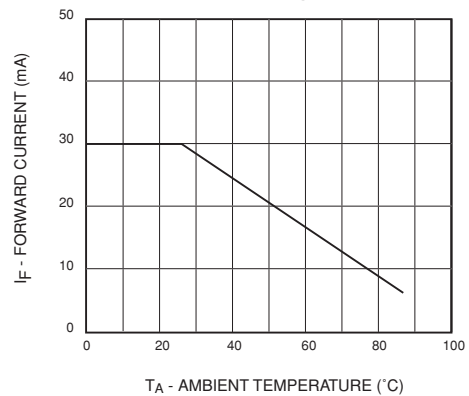


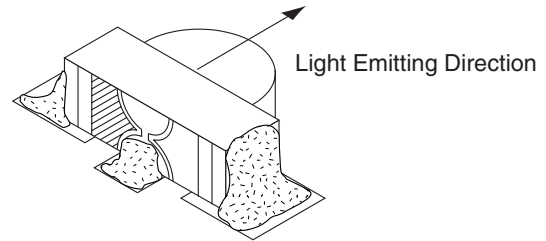
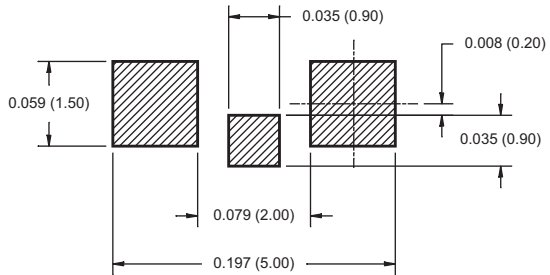
Fig.5 Maximum Forward Current vs. Ambient Temperature



Low V_F Blue

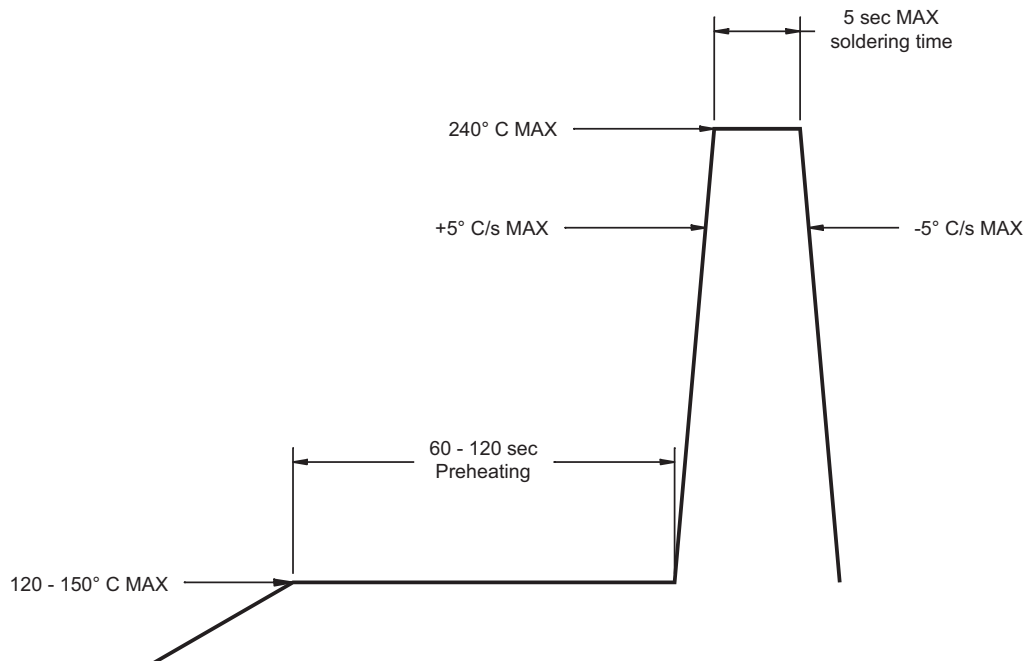
QTLP610CEBTR

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



Mounting Example

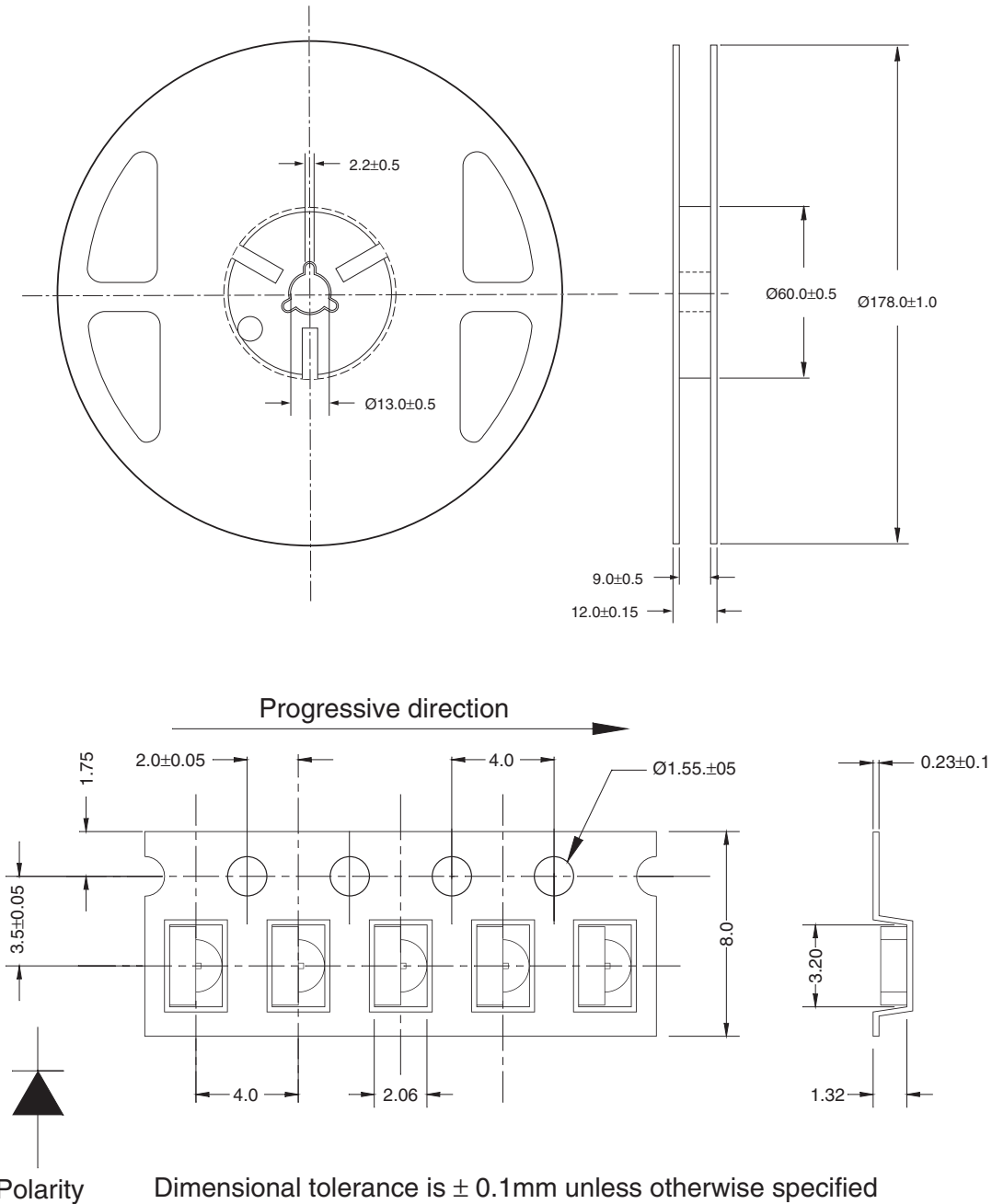
RECOMMENDED IR REFLOW SOLDERING PROFILE



Low V_F Blue

QTLP610CEBTR

TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

Low V_F Blue

QTLP610CEBTR

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