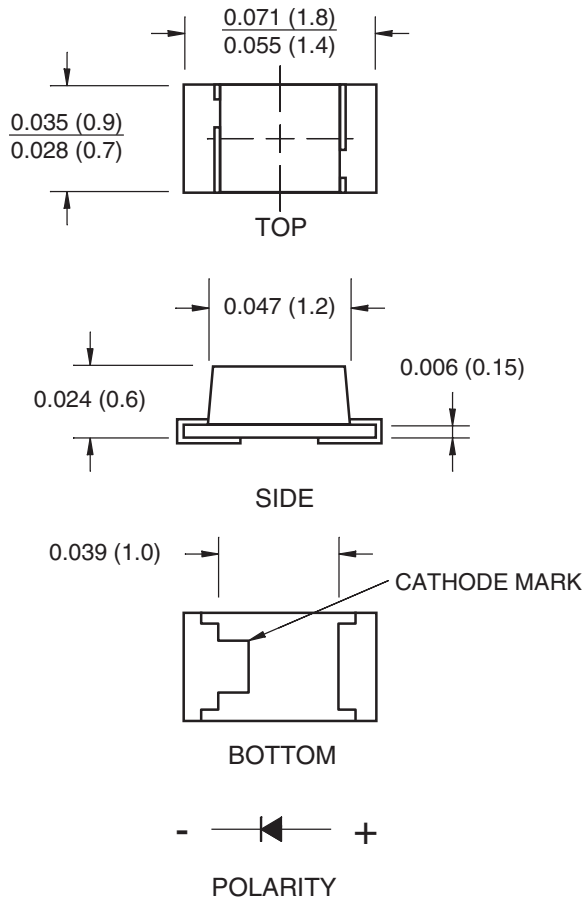


Low V_F Blue

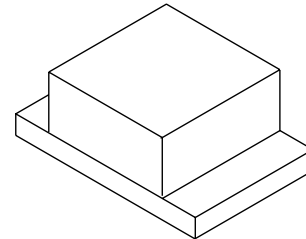
QTLP601CEBTR

PACKAGE DIMENSIONS



NOTE:

- Dimensions for all drawings are in inches (mm).
- Tolerance is ± 0.1 mm unless otherwise noted.



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 120°
- 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

QTLP601CEBTR

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	QTLP601CEBTR	Condition
Luminous Intensity (mcd)		
Bin I1	8 - 16	$I_F = 5 \text{ mA}$
Bin I2	13 - 26	
Forward Voltage (V)		
Bin V0	2.55 - 2.75	
Bin V1	2.75 - 2.95	
Bin V2	2.95 - 3.15	$I_F = 5 \text{ mA}$
Bin V3	3.15 - 3.35	
Bin V4	3.35 - 3.55	
Bin V5	3.55 - 3.75	
Dominant Wavelength (nm)		
Bin W1	465 - 470	$I_F = 5 \text{ mA}$
Bin W2	470 - 475	
Bin W3	475 - 480	
Reverse Current (I_R) max:	50 μA	$V_R = 5 \text{ V}$
Spectral Line Half Width (nm)	35	$I_F = 5 \text{ mA}$
Viewing Angle ($^\circ$)	120	$I_F = 5 \text{ mA}$

Measurement uncertainty of luminous intensity is $\pm 11\%$

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

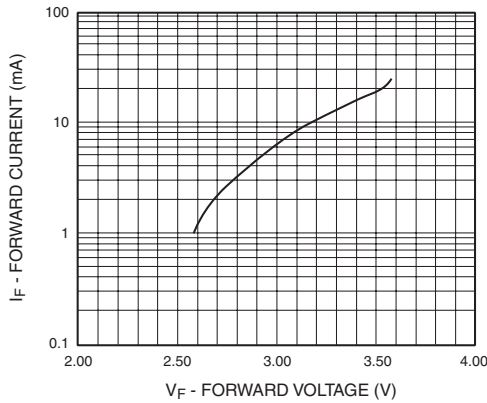


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

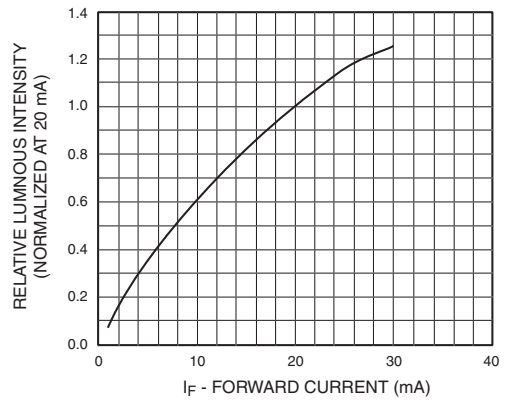


Fig. 3 Relative Intensity vs. Peak Wavelength

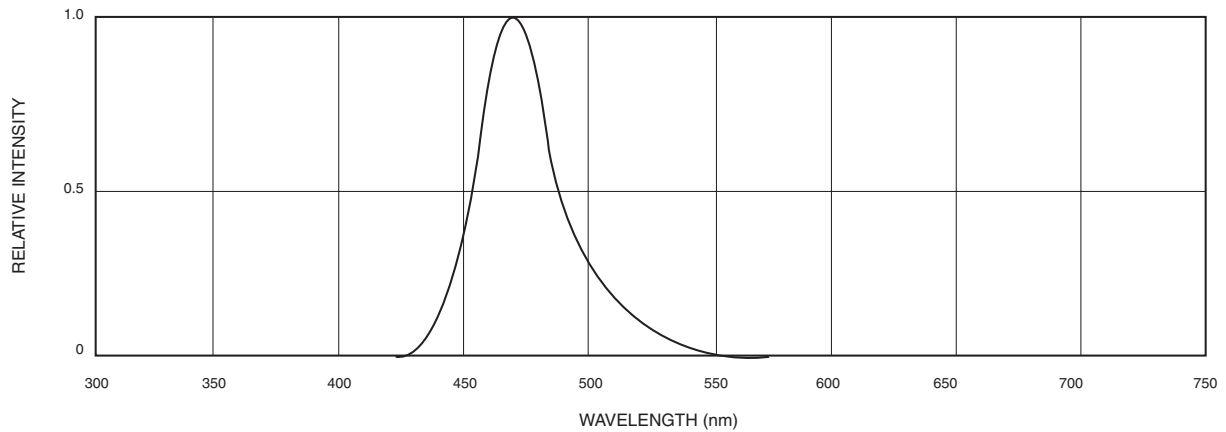


Fig.4 Radiation Diagram

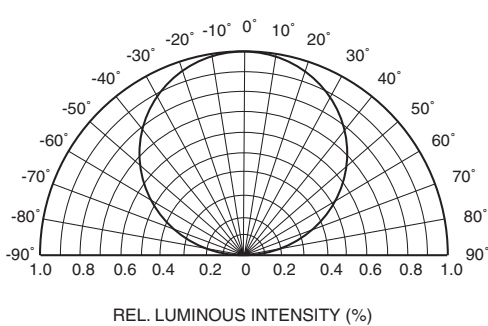
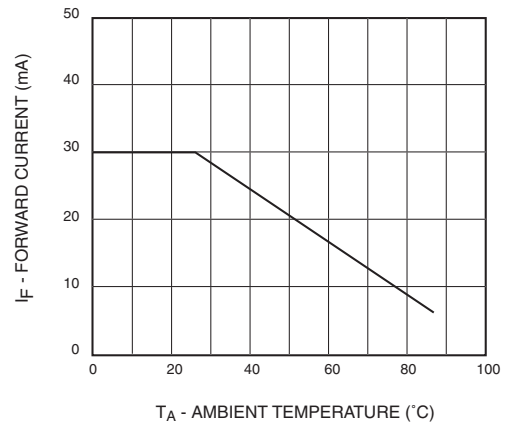


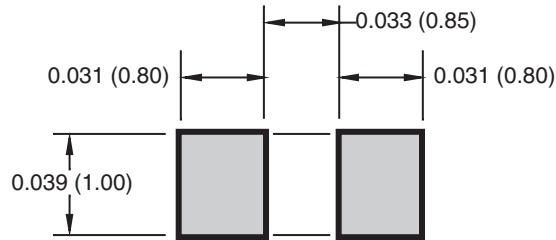
Fig.5 Maximum Forward Current vs. Ambient Temperature



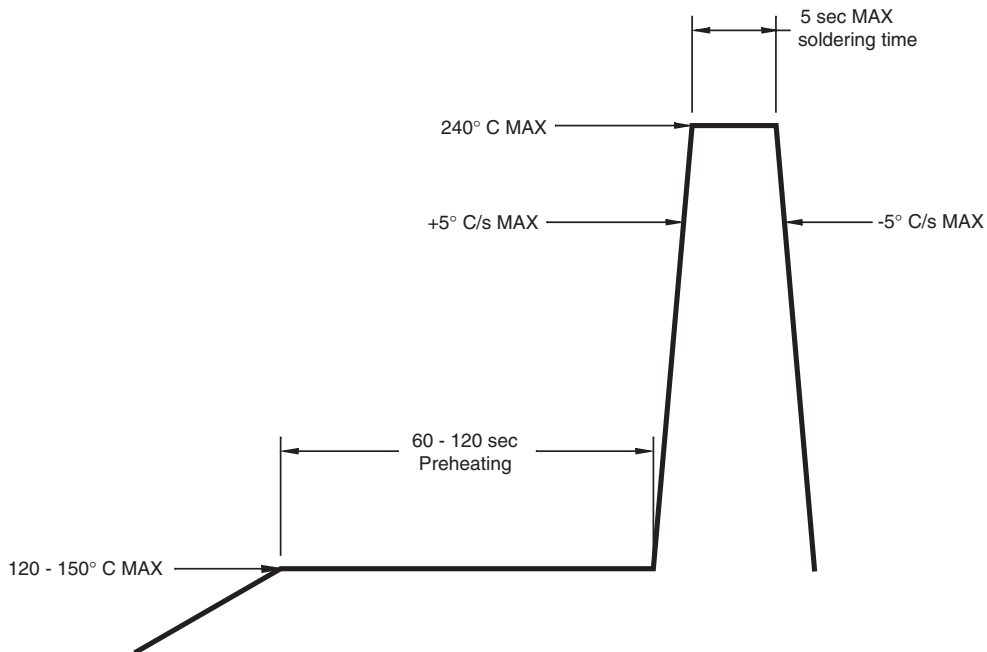
Low V_F Blue

QTLP601CEBTR

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



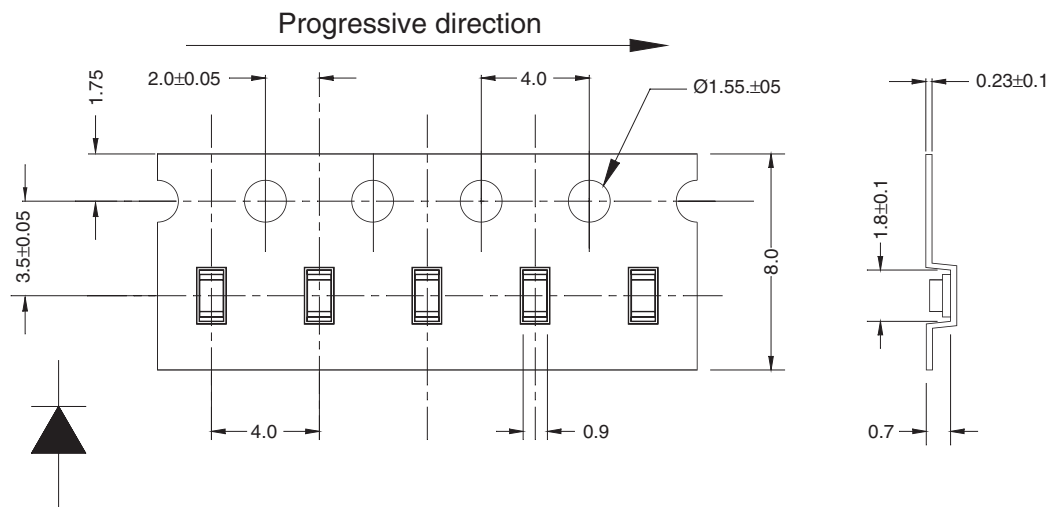
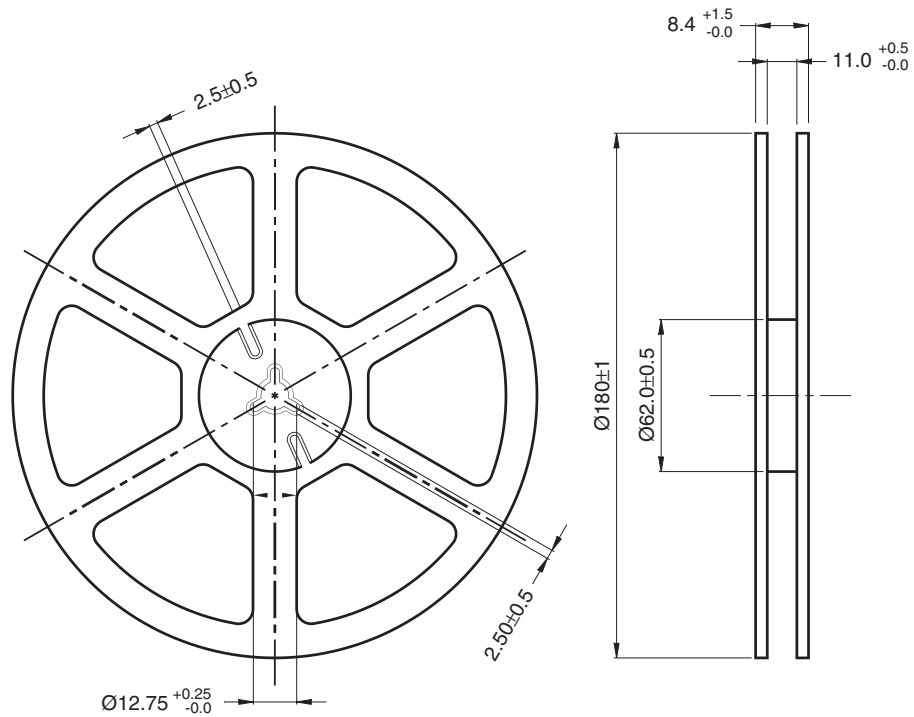
RECOMMENDED IR REFLOW SOLDERING PROFILE



Low V_F Blue

QTLP601CEBTR

TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

Polarity

Low V_F Blue

QTLP601CEBTR

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.