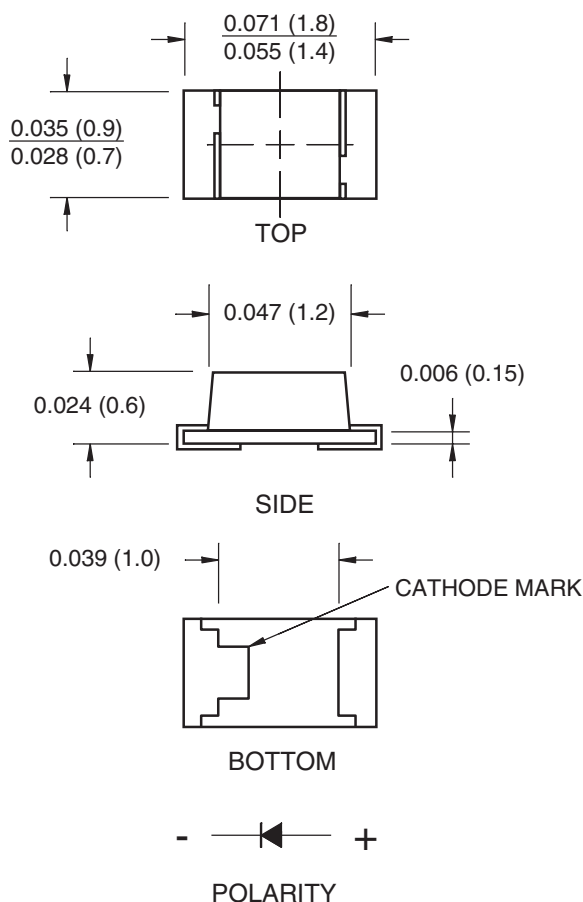


Low V_F Blue

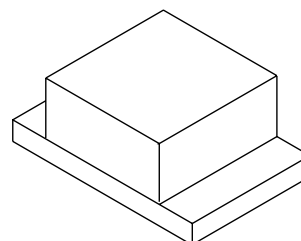
QTLP601CEBTR

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 | $I_F = 5\text{ mA}$ |
| Bin V1 | 2.75 - 2.95 | |
| Bin V2 | 2.95 - 3.15 | |
| 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 $\pm 11\%$

Low V_F Blue

QTLP601CEBTR

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

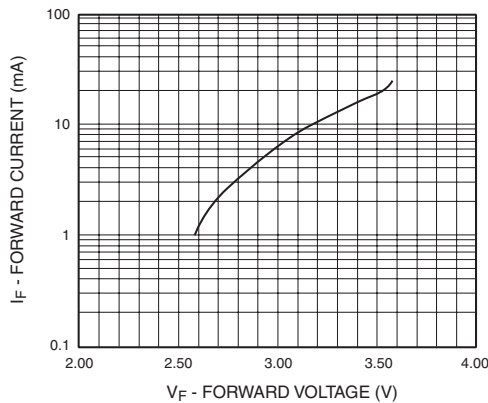


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

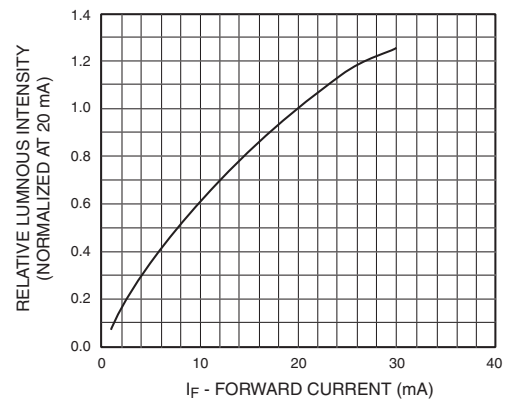


Fig. 3 Relative Intensity vs. Peak Wavelength

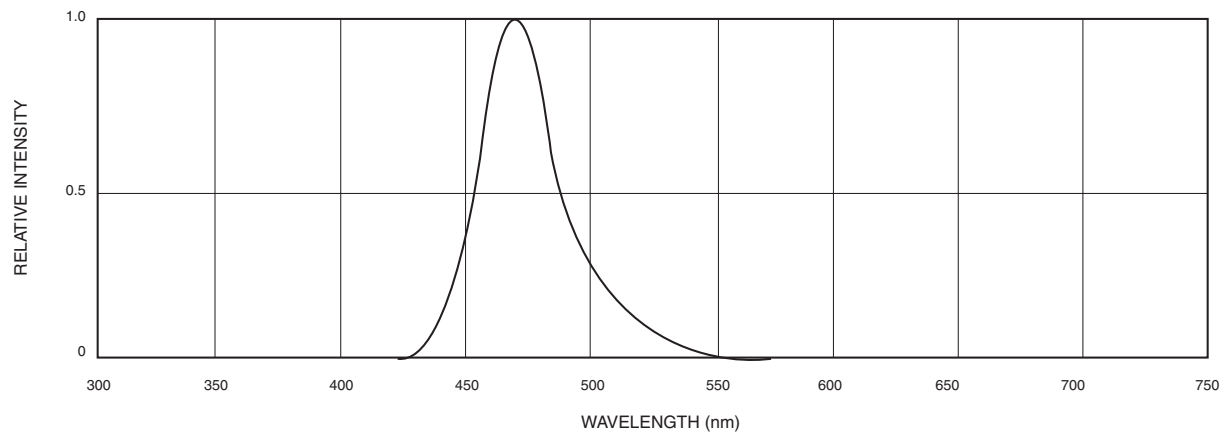


Fig.4 Radiation Diagram

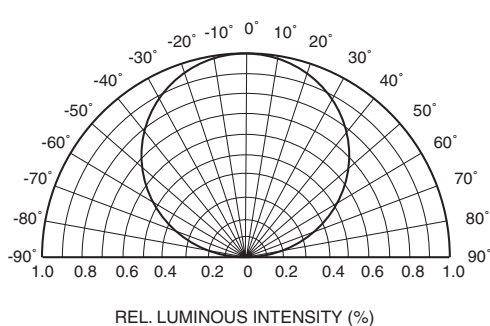
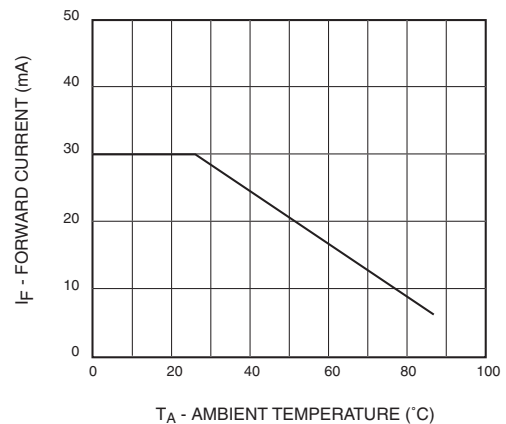


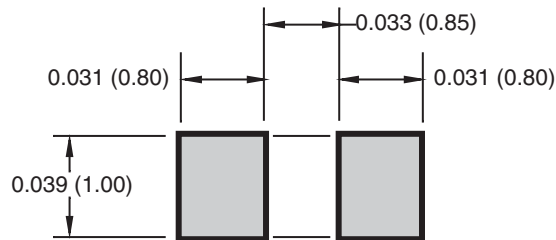
Fig.5 Maximum Forward Current vs. Ambient Temperature



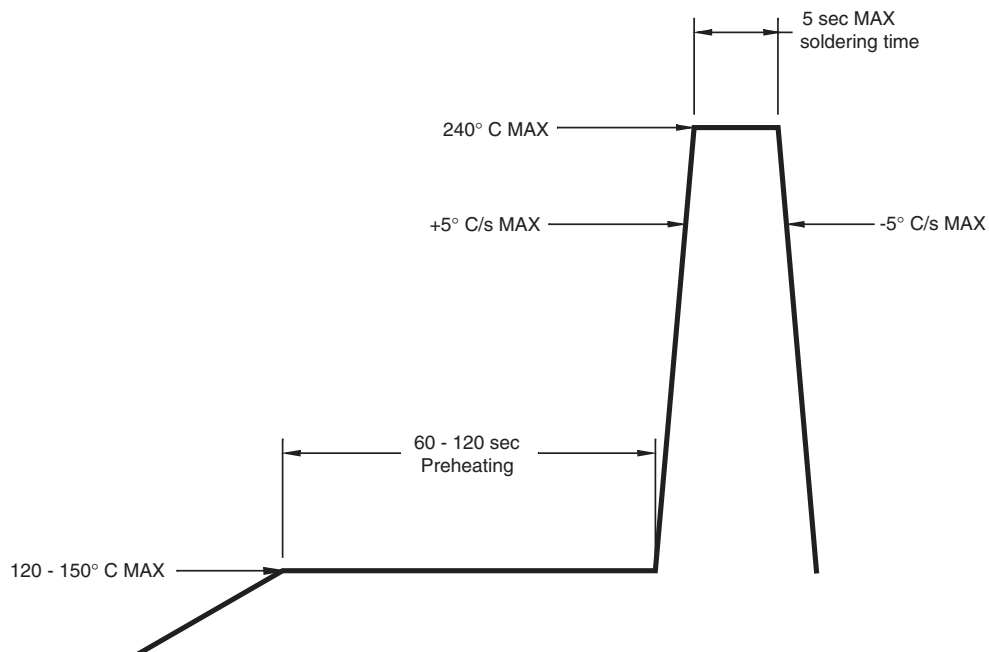
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



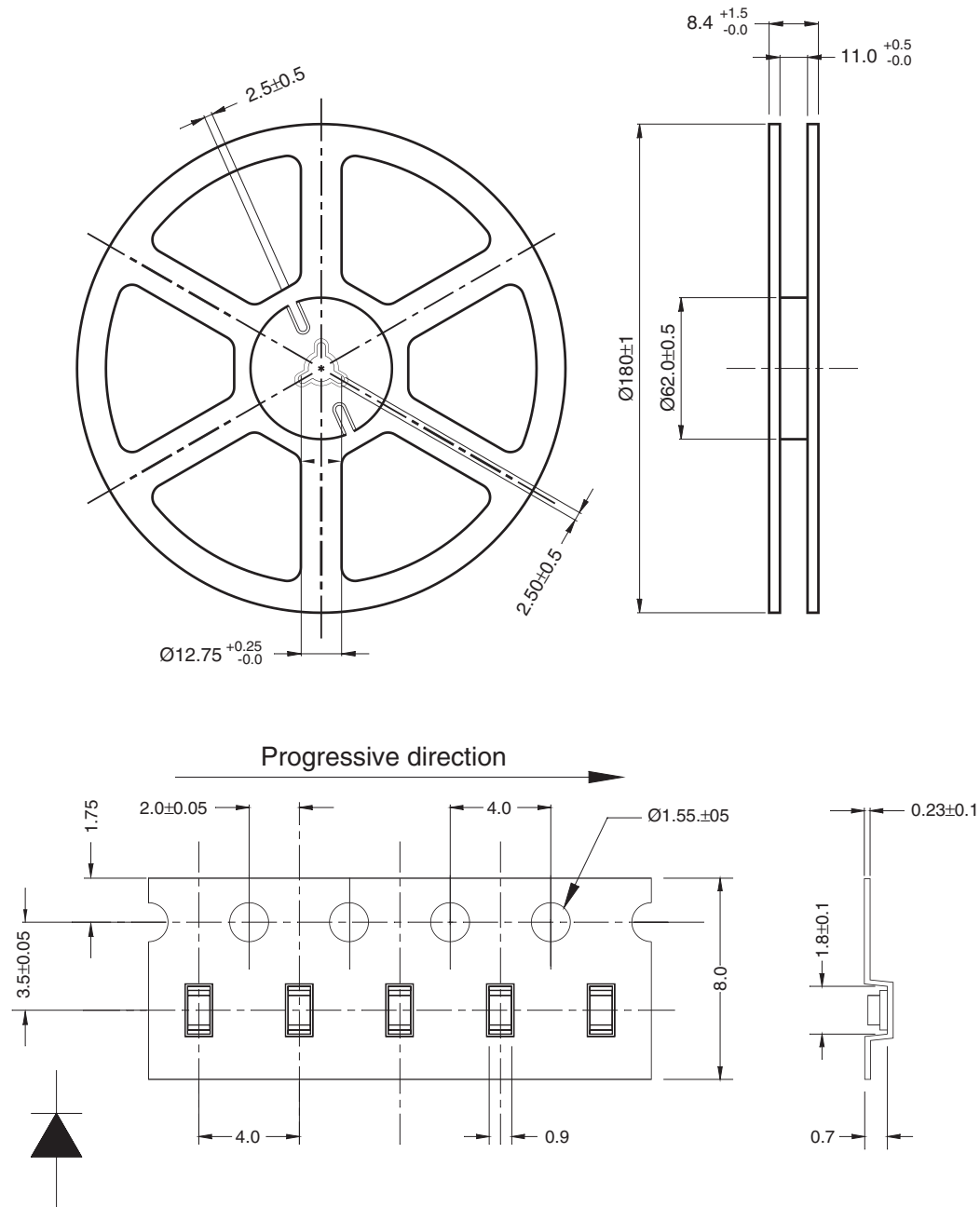
RECOMMENDED IR REFLOW SOLDERING PROFILE



Low V_F Blue

QTLP601CEBTR

TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

Polarity

Low V_F Blue

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