

**QTLP630C-2 HER**

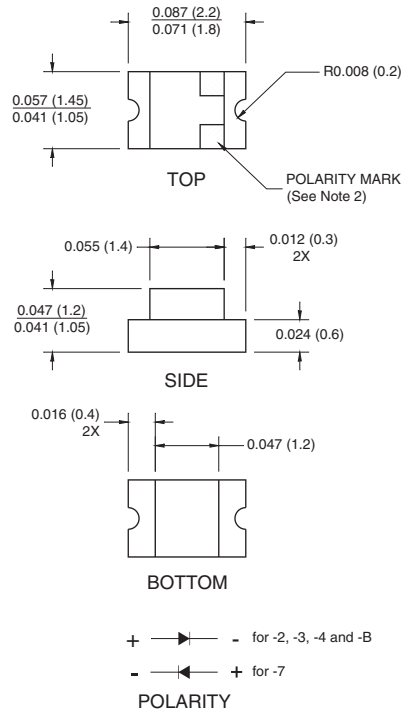
**QTLP630C-3 Yellow**

**QTLP630C-4 Green**

**QTLP630C-7 AlGaAs Red**

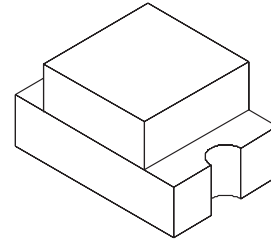
**QTLP630C-B Blue**

### PACKAGE DIMENSIONS



**NOTE:**

1. Dimensions for all drawings are in inches (mm).
2. Cathode for -2, -3, -4 and B. Anode for -7.



### APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

### DESCRIPTION

These surface mount chip LEDs are designed to fit industry standard footprint. Low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

### FEATURES

- Small footprint - 2.0(L) X 1.25(W) X 1.1(H) mm
- Wide viewing angle of 140°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT 0805

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### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ Unless otherwise specified)

| Parameter                                                             | Symbol    | QTLP630C      |     |     |     |     | Units            |
|-----------------------------------------------------------------------|-----------|---------------|-----|-----|-----|-----|------------------|
|                                                                       |           | -2            | -3  | -4  | -7  | -B  |                  |
| Continuous Forward Current                                            | $I_F$     | 30            | 30  | 30  | 30  | 30  | mA               |
| Peak Forward Current<br>( $f = 1.0 \text{ KHz}$ , Duty Factor = 1/10) | $I_{FM}$  | 160           | 160 | 160 | 180 | 100 | mA               |
| Reverse Voltage ( $I_R = 10 \mu\text{A}$ )                            | $V_R$     | 5             | 5   | 5   | 5   | 5   | V                |
| Power Dissipation                                                     | $P_D$     | 84            | 84  | 84  | 72  | 135 | mW               |
| 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 |     |     |     |     | $^\circ\text{C}$ |

### ELECTRICAL / OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

| Part Number                   | Symbol         | QTLP630C |     |     |     |     | Condition |
|-------------------------------|----------------|----------|-----|-----|-----|-----|-----------|
|                               |                | -2       | -3  | -4  | -7  | -B  |           |
| Luminous Intensity (mcd)      | $I_V$          | 5        | 5   | 6   | 10  | 15  | IF = 20mA |
| Minimum<br>Typical            |                | 10       | 10  | 10  | 20  | 20  |           |
| Forward Voltage (V)           | $V_F$          | 2.8      | 2.8 | 2.8 | 2.4 | 4.5 | IF = 20mA |
| Maximum<br>Typical            |                | 2.0      | 2.0 | 2.1 | 1.9 | 3.8 |           |
| Wavelength (nm)               | $I_P$<br>$I_D$ | 635      | 585 | 565 | 660 | 430 | IF = 20mA |
| Peak<br>Dominant              |                | 630      | 590 | 570 | 645 | 465 |           |
| Spectral Line Half Width (nm) | $D_l$          | 45       | 35  | 30  | 20  | 65  | IF = 20mA |
| Viewing Angle ( $^\circ$ )    | $2U_{1/2}$     | 140      | 140 | 140 | 140 | 140 | IF = 20mA |

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### TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

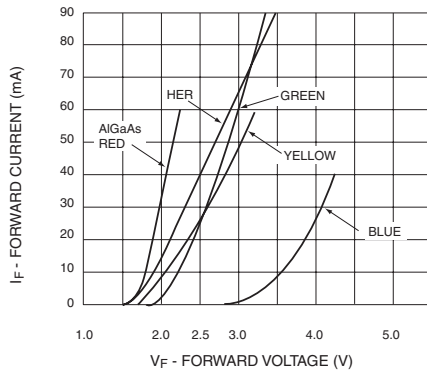


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

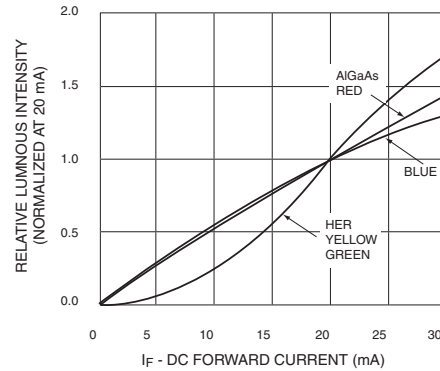


Fig. 3 Relative Intensity vs. Peak Wavelength

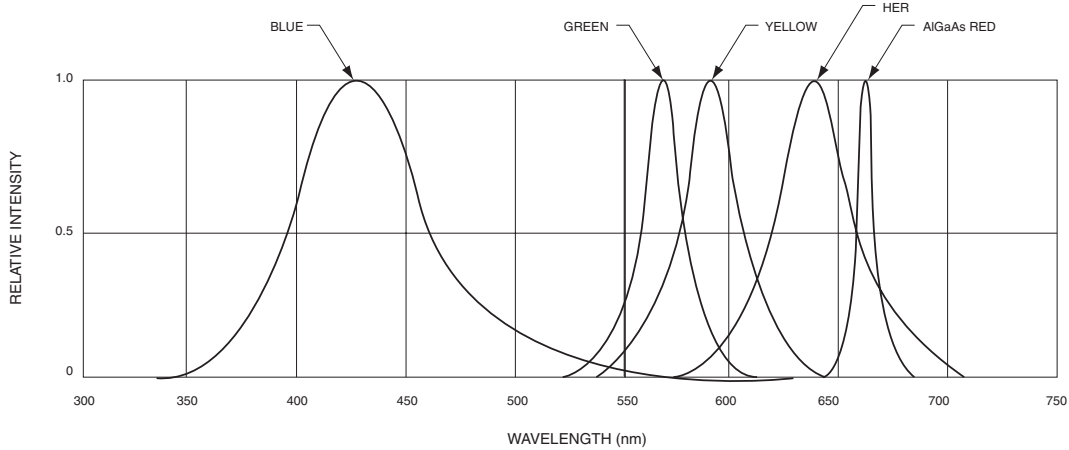


Fig.4 Radiation Diagram

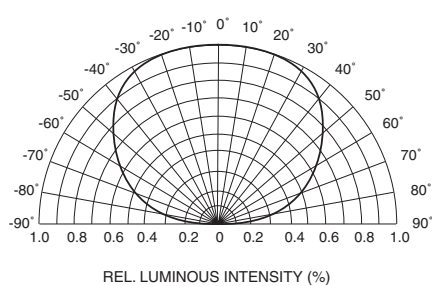
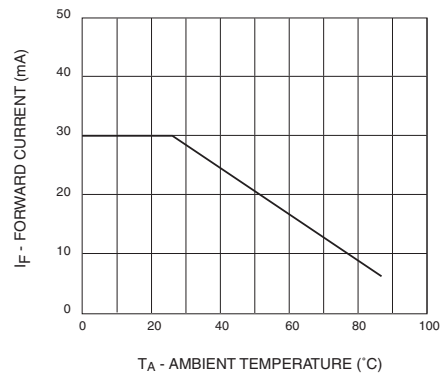


Fig.5 Maximum Forward Current vs. Ambient Temperature



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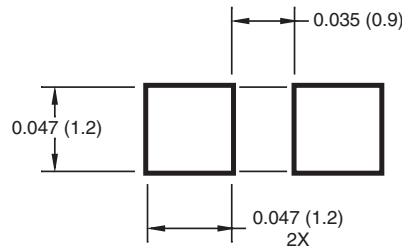
**QTLP630C-3** Yellow

**QTLP630C-4** Green

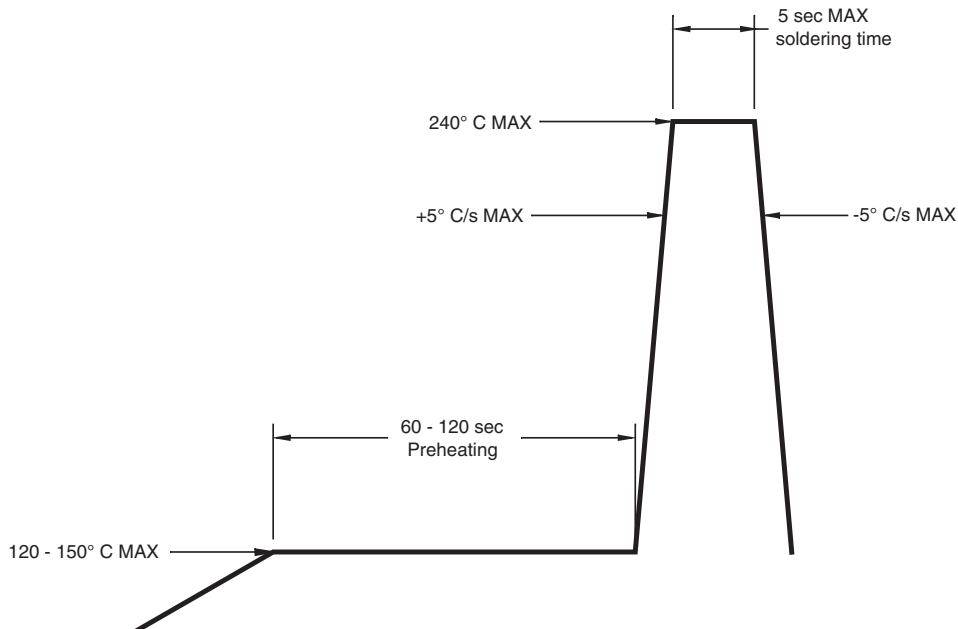
**QTLP630C-7** AlGaAs Red

**QTLP630C-B** Blue

### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



### RECOMMENDED IR REFLOW SOLDERING PROFILE



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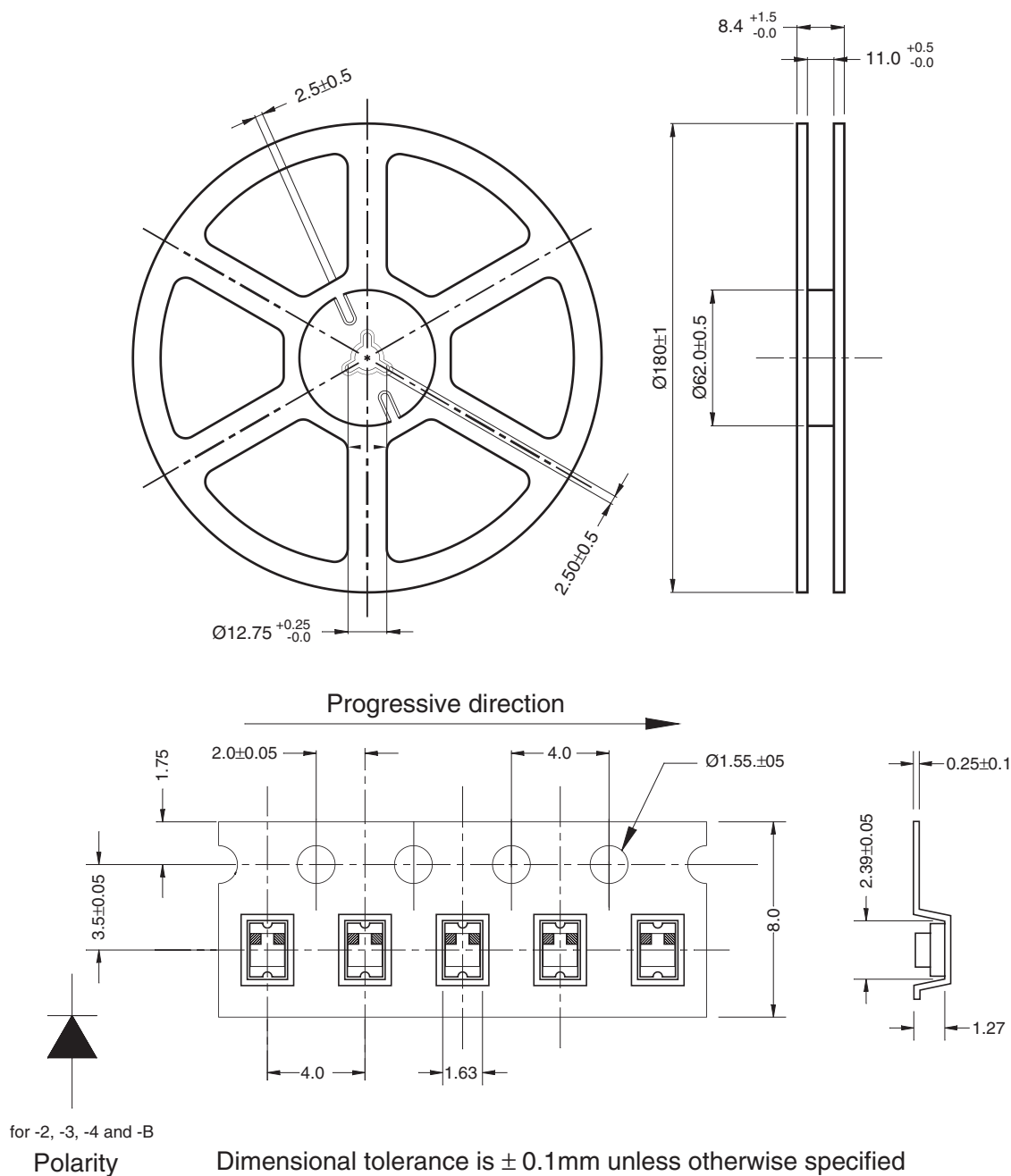
## QTLP630C-3 Yellow

## QTLP630C-4 Green

**QTL P630C-7 AlGaAs Red**

**QTL P630C-B Blue**

## TAPE AND REEL DIMENSIONS



Angle:  $\pm 0.5$

Unit: mm

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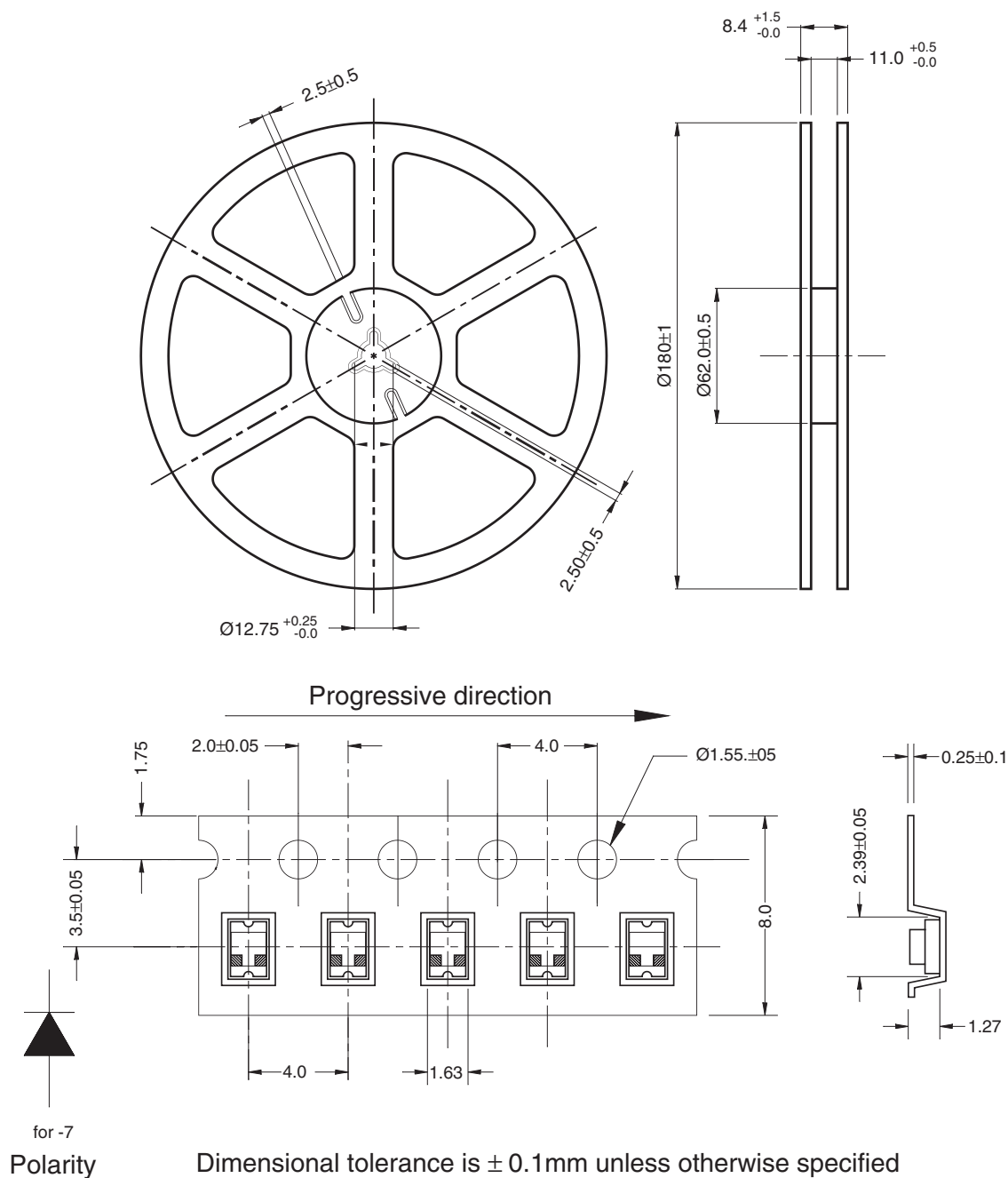
## QTLP630C-3 Yellow

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## QTL P630C-B Blue

## TAPE AND REEL DIMENSIONS



Dimensional tolerance is  $\pm 0.1\text{mm}$  unless otherwise specified

Angle:  $\pm 0.5$

Unit: mm

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