

QTLP660C-2 HER

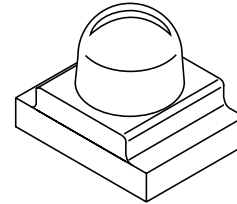
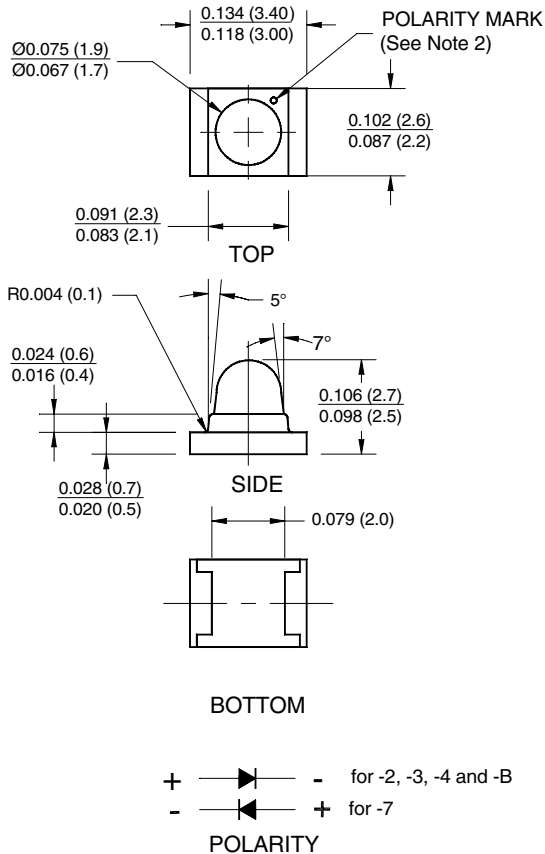
QTLP660C-3 Yellow

QTLP660C-4 Green

QTLP660C-7 AlGaAs Red

QTLP660C-B Blue

### PACKAGE DIMENSIONS



NOTE:

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

### APPLICATIONS

- Backlighting
- Status indication for consumer electronics and other equipment

### DESCRIPTION

These surface mount chip LEDs are designed with a 1.8 mm dome lens that focuses the light output.

### FEATURES

- Small footprint - 3.2(L) X 2.4(W) X 2.6(H) mm
- Narrow viewing angle of 30°
- Water clear
- 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 1.8 mm (Dome Lens)

QTLP660C-2 HER

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### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> =25°C Unless otherwise specified)

Parameter	Symbol	QTLP660C					Units
		-2	-3	-4	-7	-B	
Continuous Forward Current	I <sub>F</sub>	30	30	30	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>FM</sub>	160	160	160	180	100	mA
Reverse Voltage (I <sub>R</sub> = 10 μA)	V <sub>R</sub>	5	5	5	5	5	V
Power Dissipation	P <sub>D</sub>	84	84	84	72	135	mW
Operating Temperature	T <sub>OPR</sub>	-40 to +85					°C
Storage Temperature	T <sub>STG</sub>	-40 to +90					°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec					°C

### ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> =25°C)

Part Number	Symbol	QTLP660C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I <sub>v</sub>	20	35	70	110	80	I <sub>F</sub> = 20mA
Minimum							
Typical		40	60	120	190	110	
Forward Voltage (V)	V <sub>F</sub>	2.8	2.8	2.8	2.4	4.5	I <sub>F</sub> = 20mA
Maximum							
Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	λ <sub>P</sub>	635	585	565	660	430	I <sub>F</sub> = 20mA
Peak							
Dominant	λ <sub>D</sub>	630	590	570	645	465	
Spectral Line Half Width (nm)	Δλ	45	35	30	20	65	I <sub>F</sub> = 20mA
Viewing Angle (°)	2Θ <sub>1/2</sub>	30	30	30	30	30	I <sub>F</sub> = 20mA

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**TYPICAL PERFORMANCE CURVES**

Fig. 1 Forward Current vs. Forward Voltage

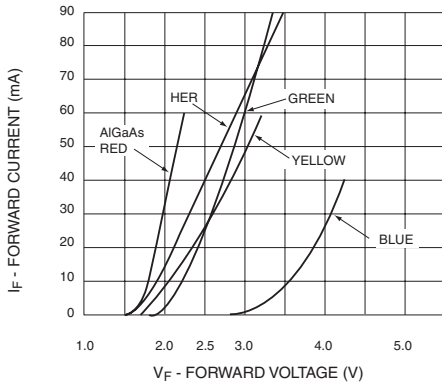


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

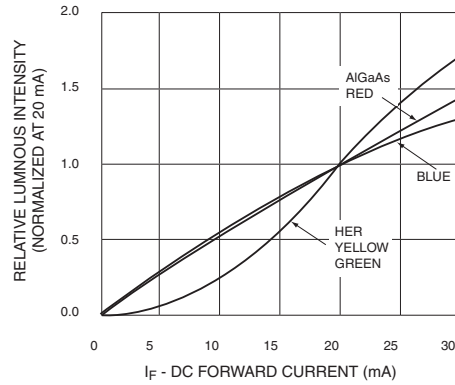


Fig. 3 Relative Intensity vs. Peak Wavelength

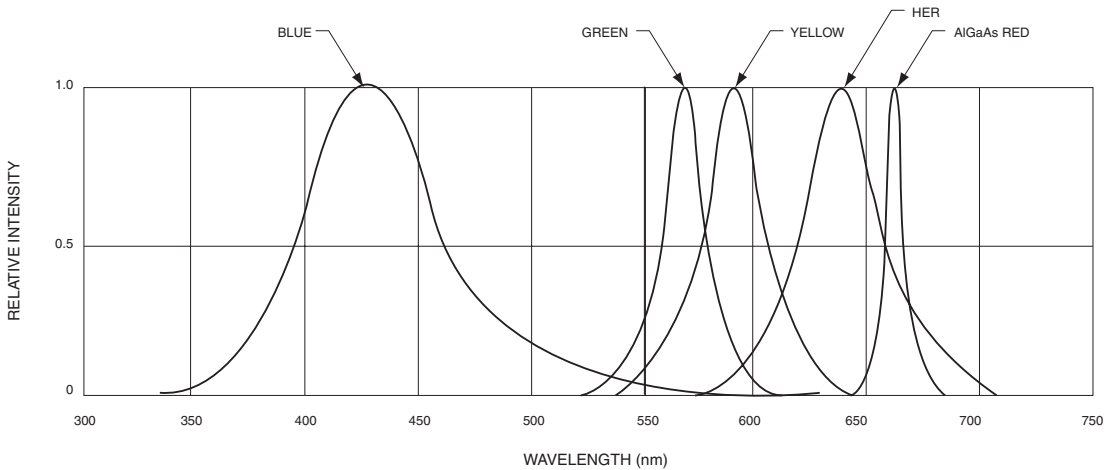


Fig.4 Radiation Diagram

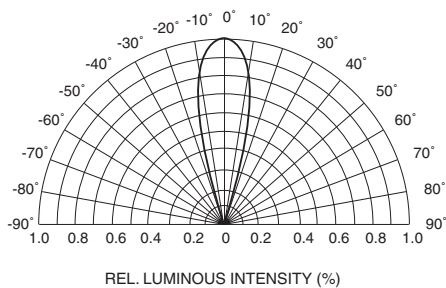
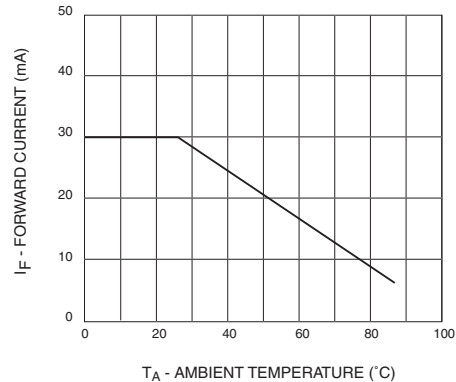


Fig.5 Maximum Forward Current vs. Ambient Temperature



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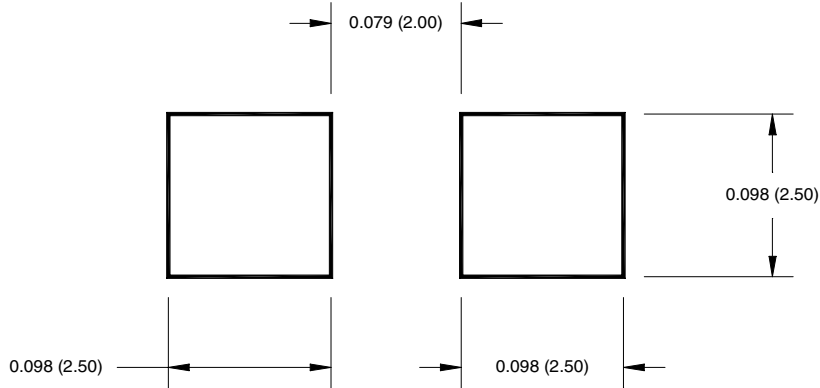
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QTLP660C-4 Green

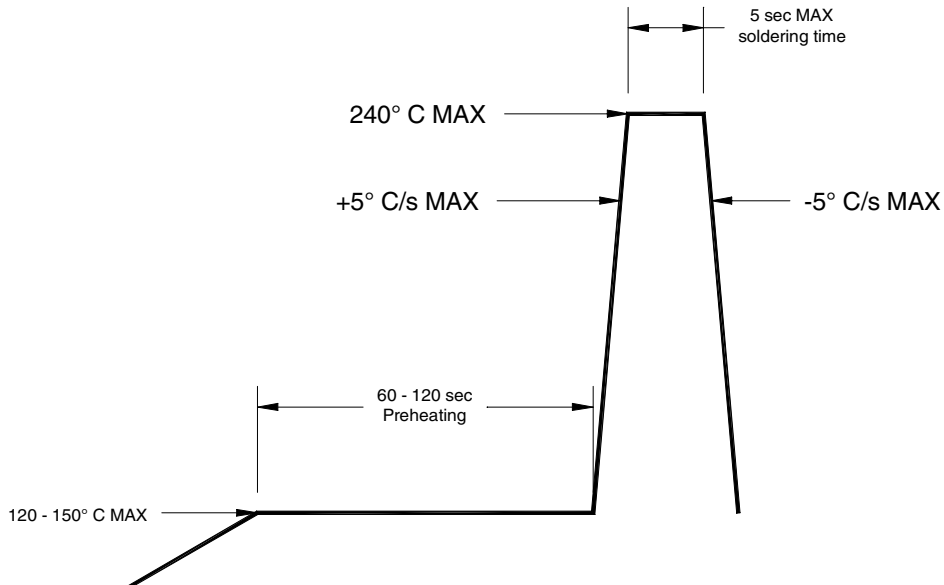
QTLP660C-7 AlGaAs Red

QTLP660C-B Blue

**RECOMMENDED PRINTED CIRCUIT BOARD PATTERN**



**RECOMMENDED IR REFLOW SOLDERING PROFILE**



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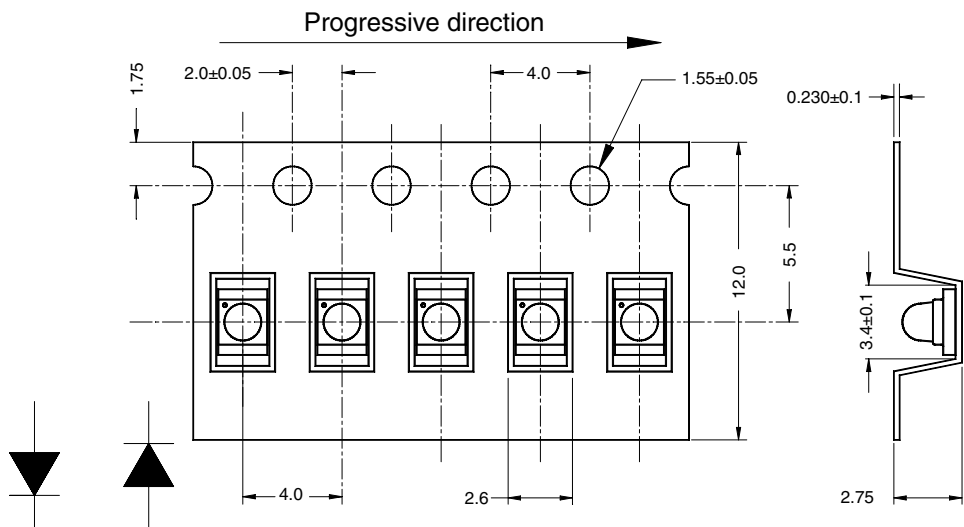
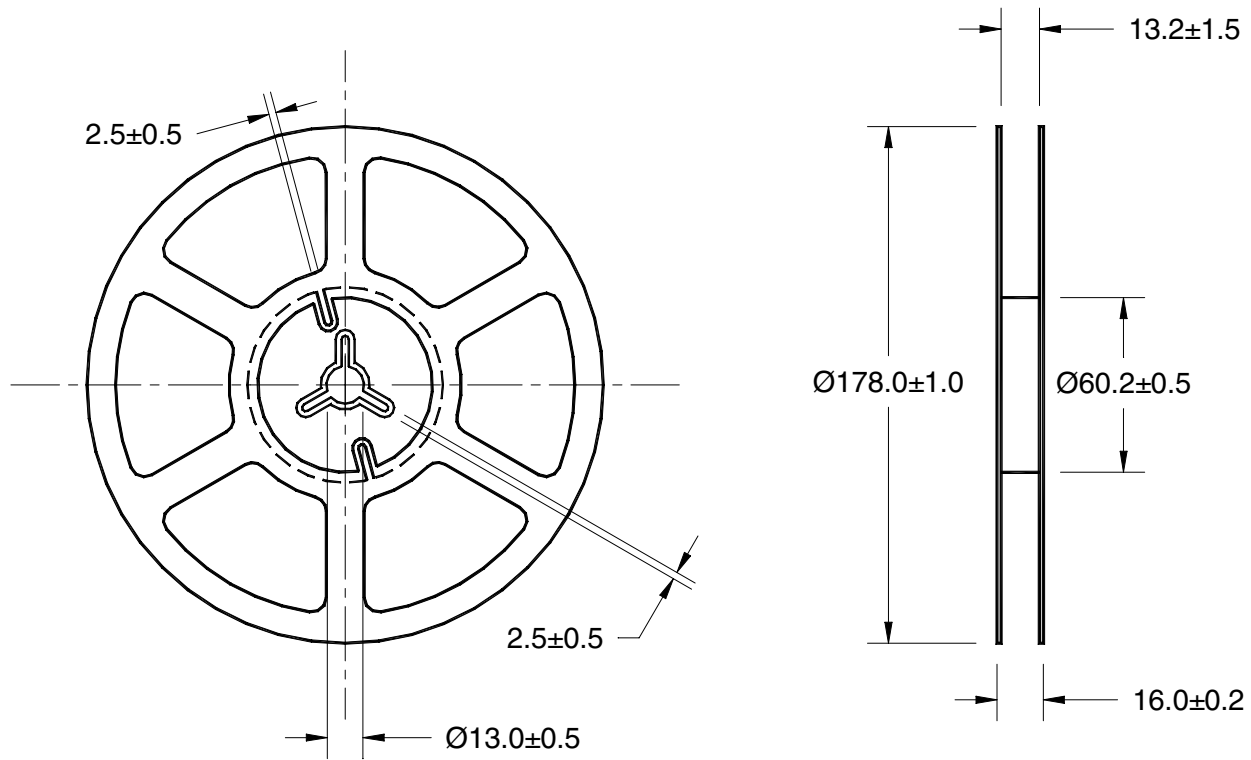
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QTLP660C-7 AlGaAs Red

QTLP660C-B Blue

**TAPE AND REEL DIMENSIONS**



for -7    for -2, -3, -4 and -B  
Polarity

Dimensional tolerance is  $\pm 0.1$ mm unless otherwise specified  
Angle:  $\pm 0.5$   
Unit: mm

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