

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1.8mm (Dome Lens)

QTLP660C-2 HER

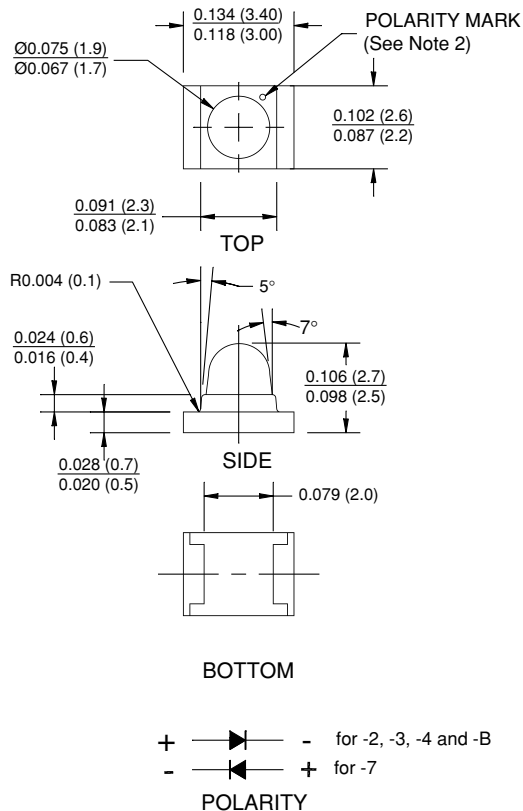
QTLP660C-3 Yellow

QTLP660C-4 Green

QTLP660C-7 AlGaAs Red

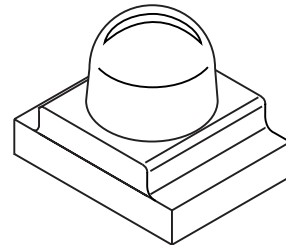
QTLP660C-B Blue

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

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

Parameter	Symbol	QTLP660C					Units
		-2	-3	-4	-7	-B	
Continuous Forward Current	I_F	30	30	30	30	30	mA
Peak Forward Current ($f = 1.0 \text{ KHz}$, 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	QTLP660C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I_V	20	35	70	110	80	$I_F = 20\text{mA}$
Minimum		40	60	120	190	110	
Typical							
Forward Voltage (V)	V_F	2.8	2.8	2.8	2.4	4.5	$I_F = 20\text{mA}$
Maximum		2.0	2.0	2.1	1.9	3.8	
Typical							
Wavelength (nm)	λ_P	635	585	565	660	430	$I_F = 20\text{mA}$
Peak		630	590	570	645	465	
Dominant	λ_D						
Spectral Line Half Width (nm)	$\Delta\lambda$	45	35	30	20	65	$I_F = 20\text{mA}$
Viewing Angle ($^\circ$)	$2\Theta_{1/2}$	30	30	30	30	30	$I_F = 20\text{mA}$

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

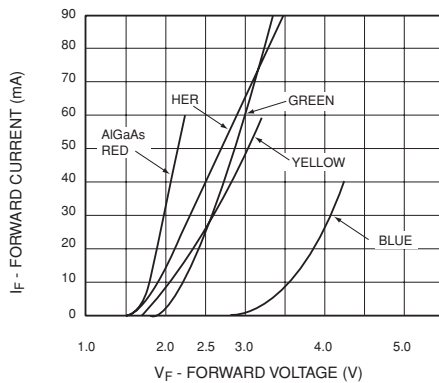


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

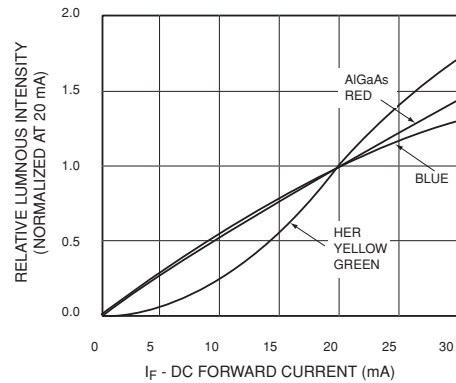


Fig. 3 Relative Intensity vs. Peak Wavelength

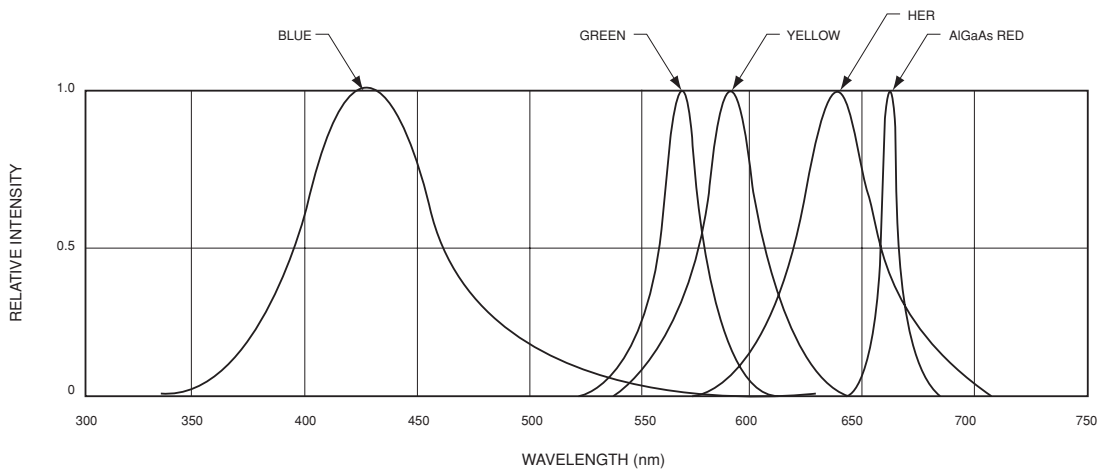


Fig.4 Radiation Diagram

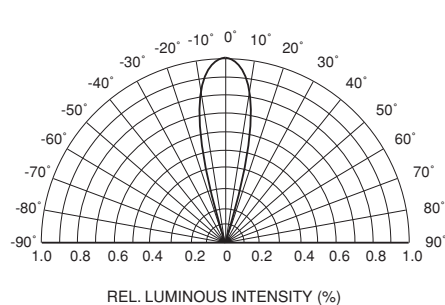
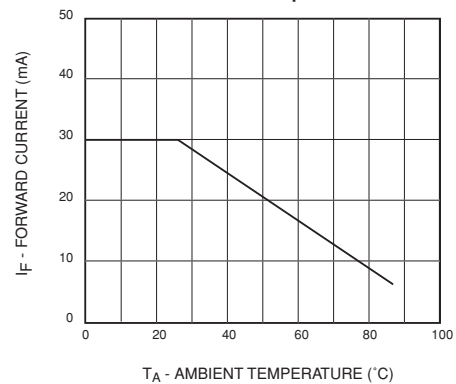


Fig.5 Maximum Forward Current vs. Ambient Temperature



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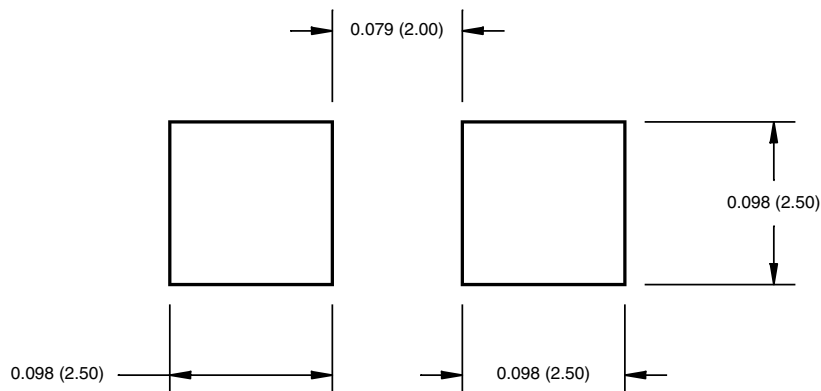
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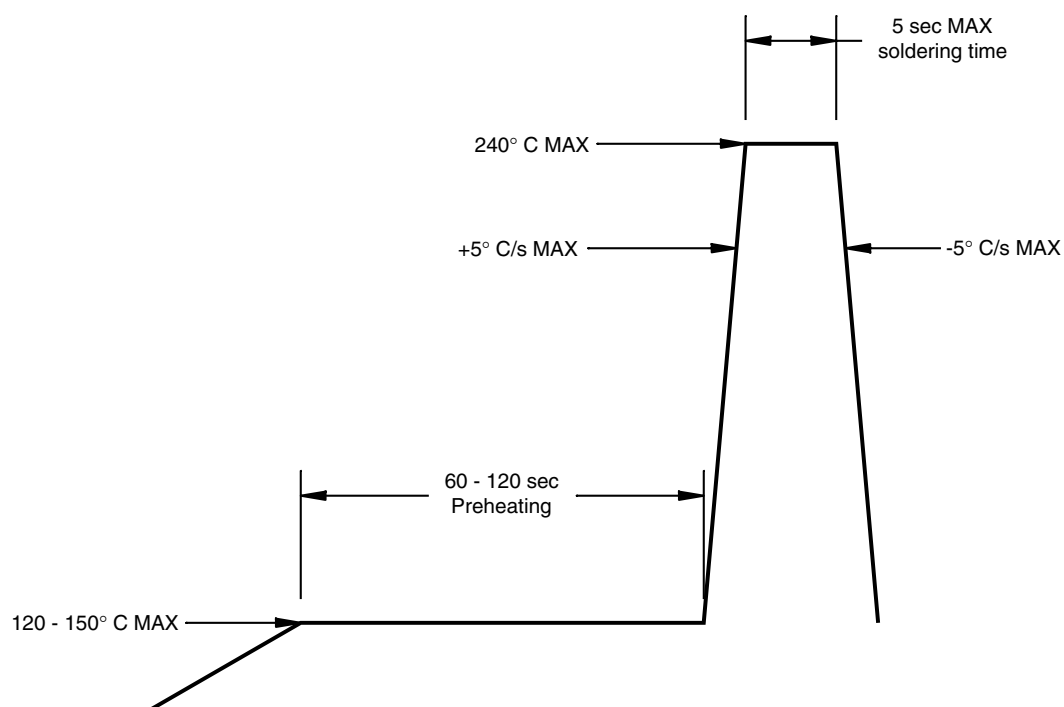
QTLP660C-7 AlGaAs Red

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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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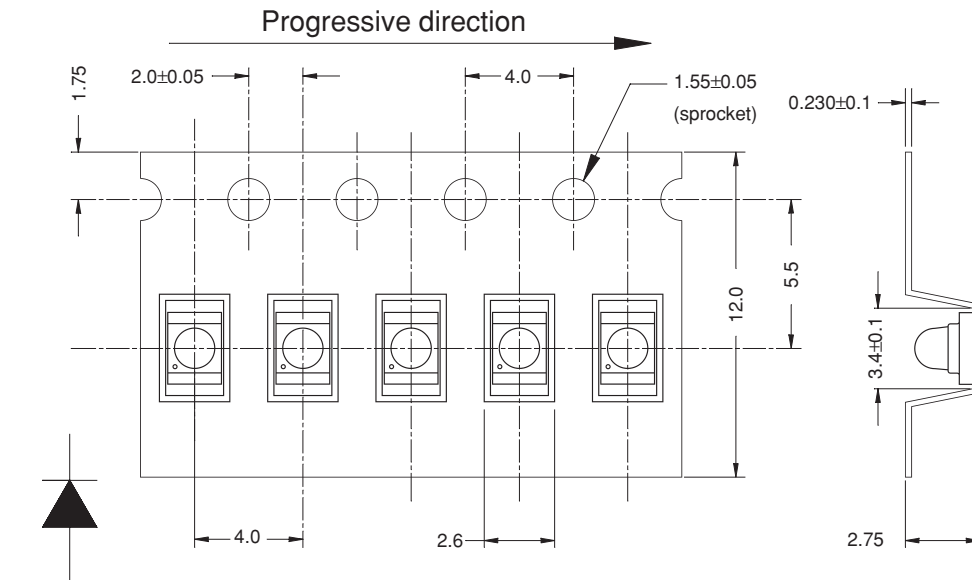
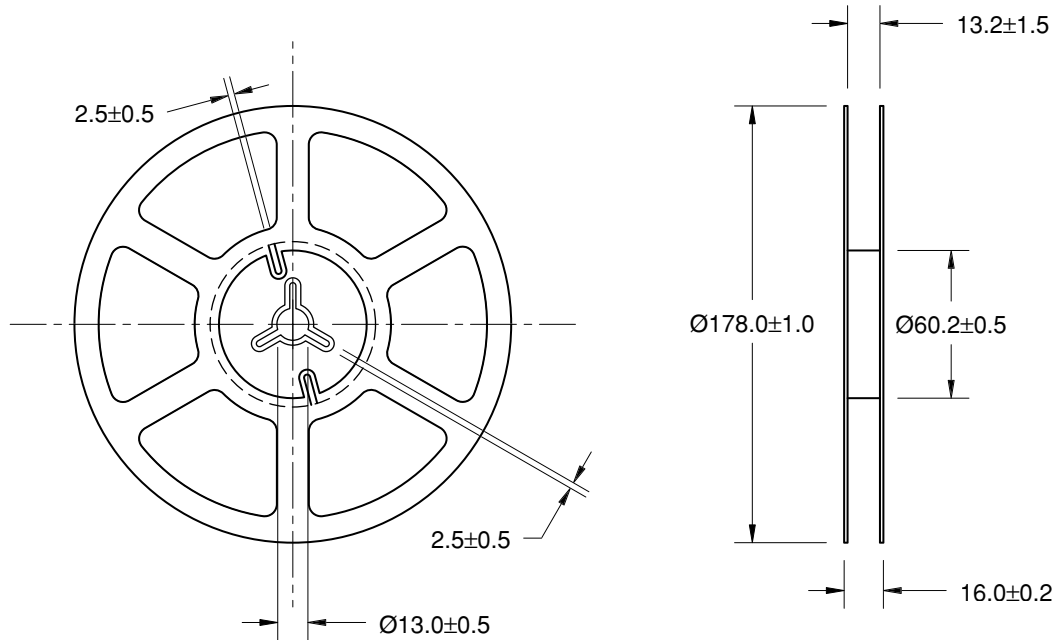
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QTLP660C-B Blue

TAPE AND REEL DIMENSIONS



for -7
Polarity

Dimensional tolerance is ± 0.1 mm unless otherwise specified
 Angle: ± 0.5
 Unit: mm
 Polarity marks on the opposite sprocket side.

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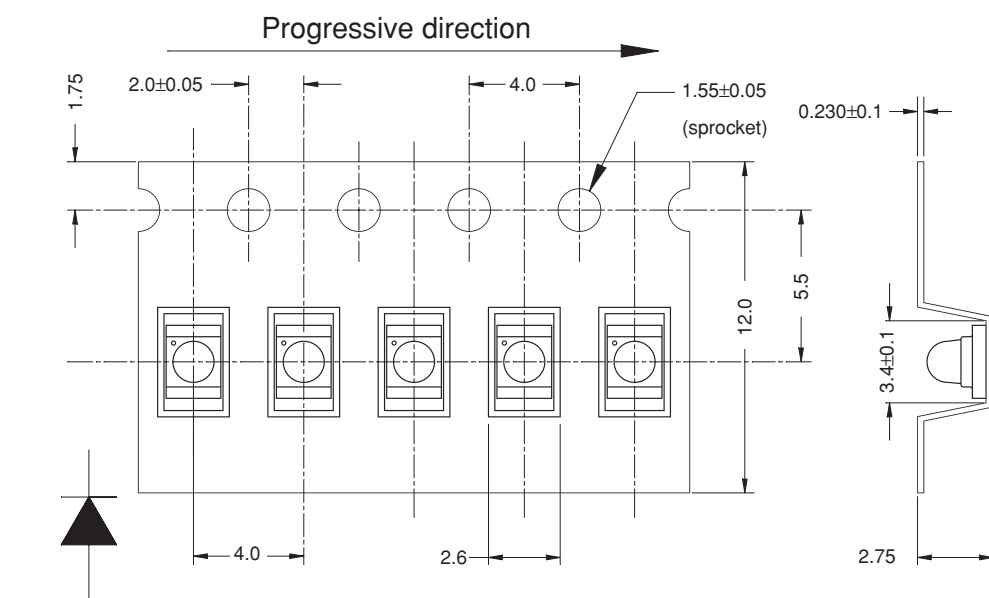
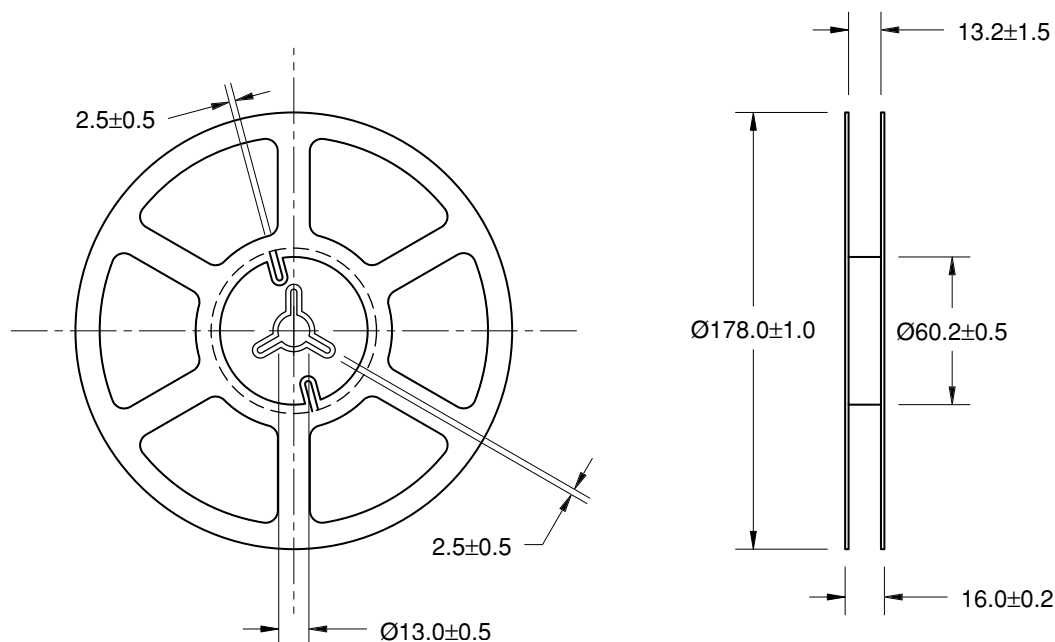
QTL P660C-3 Yellow

QTL P660C-4 Green

QTL P660C-7 AlGaAs Red

QTL P660C-B Blue

TAPE AND REEL DIMENSIONS



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

Polarity

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

Angle: ± 0.5

Unit: mm

Polarity marks on the sprocket side.

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