

**QTLP680C-2 HER**

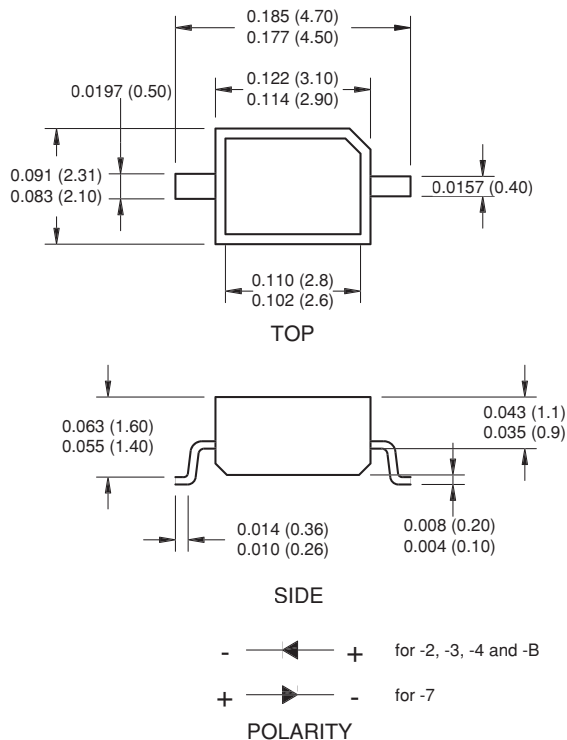
**QTLP680C-3 Yellow**

**QTLP680C-4 Green**

**QTLP680C-7 AlGaAs Red**

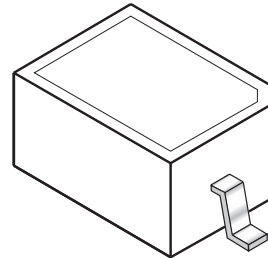
**QTLP680C-B Blue**

## PACKAGE DIMENSIONS



### NOTE:

1. Dimensions for all drawings are in inches (mm).



## APPLICATIONS

- Backlighting
- Status indication for consumer electronics and other equipment

## DESCRIPTION

Designed with a reflective housing, these surface mount LEDs offer uniform lighting and high light output performance.

## FEATURES

- Wide viewing angle of 130°
- 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 REFLECTOR

**QTLP680C-2** HER

**QTLP680C-3** Yellow

**QTLP680C-4** Green

**QTLP680C-7** AlGaAs Red

**QTLP680C-B** Blue

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

Parameter	Symbol	QTLP680C					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 +100					$^\circ\text{C}$
Lead Soldering Time	$T_{SOL}$	260 for 5 sec					$^\circ\text{C}$

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

Part Number	Symbol	QTLP680C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	$I_V$						$I_F = 20\text{mA}$
Minimum		7	7	15	25	15	
Typical		15	15	25	40	20	
Forward Voltage (V)	$V_F$						$I_F = 20\text{mA}$
Maximum		2.8	2.8	2.8	2.4	4.5	
Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	$\lambda_P$						$I_F = 20\text{mA}$
Peak		635	585	565	660	430	
Dominant	$\lambda_D$	630	590	570	645	465	
Spectral Line Half Width (nm)	$\Delta\lambda$	45	35	30	20	65	$I_F = 20\text{mA}$
Viewing Angle ( $^\circ$ )	$2\theta_{1/2}$	130	130	130	130	130	$I_F = 20\text{mA}$

**QTLP680C-2 HER**

**QTLP680C-3 Yellow**

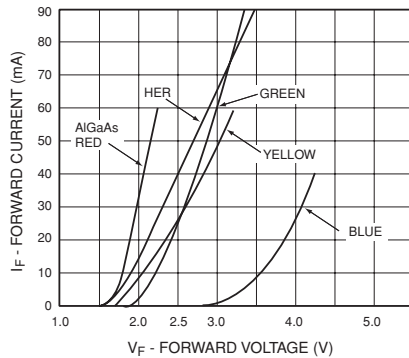
**QTLP680C-4 Green**

**QTLP680C-7 AlGaAs Red**

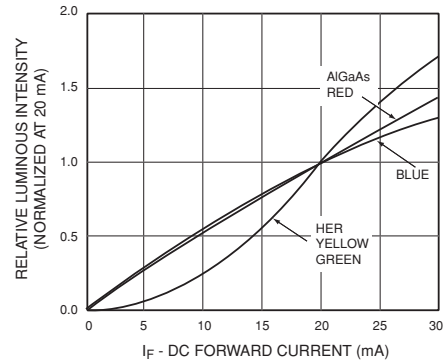
**QTLP680C-B Blue**

## TYPICAL PERFORMANCE CURVES

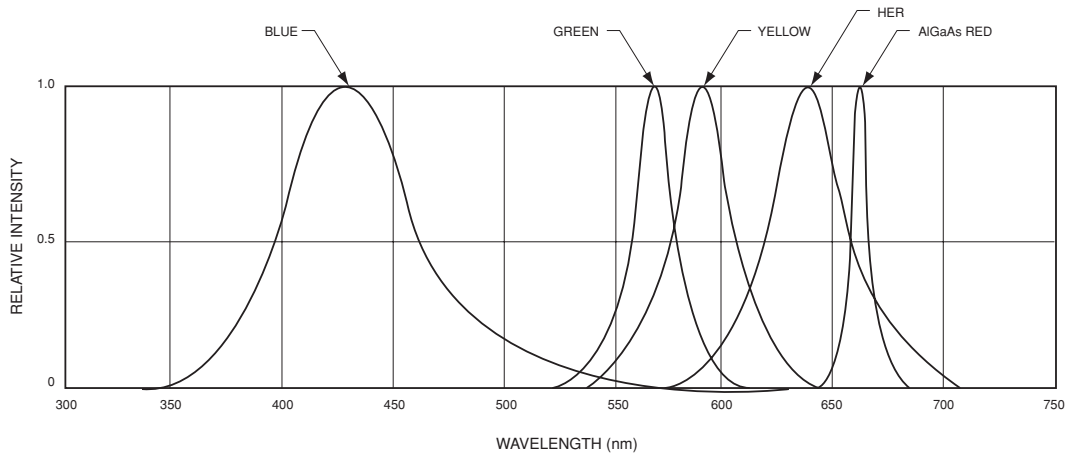
**Fig. 1 Forward Current vs. Forward Voltage**



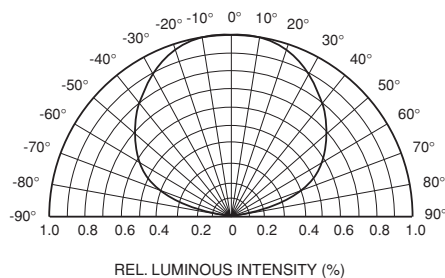
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



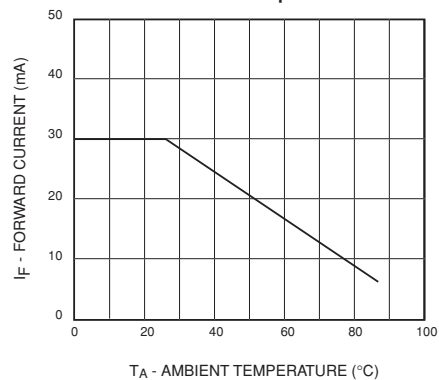
**Fig. 3 Relative Intensity vs. Peak Wavelength**



**Fig.4 Radiation Diagram**



**Fig.5 Maximum Forward Current vs. Ambient Temperature**



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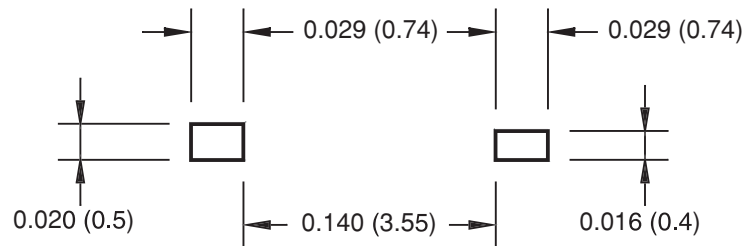
**QTLP680C-3** Yellow

**QTLP680C-4** Green

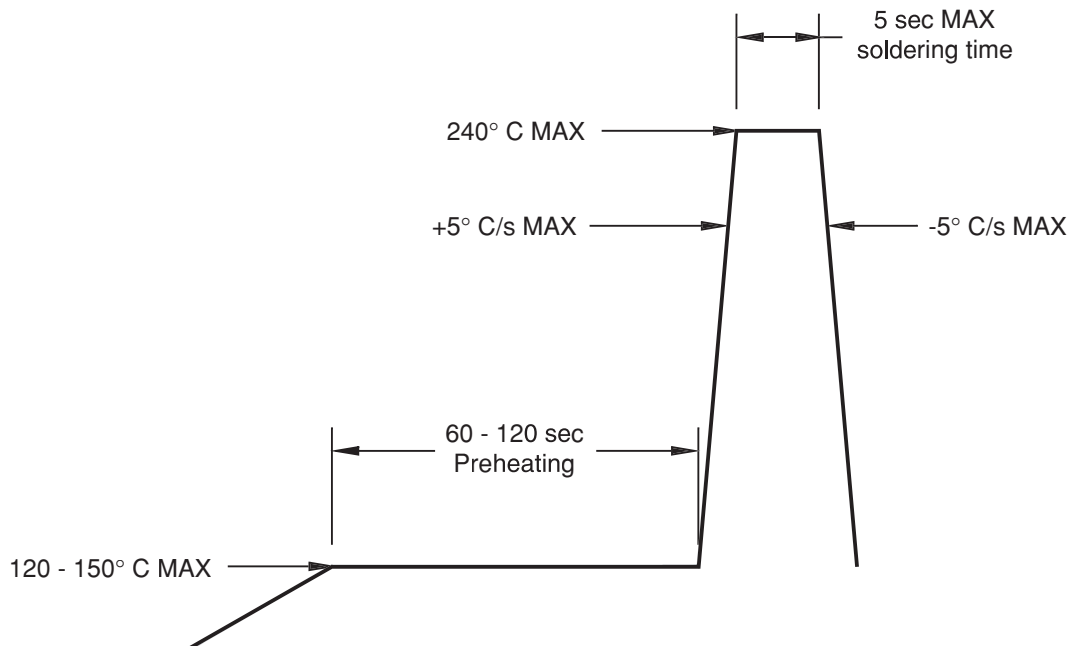
**QTLP680C-7** AlGaAs Red

**QTLP680C-B** Blue

## RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



## RECOMMENDED IR REFLOW SOLDERING PROFILE



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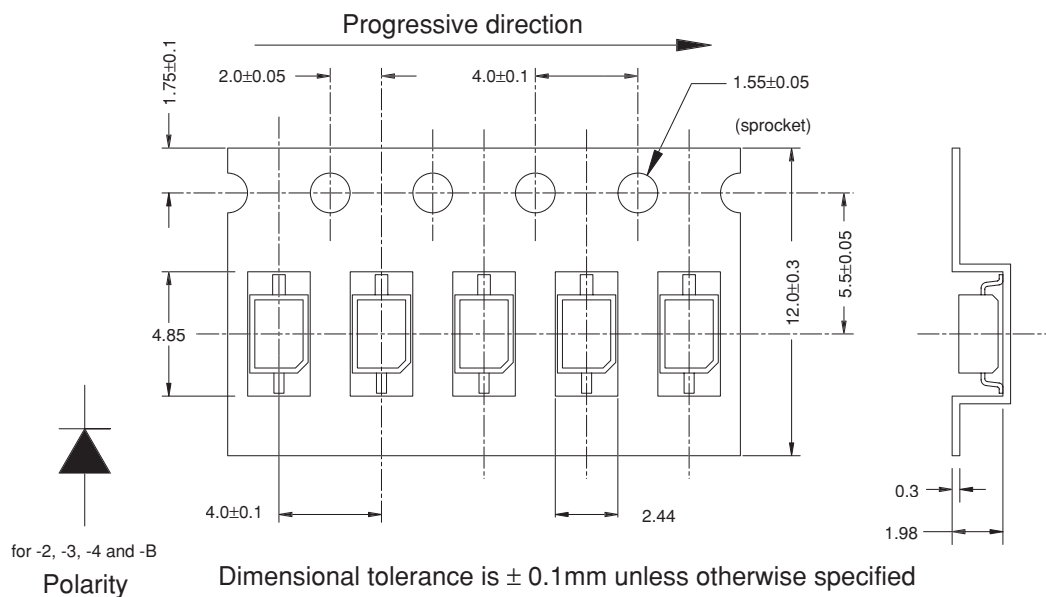
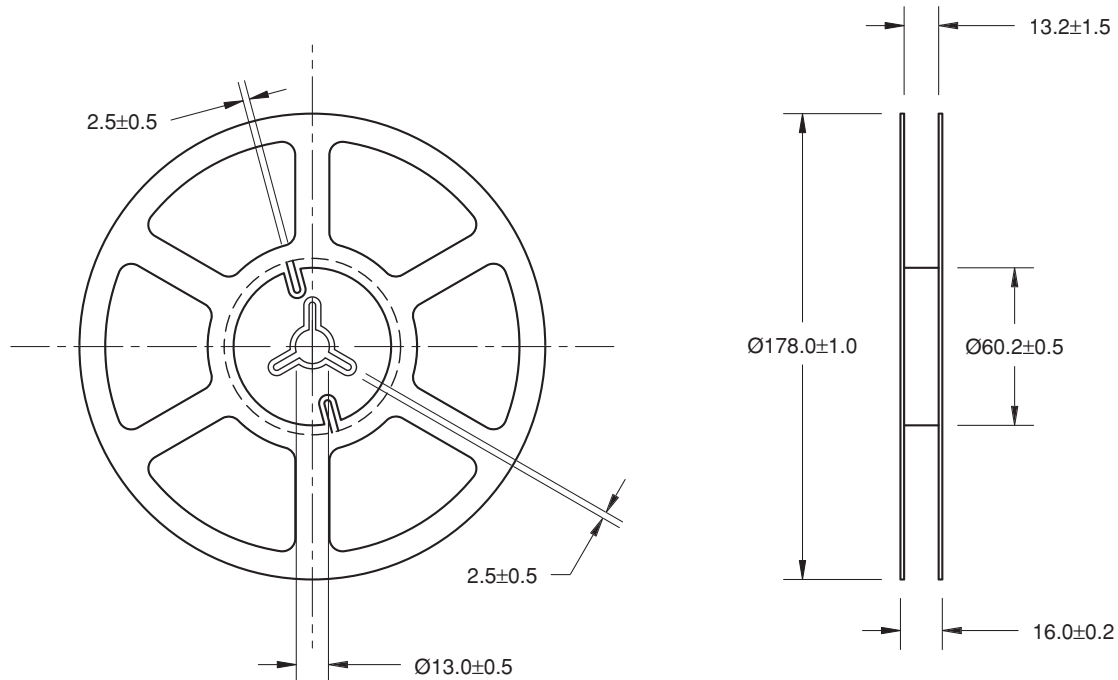
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## TAPE AND REEL DIMENSIONS



Dimensional tolerance is  $\pm 0.1\text{mm}$  unless otherwise specified  
 Angle:  $\pm 0.5$   
 Unit: mm  
 Polarity marks are on the opposite sprocket side.

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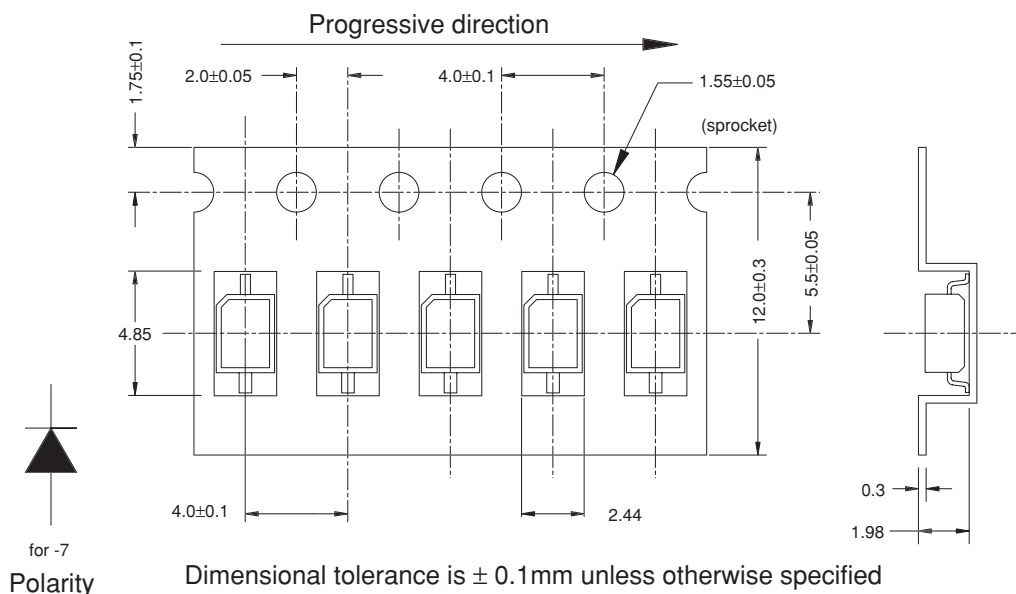
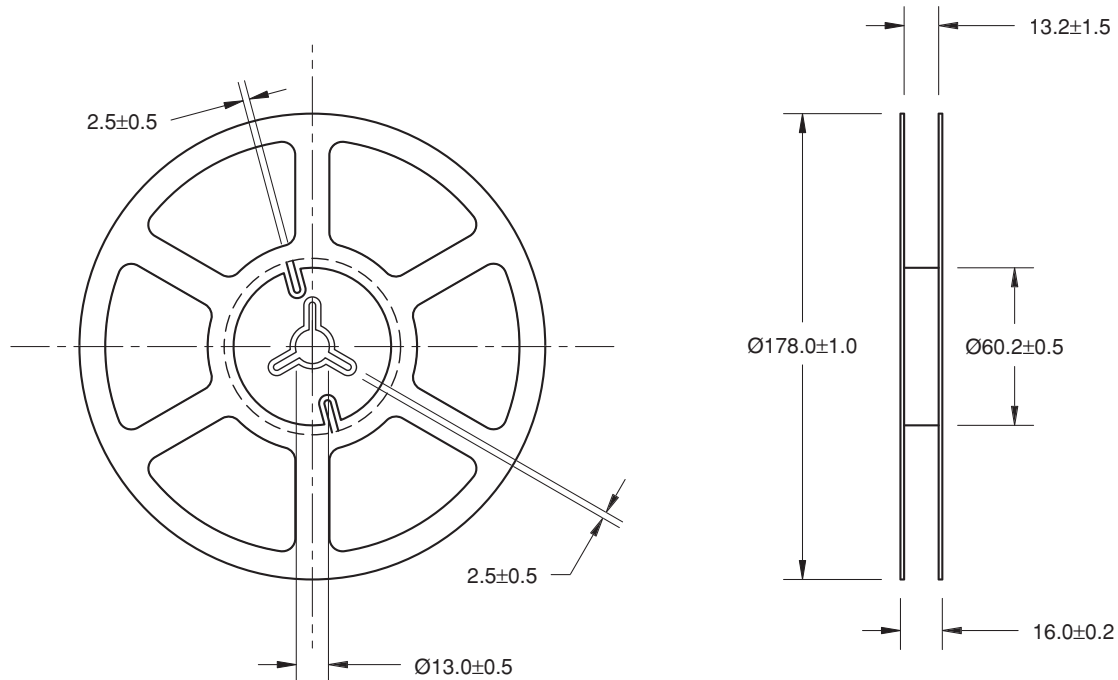
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## TAPE AND REEL DIMENSIONS



for -7  
Polarity

Dimensional tolerance is  $\pm 0.1$ mm unless otherwise specified  
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 Unit: mm  
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## DISCLAIMER

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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.