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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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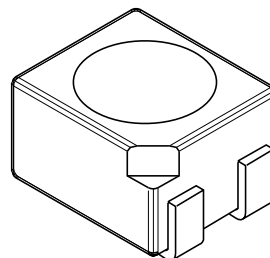
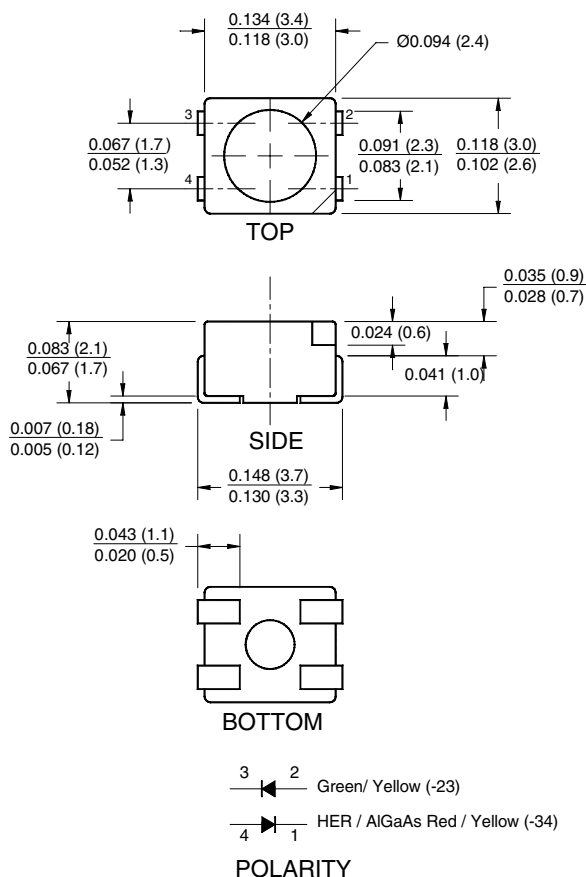
**QTLP670C-23** HER/Yellow

**QTLP670C-24** HER/Green

**QTLP670C-34** Yellow/Green

**QTLP670C-74** AlGaAs Red/Green

## PACKAGE DIMENSIONS



### NOTE:

Dimensions for all drawings are in inches (mm).

## APPLICATIONS

- Automotive interior lighting
- Status indication for consumer electronics and office equipment

## DESCRIPTION

These dual color surface mount LEDs are designed with flat top and sides for the ease of pick-and-place by automatic placement equipment. They are compatible with convective IR and vapor phase reflow soldering. The package size and configuration conform to EIA-535 BAAC standard specification for case size 3528 tantalum capacitor. These LEDs are ideal for backlighting and optical coupling into light pipes.

## FEATURES

- 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

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

Parameter	Symbol	QTLP670C				Units
		-23	-24	-34	-74	
Continuous Forward Current	I <sub>F</sub>	30 / 30	30 / 30	30 / 30	30 / 30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>FM</sub>	160 / 160	160 / 160	160 / 160	180 / 160	mA
Reverse Voltage	V <sub>R</sub>	5	5	5	5	V
Power Dissipation	P <sub>D</sub>	84 / 84	84 / 84	84 / 84	72 / 84	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)

Parameter	Symbol	QTLP670C				Units
		-23	-24	-34	-74	
Luminous Intensity (mcd)	I <sub>V</sub>	5 / 2.5	5 / 15	2.5 / 15	10 / 15	I <sub>F</sub> = 20mA
Minimum		10 / 5	10 / 25	5 / 25	20 / 25	
Typical						
Forward Voltage (V)	V <sub>F</sub>	2.8 / 2.8	2.8 / 2.8	2.8 / 2.8	2.4 / 2.8	I <sub>F</sub> = 20mA
Maximum		2.0 / 2.0	2.0 / 2.1	2.0 / 2.1	1.9 / 2.1	
Typical						
Wavelength (nm)	λ <sub>P</sub>	635 / 585	635 / 565	585 / 565	660 / 565	I <sub>F</sub> = 20mA
Peak		630 / 590	630 / 570	590 / 570	645 / 570	
Dominant	λ <sub>D</sub>					
Spectral Line Half Width (nm)	Δλ	45 / 35	45 / 30	35 / 30	20 / 30	I <sub>F</sub> = 20mA
Viewing Angle (°)	2θ <sub>1/2</sub>	120	120	120	120	I <sub>F</sub> = 20mA

**QTLP670C-23** HER/Yellow

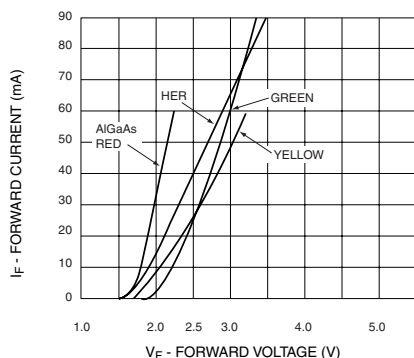
**QTLP670C-24** HER/Green

**QTLP670C-34** Yellow/Green

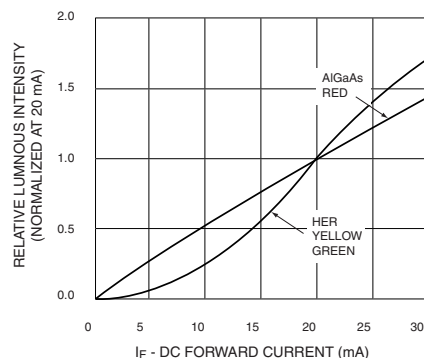
**QTLP670C-74** AlGaAs Red/Green

## TYPICAL PERFORMANCE CURVES

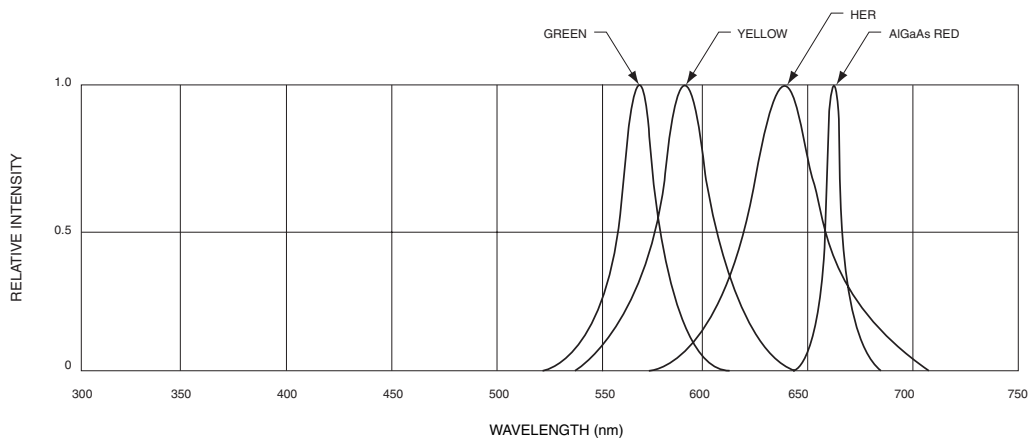
**Fig. 1 Forward Current vs. Forward Voltage**



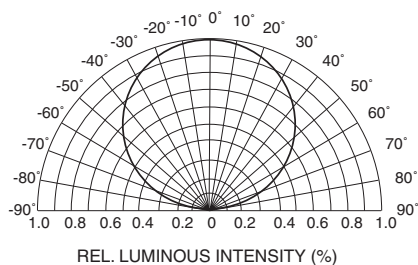
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



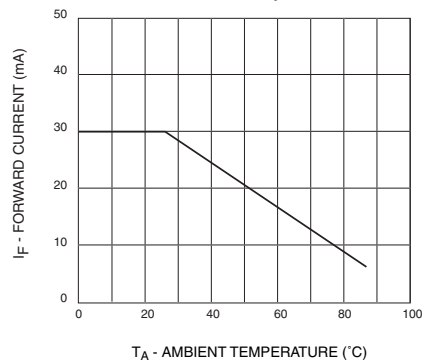
**Fig. 3 Relative Intensity vs. Peak Wavelength**



**Fig.4 Radiation Diagram**



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





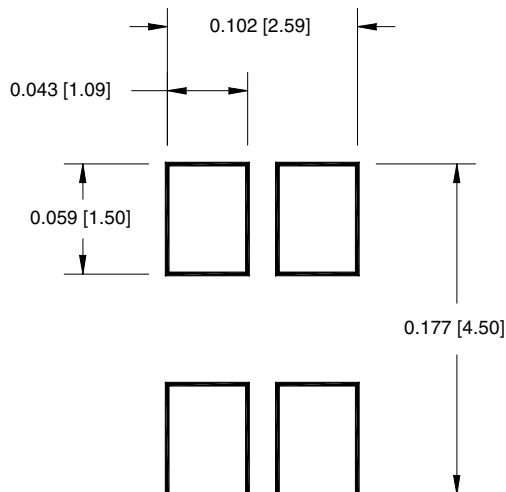
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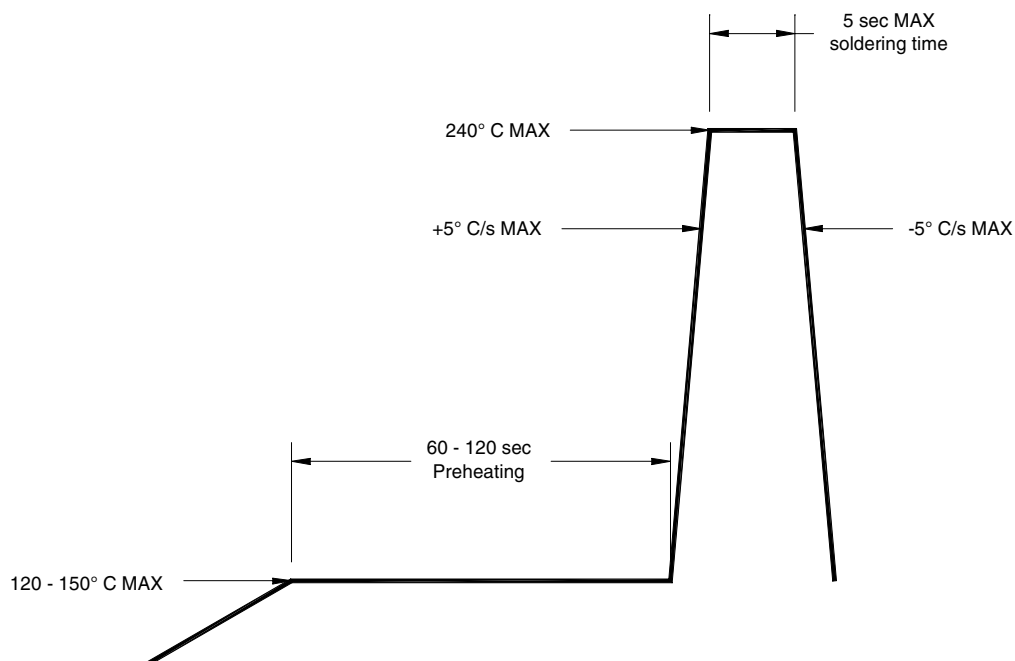
**QTLP670C-34** Yellow/Green

**QTLP670C-74** AlGaAs Red/Green

### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



### RECOMMENDED IR REFLOW SOLDERING PROFILE



# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-4

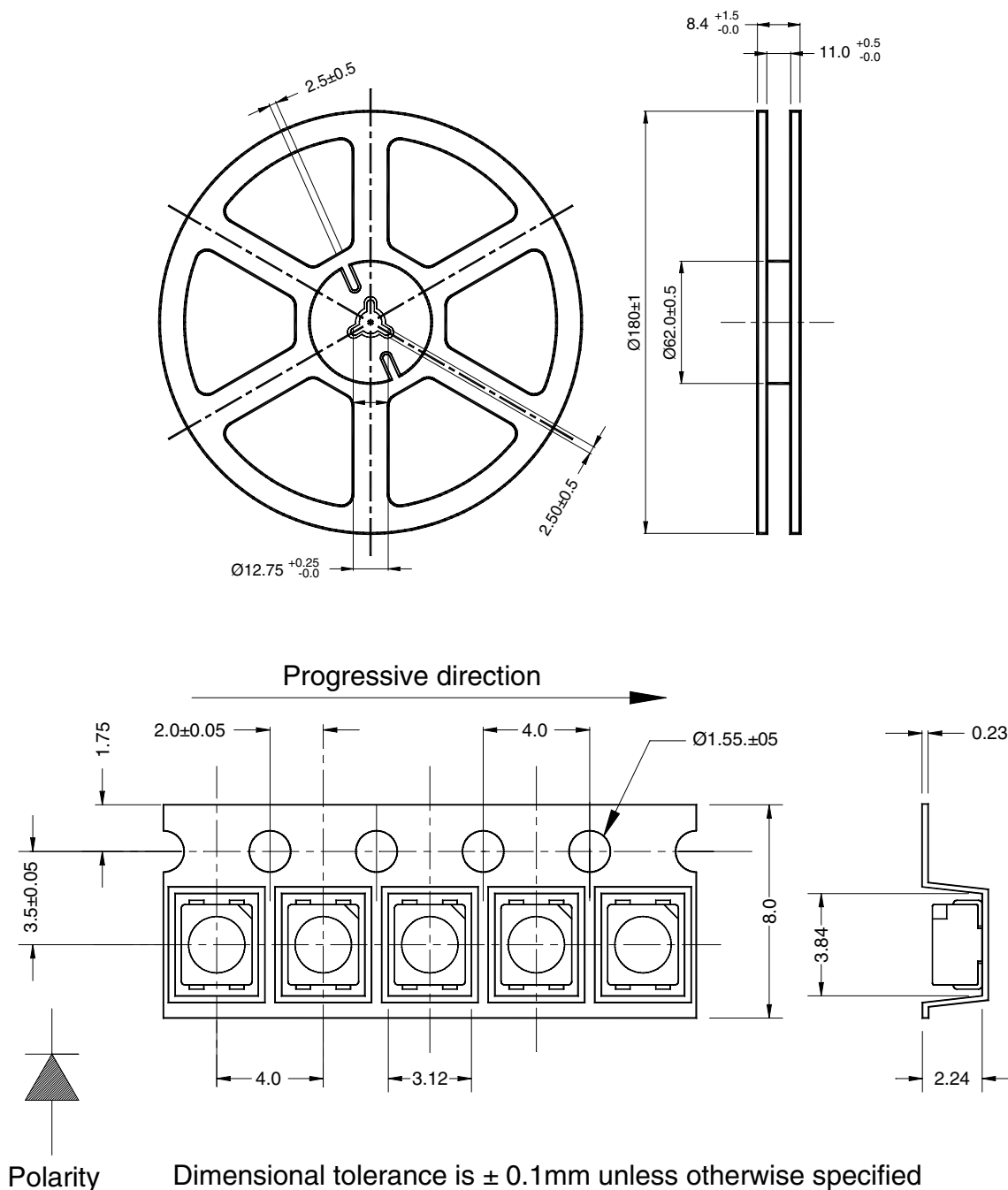
## QTLP670C-23 HER/Yellow

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## QTL P670C-34 Yellow/Green

## QTLP670C-74 AlGaAs Red/Green

## 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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