



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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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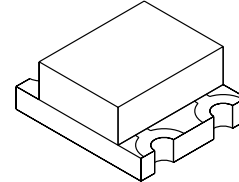
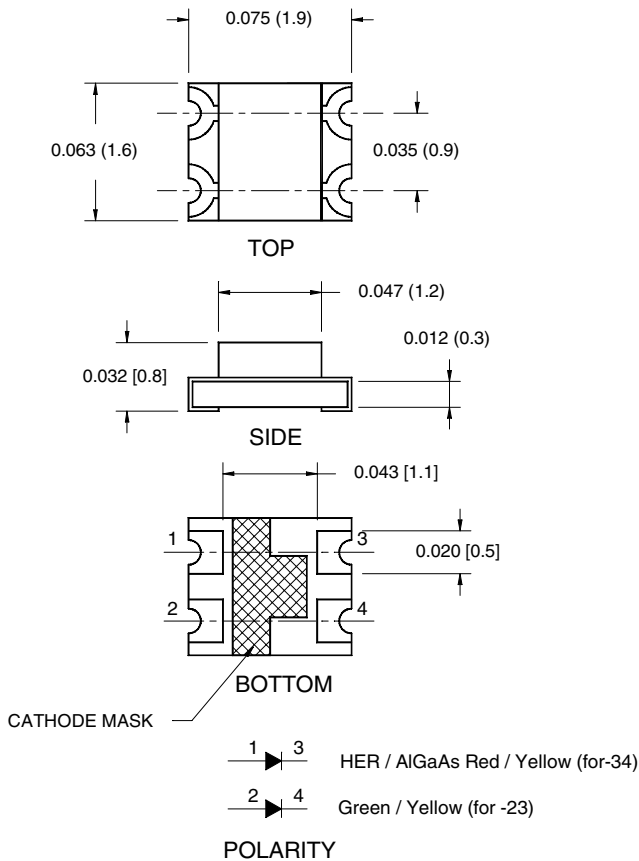
QTLP600C-23 HER/Yellow

QTLP600C-34 Yellow/Green

QTLP600C-24 HER/Green

QTLP600C-74 AlGaAs Red/Green

## PACKAGE DIMENSIONS



### NOTE:

Dimensions for all drawings are in inches (mm).

## APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

## DESCRIPTION

These bi-color surface mount chip LEDs are designed to fit industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal for backlighting applications and panel illumination.

## FEATURES

- Miniature footprint - 1.9(L) X 1.6(W) X 0.8(H) mm
- 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

**QTLP600C-23** HER/Yellow

**QTLP600C-24** HER/Green

**QTLP600C-34** Yellow/Green

**QTLP600C-74** AlGaAs Red/Green

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

Parameter	Symbol	QTLP600C				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	QTLP600C				Units
		-23	-24	-34	-74	
Luminous Intensity (mcd)	I <sub>v</sub>	4 / 2.5	4 / 7.5	2.5 / 7.5	10 / 7.5	I <sub>F</sub> = 20mA
Minimum		7 / 4	7 / 12.5	4 / 12.5	20 / 12.5	
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>	130	130	130	130	I <sub>F</sub> = 20mA

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## TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

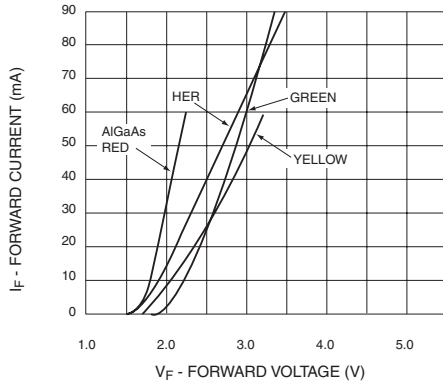


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

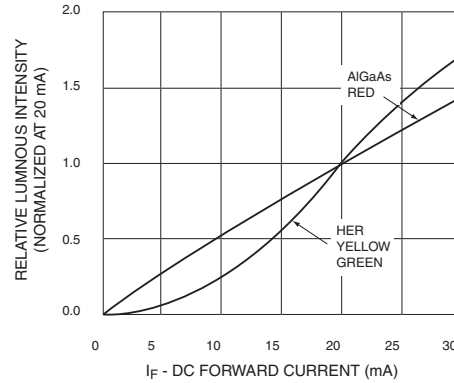


Fig. 3 Relative Intensity vs. Peak Wavelength

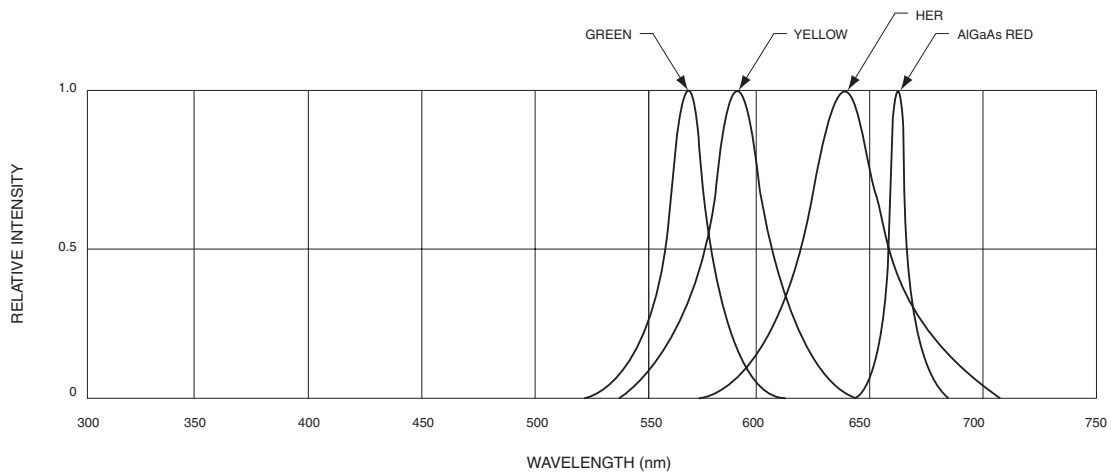


Fig. 4 Radiation Diagram

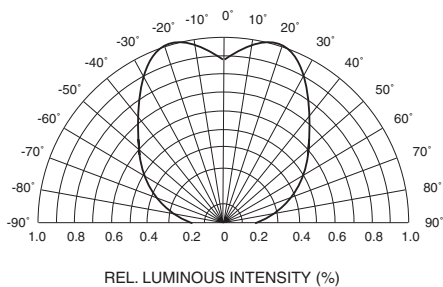
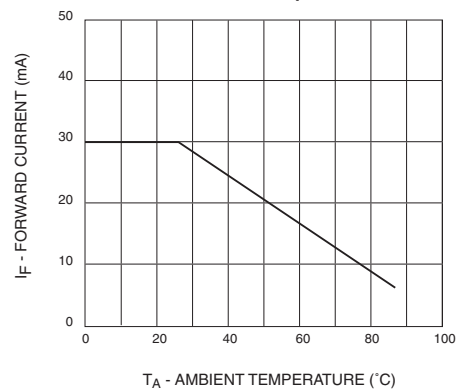


Fig. 5 Maximum Forward Current vs. Ambient Temperature



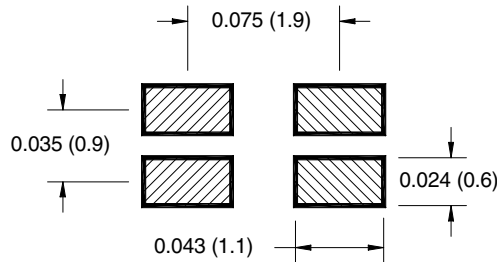
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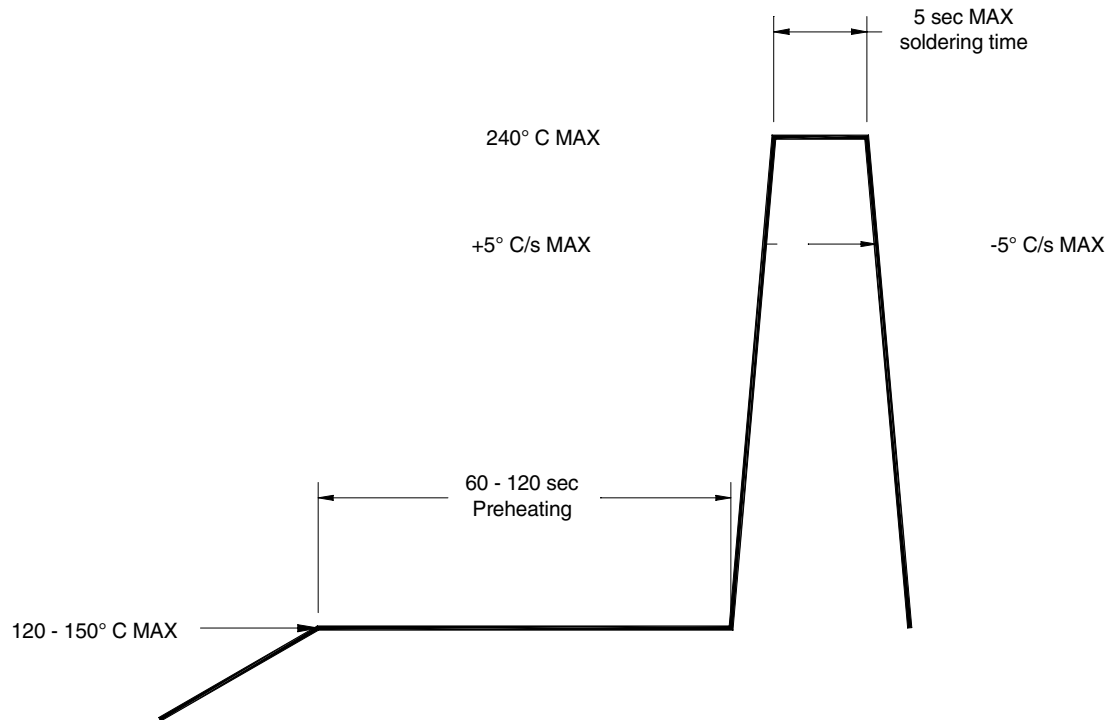
**QTLP600C-34** Yellow/Green

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**RECOMMENDED PRINTED CIRCUIT BOARD PATTERN**



**RECOMMENDED IR REFLOW SOLDERING PROFILE**



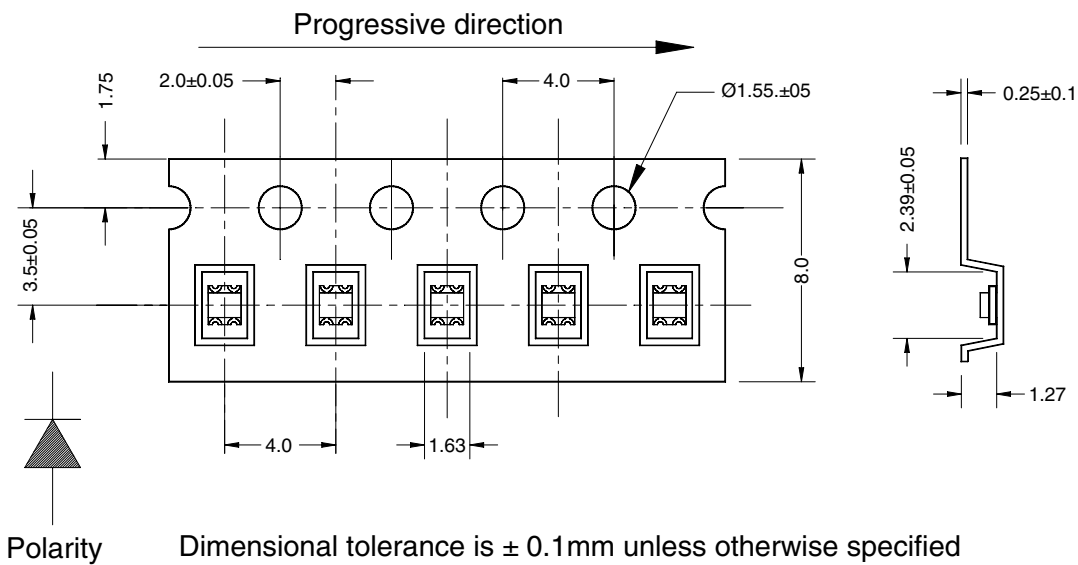
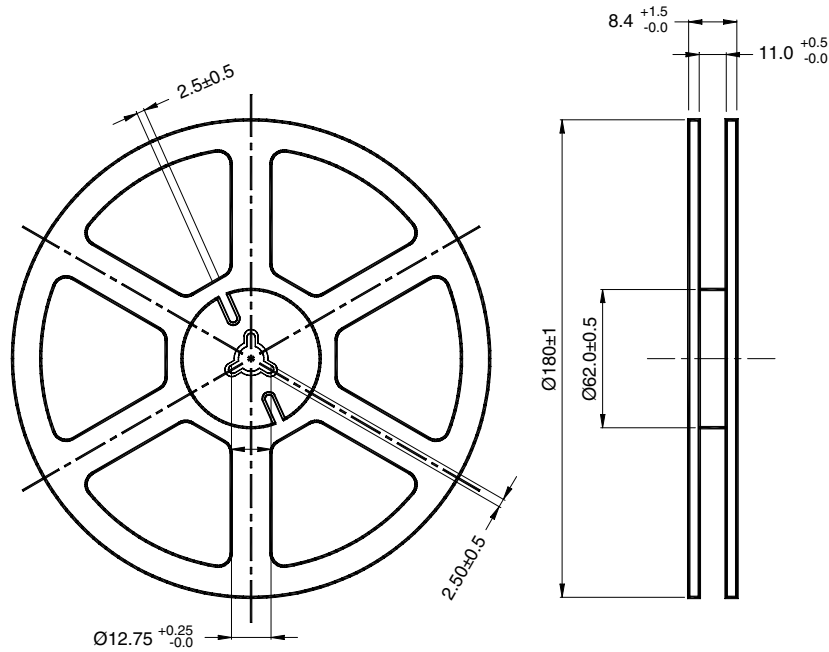
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**TAPE AND REEL DIMENSIONS**



Polarity

Dimensional tolerance is  $\pm 0.1$  mm unless otherwise specified

Angle:  $\pm 0.5$

Unit: mm

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