

FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 0606

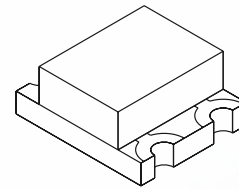
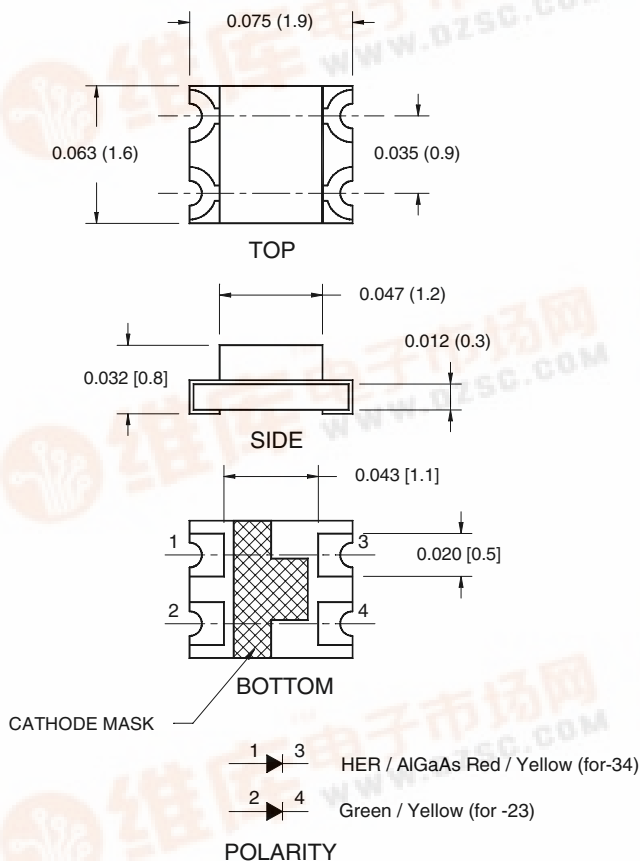
QTLP600C-23 HER/Yellow

QTLP600C-24 HER/Green

QTLP600C-34 Yellow/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



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ABSOLUTE MAXIMUM RATINGS (T_A = 25°C Unless otherwise specified)

Parameter	Symbol	QTLP600C				Units
		-23	-24	-34	-74	
Continuous Forward Current	I _F	30 / 30	30 / 30	30 / 30	30 / 30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	160 / 160	160 / 160	160 / 160	180 / 160	mA
Reverse Voltage	V _R	5	5	5	5	V
Power Dissipation	P _D	84 / 84	84 / 84	84 / 84	72 / 84	mW
Operating Temperature	T _{OPR}	-40 to +85				°C
Storage Temperature	T _{STG}	-40 to +90				°C
Lead Soldering Time	T _{SOL}	260 for 5 sec				°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

Parameter	Symbol	QTLP600C				Units
		-23	-24	-34	-74	
Luminous Intensity (mcd)	I _V	4 / 2.5	4 / 7.5	2.5 / 7.5	10 / 7.5	I _F = 20mA
Minimum		7 / 4	7 / 12.5	4 / 12.5	20 / 12.5	
Forward Voltage (V)	V _F	2.8 / 2.8	2.8 / 2.8	2.8 / 2.8	2.4 / 2.8	I _F = 20mA
Maximum		2.0 / 2.0	2.0 / 2.1	2.0 / 2.1	1.9 / 2.1	
Typical						
Wavelength (nm)	λ _P	635 / 585	635 / 565	585 / 565	660 / 565	I _F = 20mA
Peak		630 / 590	630 / 570	590 / 570	645 / 570	
Dominant	λ _D					
Spectral Line Half Width (nm)	Δλ	45 / 35	45 / 30	35 / 30	20 / 30	I _F = 20mA
Viewing Angle (°)	2Θ _{1/2}	130	130	130	130	I _F = 20mA

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

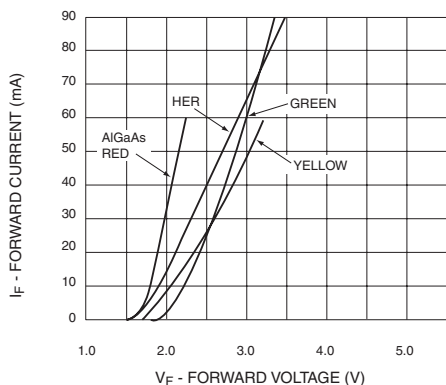


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

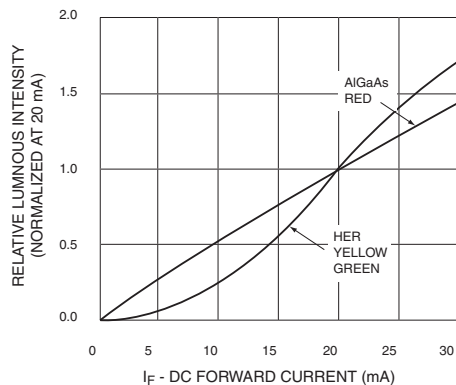


Fig. 3 Relative Intensity vs. Peak Wavelength

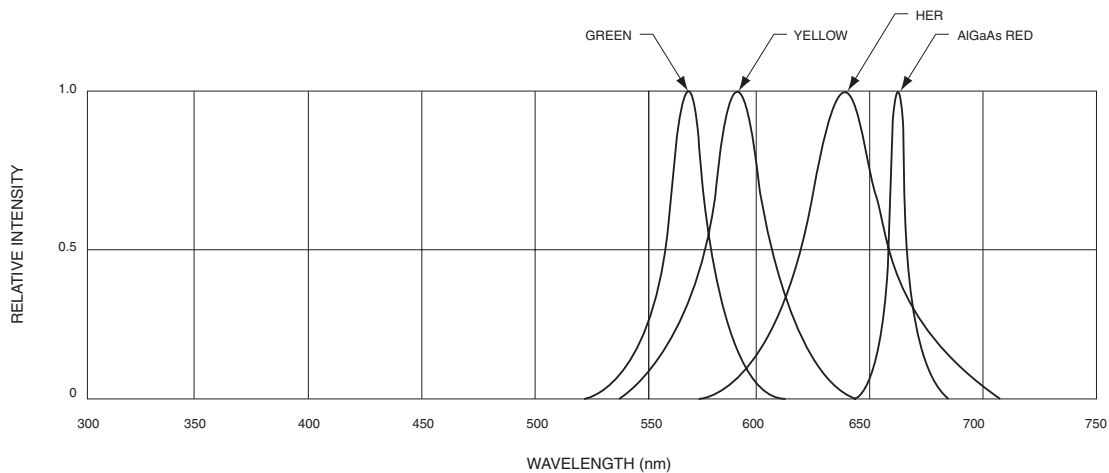


Fig.4 Radiation Diagram

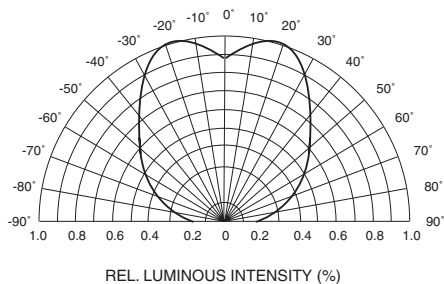
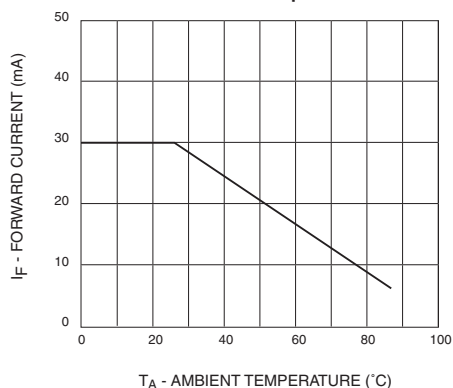


Fig.5 Maximum Forward Current vs. Ambient Temperature



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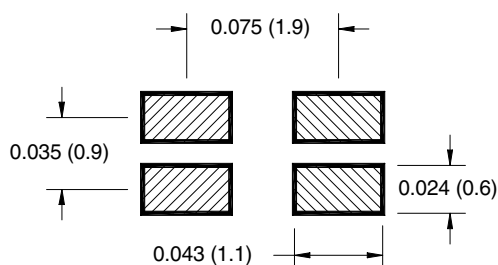
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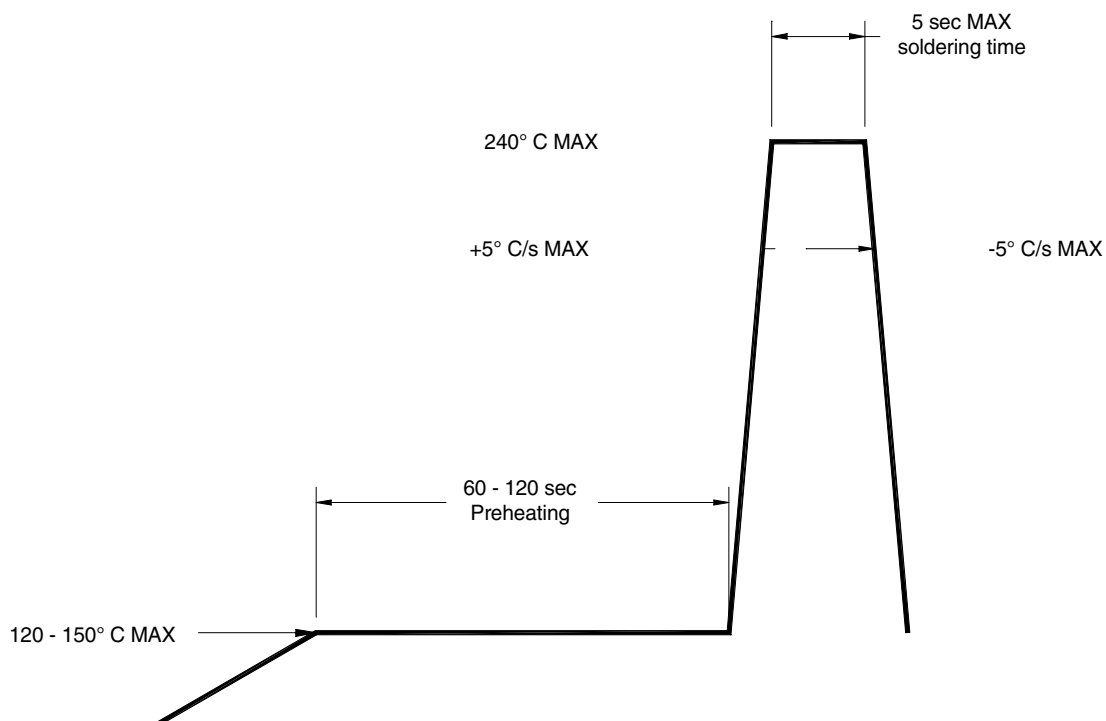
QTLP600C-34 Yellow/Green

QTLP600C-74 AlGaAs Red/Green

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



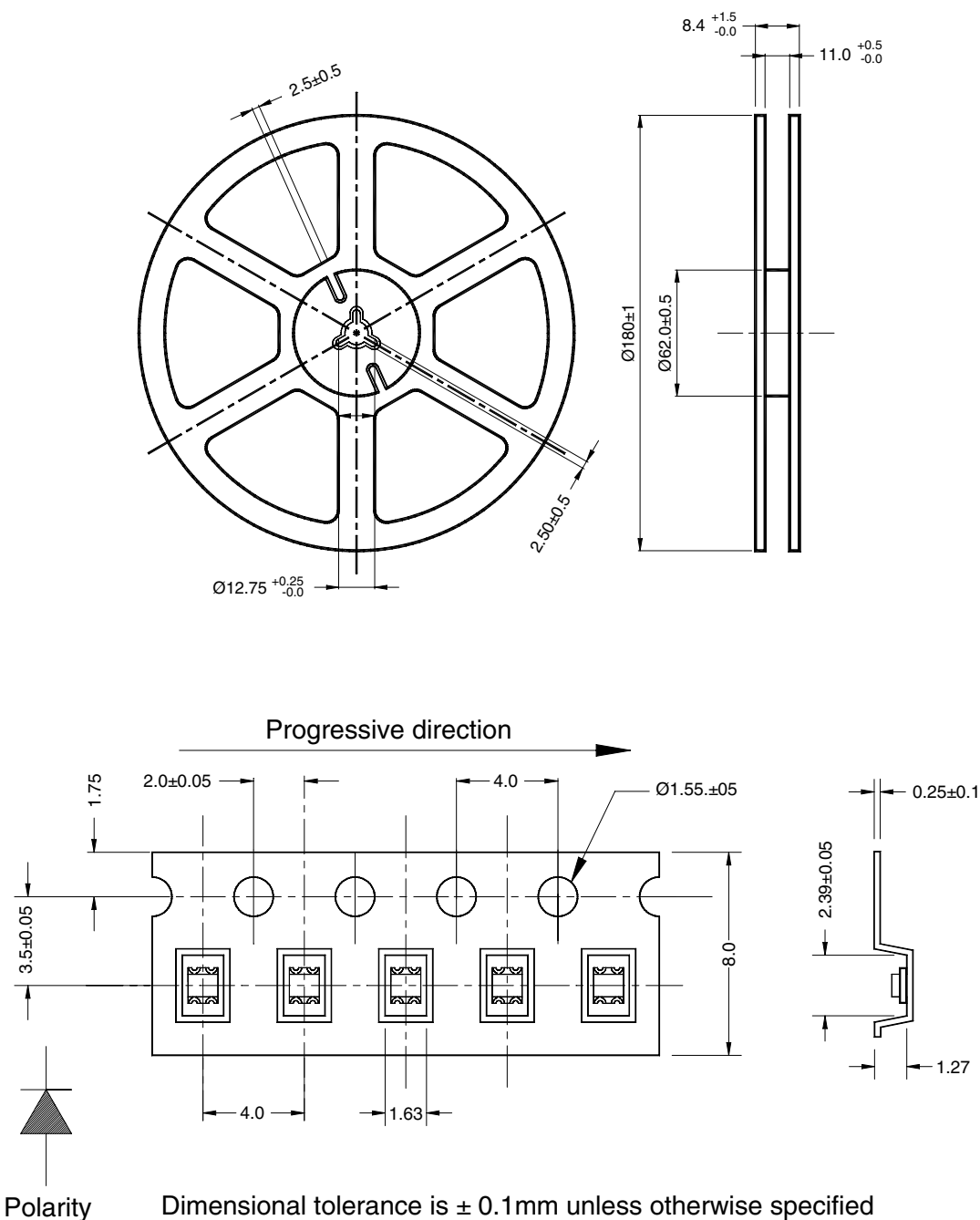
RECOMMENDED IR REFLOW SOLDERING PROFILE





QTLP600C-24 HER/Green

QTLP600C-74 AlGaAs Red/Green



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

Angle: ± 0.5

Unit: mm



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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.