



SURFACE MOUNT LED LAMP

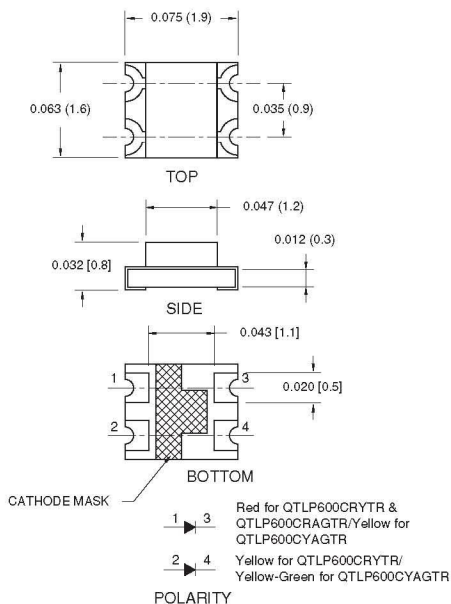
SUPER BRIGHT 0606

QTL600CRYTR Red/Yellow

QTL600CRAGTR Red/Yellow-Green

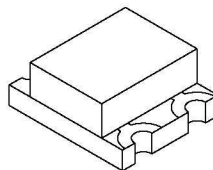
QTL600CYAGTR Yellow/Yellow-Green

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).



APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

DESCRIPTION

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

FEATURES

- Miniature footprint - 1.9(L) X 1.6(W) X 0.8(H) mm
- AllnGap technology
- 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 ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	QTLP600C			Unit
		-RY	-RAG	-YAG	
Continuous Forward Current	I_F	30 / 25	30 / 30	25 / 30	mA
Peak Forward Current ($f = 1.0\text{ KHz}$, Duty Factor = 1/10)	I_{FM}	160 / 120	160 / 160	120/160	mA
Reverse Voltage	V_R	5	5	5	V
Power Dissipation	P_D	72 / 60	72 / 72	60 / 72	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 ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	QTLP600C			Units
		-RY	-YAG	-RAG	
Luminous Intensity (mcd)	I_v				$I_F = 20\text{ mA}$
Minimum		10 / 10	10 / 8	10 / 8	
Typical		30 / 30	30 / 15	30 / 15	
Forward Voltage (V)	V_F				$I_F = 20\text{ mA}$
Maximum		2.4 / 2.4	24 / 24	2.4 / 2.4	
Typical		2.0 / 2.0	20 / 20	2.0 / 2.0	
Wavelength (nm)					$I_F = 20\text{ mA}$
Peak	λ_P	630 / 590	590 / 575	630 / 575	
Dominant	λ_D	624 / 589	584 / 573	624 / 573	
Spectral Line Half Width (nm)	$\Delta\lambda$	20 / 15	15 / 20	20 / 20	$I_F = 20\text{ mA}$
Viewing Angle ($^\circ$)	$2\Theta_{1/2}$	130	130	130	$I_F = 20\text{ mA}$



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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

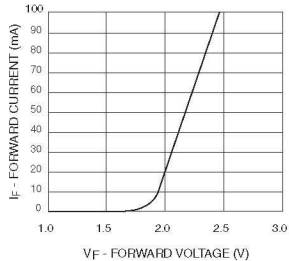


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

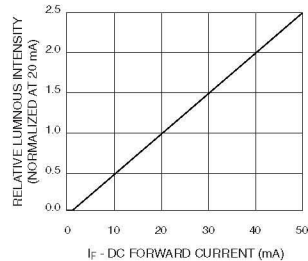


Fig. 3 Relative Intensity vs. Peak Wavelength

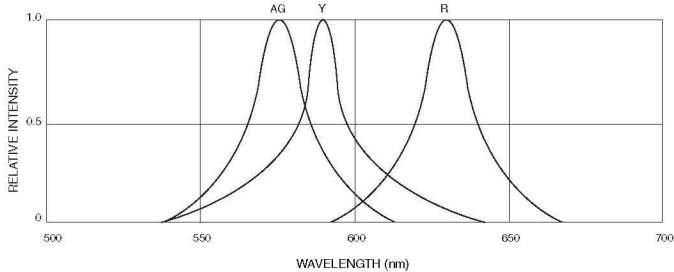


Fig.4 Radiation Diagram

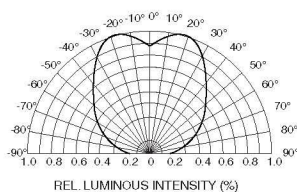
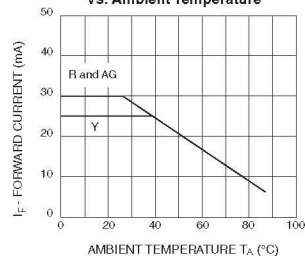


Fig.5 Maximum Forward Current vs. Ambient Temperature





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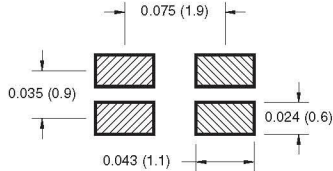
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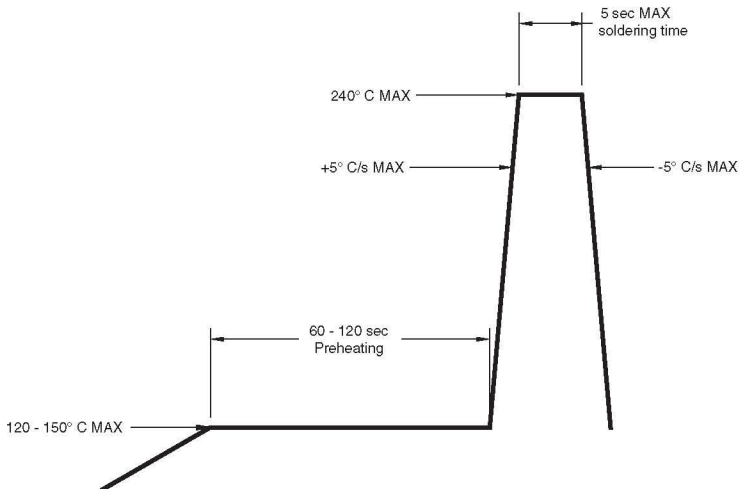
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE





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TAPE AND REEL DIMENSIONS





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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.