

# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT 0603 (0.8 mm Height)

### QTLP600C

QTLP600C-2 HER

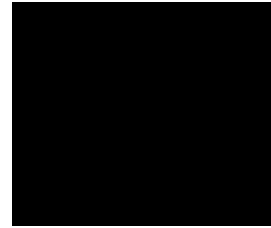
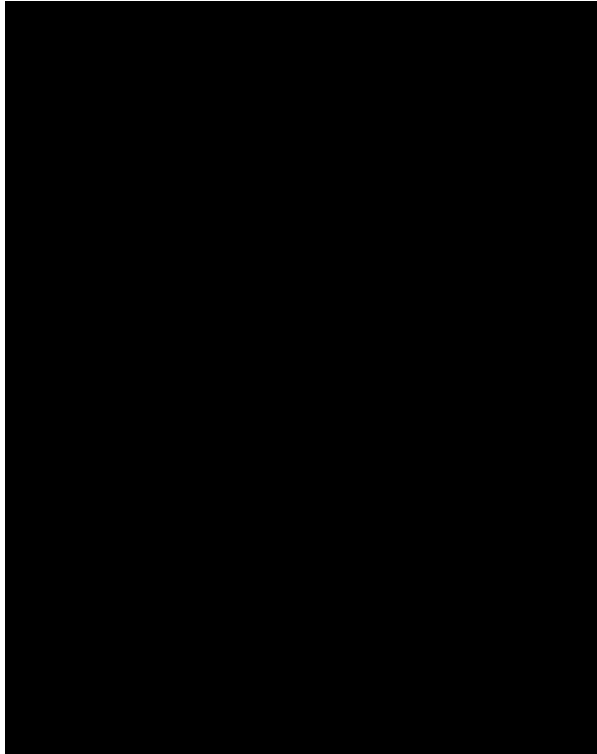
QTLP600C-3 Yellow

QTLP600C-4 Green

QTLP600C-7 AlGaAs Red

QTLP600C-B Blue

#### PACKAGE DIMENSIONS



**NOTE:**

1. Dimensions for all drawings are in inches (mm).
2. Cathode for -2, -3, -4 and B. Anode for -7.

#### APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

#### DESCRIPTION

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

#### FEATURES

- Miniature footprint - 1.6(L) X 0.8(W) X 0.8(H) mm
- Wide viewing angle of 100°
- 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					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 +90					$^\circ\text{C}$
Lead Soldering Time	$T_{SOL}$	260 for 5 sec					$^\circ\text{C}$

ELECTRICAL / OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )							
Part Number	Symbol	QTLP600C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	$I_V$	5	5	9	10	15	$I_F = 20\text{mA}$
Minimum							
Typical		9	9	18	20	20	
Forward Voltage (V)	$V_F$	2.8	2.8	2.8	2.4	4.5	$I_F = 20\text{mA}$
Maximum							
Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	$\lambda_P$	635	585	565	660	430	$I_F = 20\text{mA}$
Peak							
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 ( $^\circ$ )	$2\Theta_{1/2}$	100	100	100	100	100	$I_F = 20\text{mA}$

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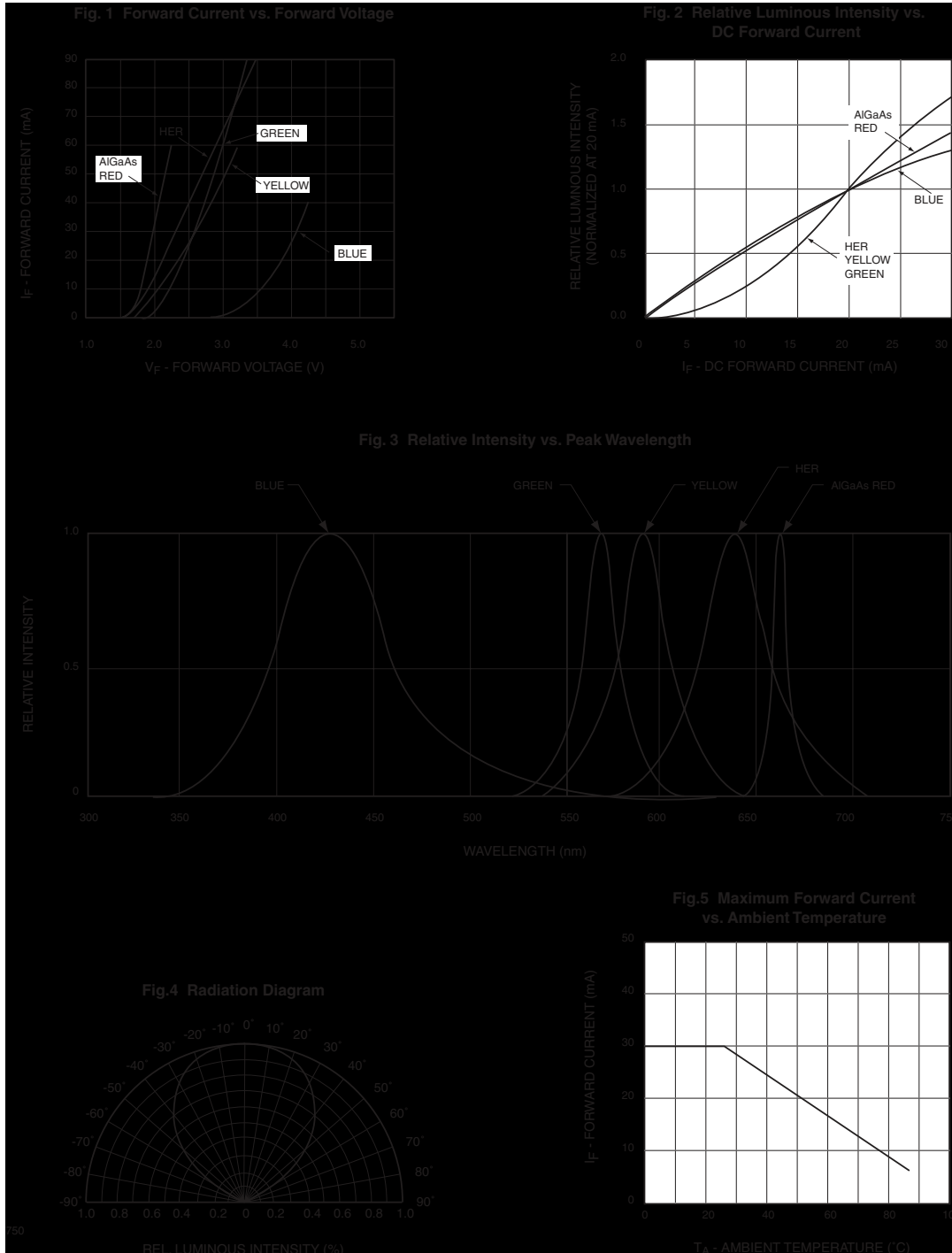
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### TYPICAL PERFORMANCE CURVES





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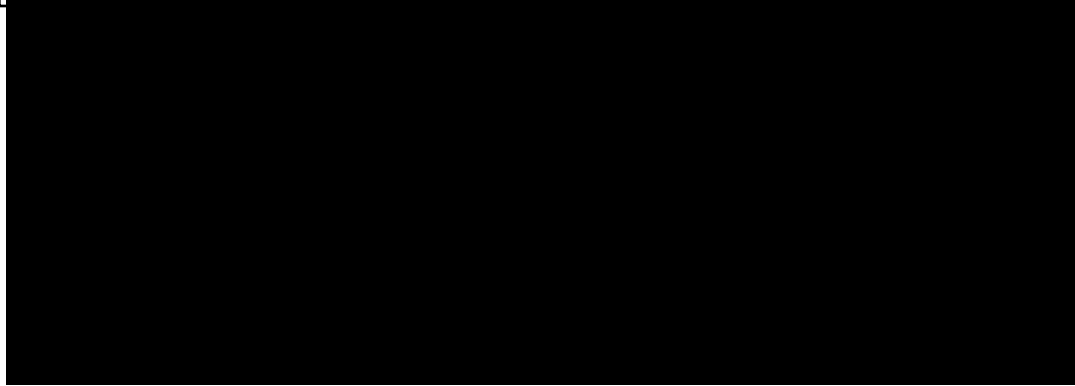
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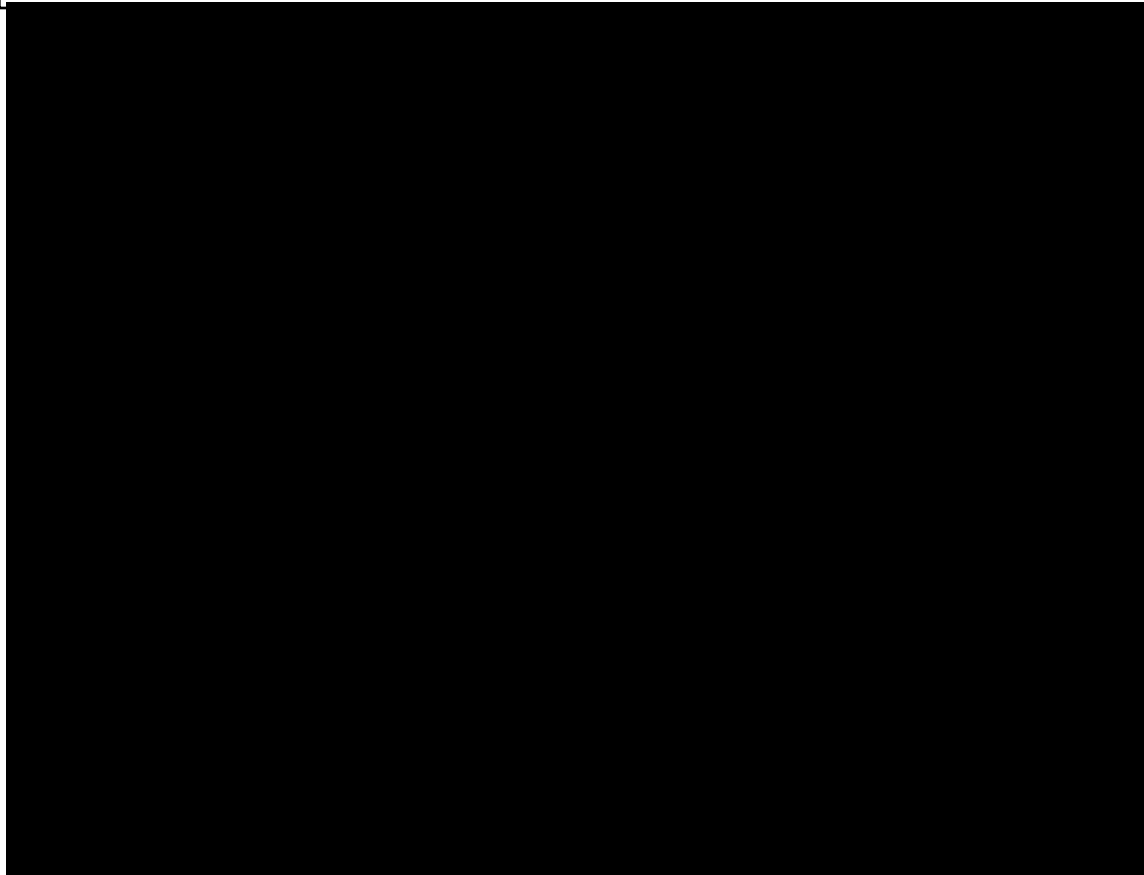
QTLP600C-7 AlGaAs Red

QTLP600C-B Blue

#### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



#### RECOMMENDED IR REFLOW SOLDERING PROFILE



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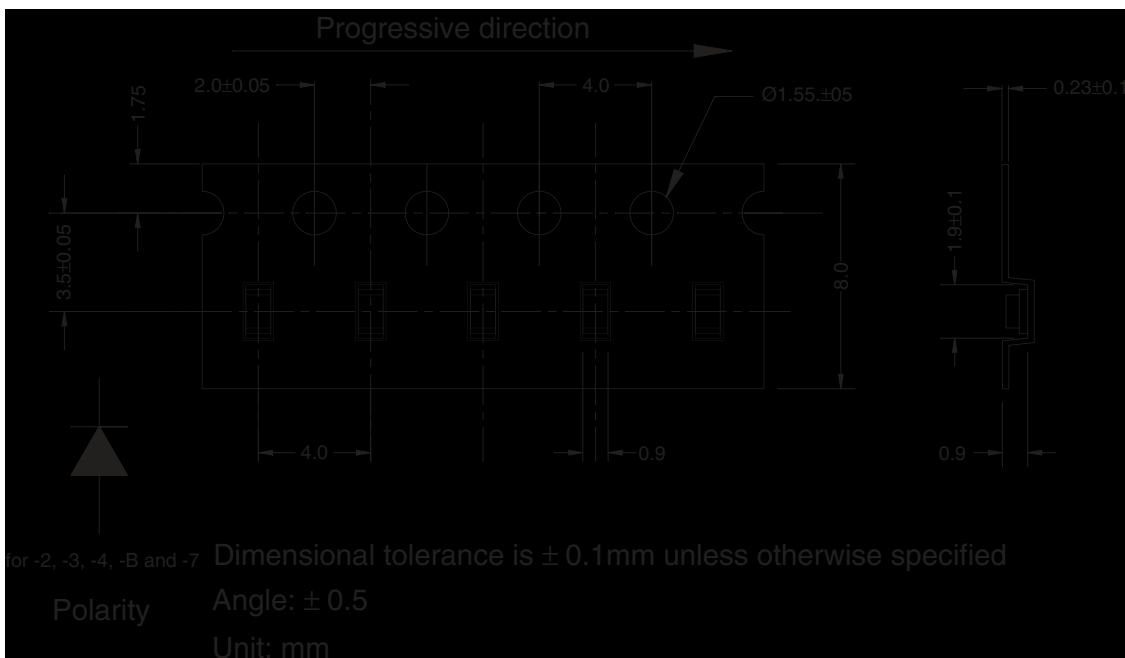
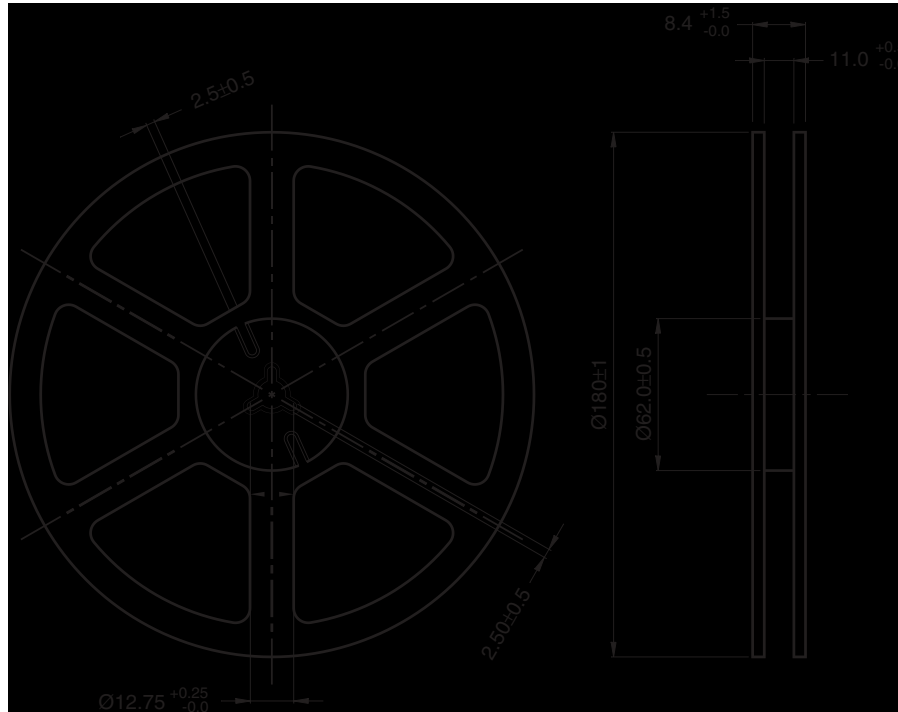
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#### TAPE AND REEL DIMENSIONS





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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.