

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Inner Lens)

QTLP651C-2 HER

QTLP651C-3 Yellow

QTLP651C-4 Green

QTLP651C-7 AlGaAs Red

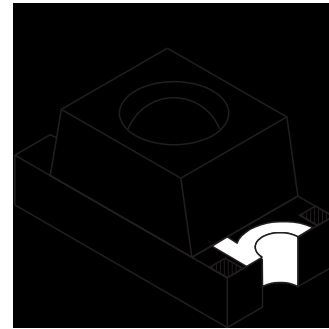
QTLP651C-B Blue

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. The package features a recessed, inner lens that focuses light output, offering greater luminous intensity for direct viewing.

FEATURES

- Small footprint - 3.0(L) X 1.5(W) X 1.5(H) mm
- Moisture-proof packaging
- Narrow viewing angle of 20°
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel;
- Water clear optics
- 2,000 units per reel

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ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	QTLP651C					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	QTLP651C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I_V	9	10	20	30	25	$I_F = 10\text{mA}$
Minimum							
Typical		15	18	35	50	35	
Forward Voltage (V)	V_F	2.8	2.8	2.8	2.4	4.5	$I_F = 10\text{mA}$
Maximum							
Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	λ_P	635	585	565	660	430	$I_F = 10\text{mA}$
Peak							
Dominant	λ_D	630	590	570	645	465	
Spectral Line Half Width (nm)	$\Delta\lambda$	45	35	30	20	65	$I_F = 10\text{mA}$
Viewing Angle ($^\circ$)	2U1/2	20	20	20	20	20	$I_F = 10\text{mA}$

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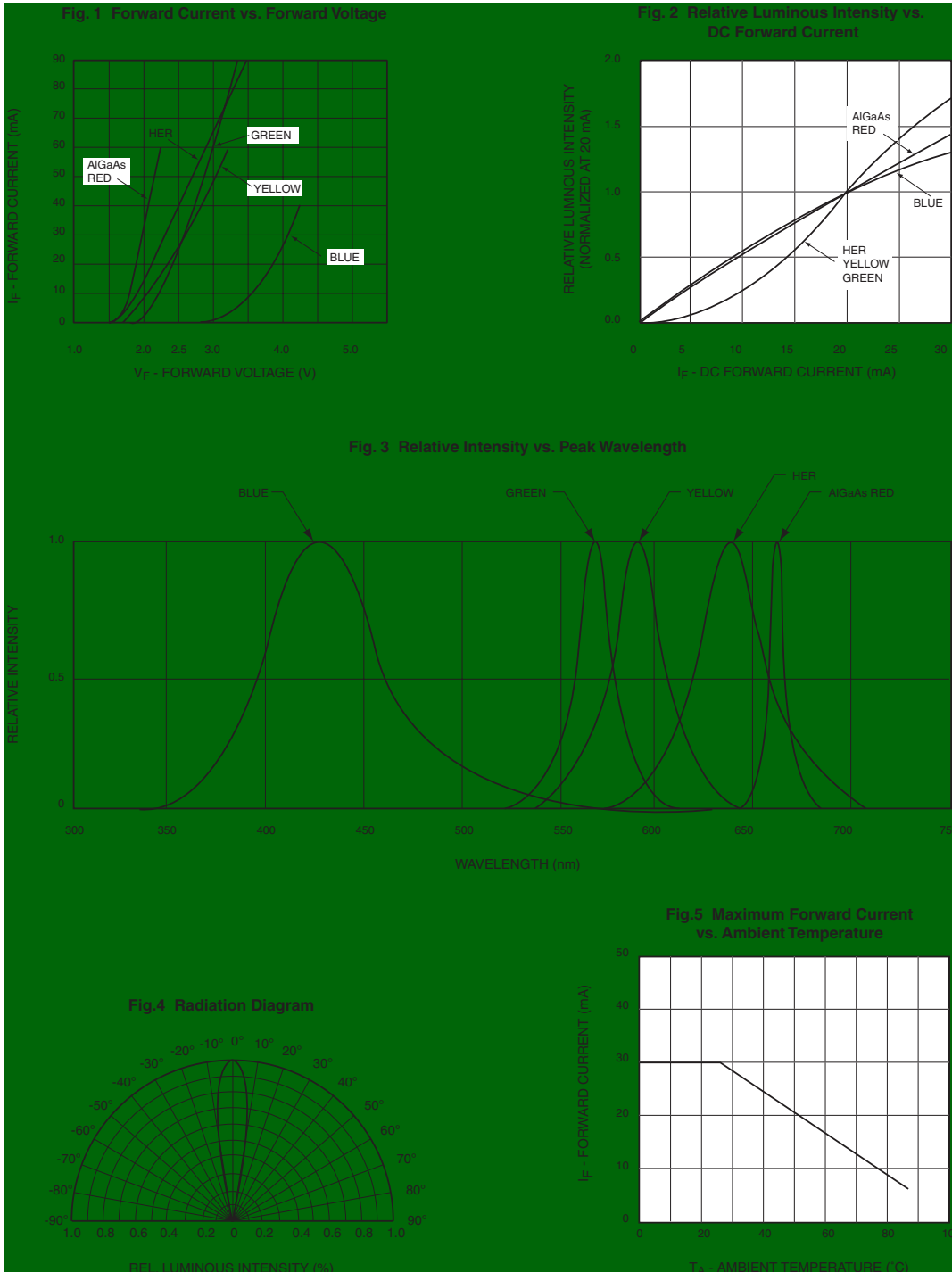
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TYPICAL PERFORMANCE CURVES





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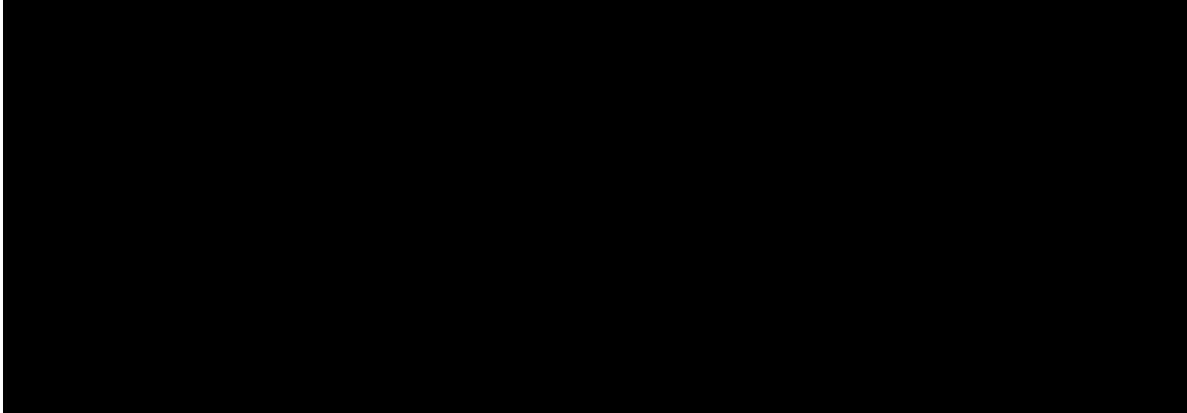
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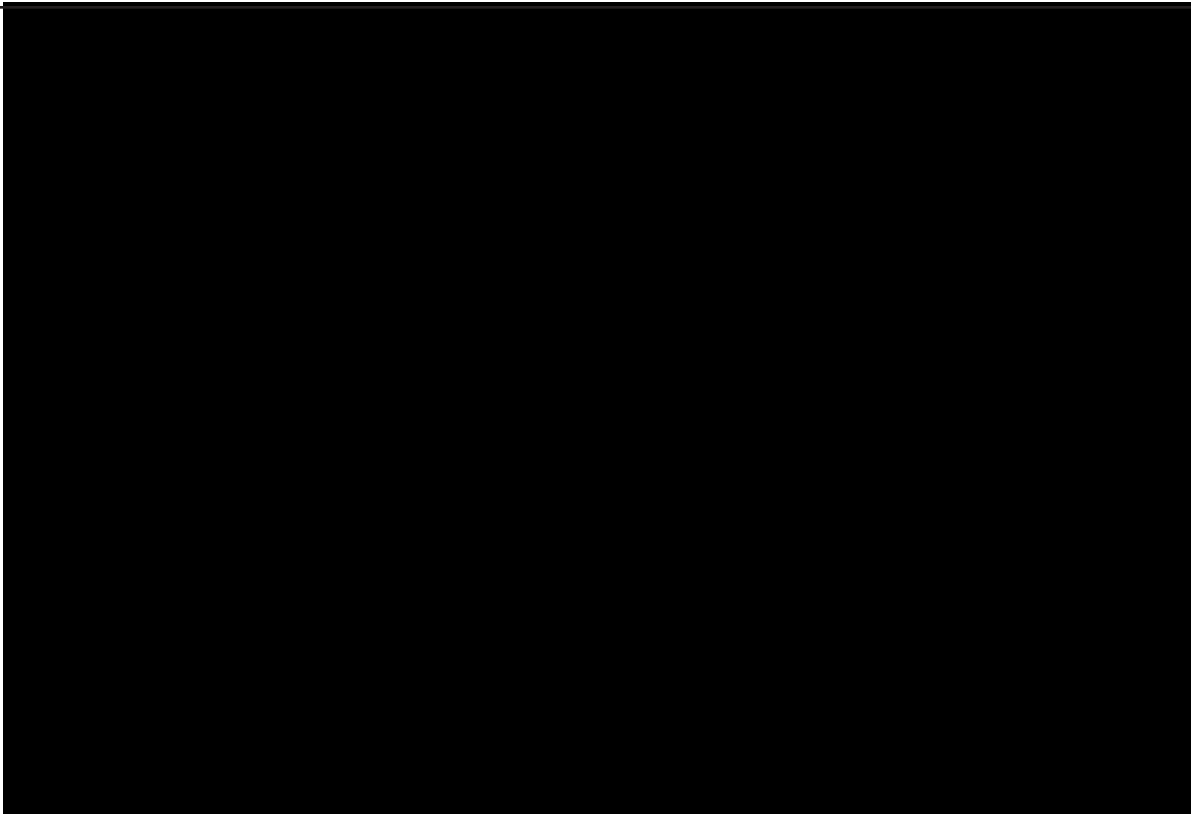
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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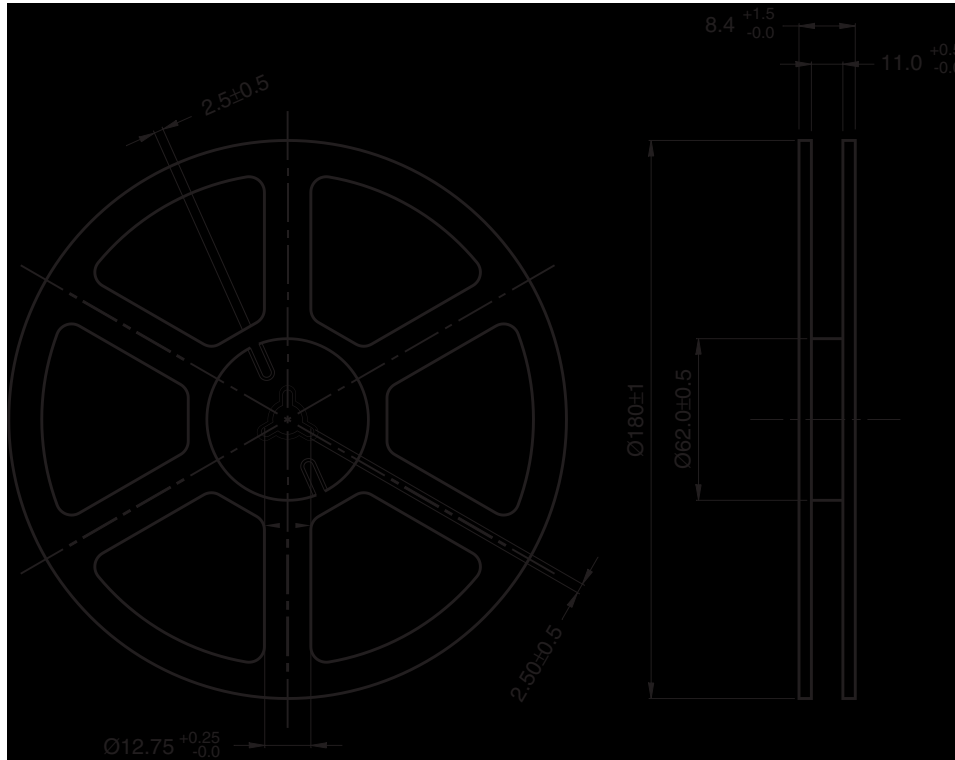
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TAPE AND REEL DIMENSIONS



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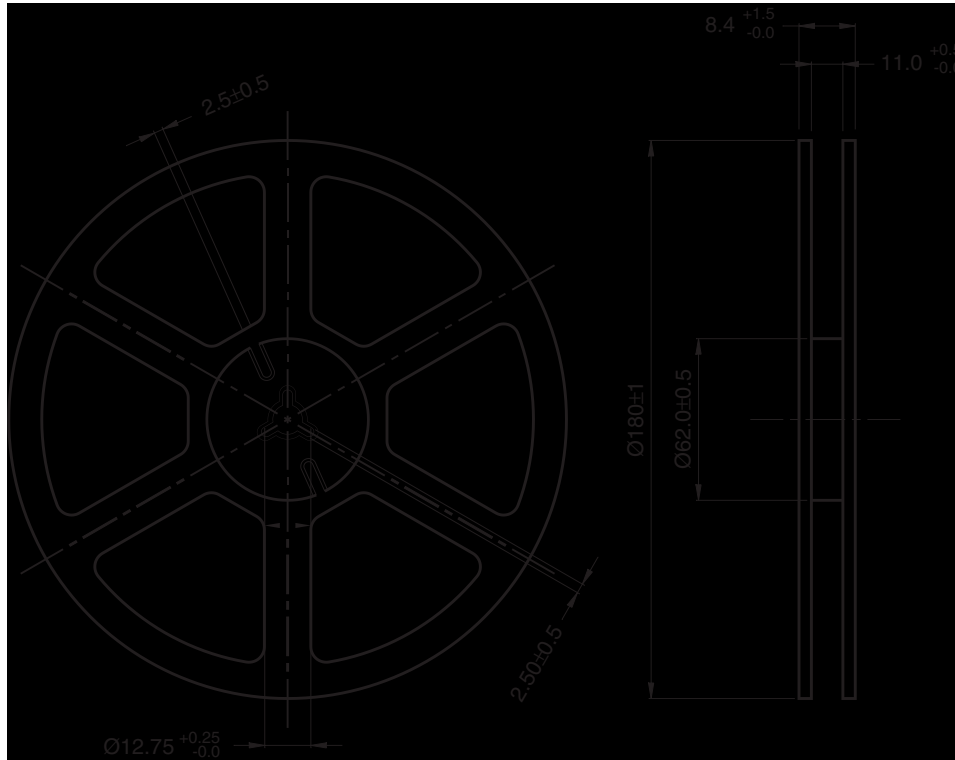
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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.