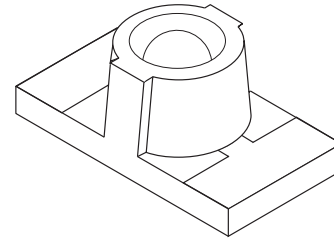
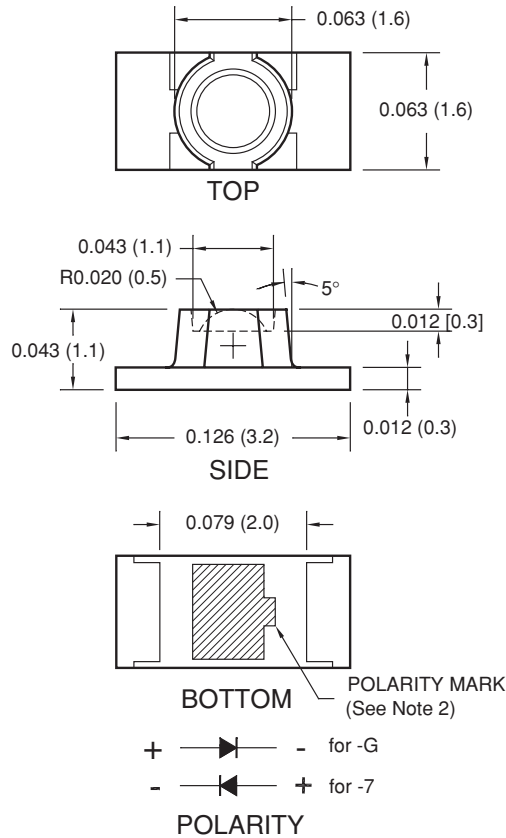


PACKAGE DIMENSIONS



NOTE:
1. Dimensions for all drawings are in inches (mm).
2. Cathode for -G. Anode for -7.

APPLICATIONS

- Keypad backlighting
- Push-button backlighting

DESCRIPTION

These surface mount chip LEDs are designed to fit industry standard footprint. They are reverse mountable and designed to emit light through a small cut-out hole in the PC board.

FEATURES

- Small footprint - 3.2(L) X 1.6(W) X 1.1(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

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Reverse Mount with Inner Lens)

QTLP653C-7 AlGaAs Red

QTLP653C-G Green

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

Parameter	Symbol	QTLP653C		Units
		-7	-G	
Continuous Forward Current	I_F	30	30	mA
Peak Forward Current ($f = 1.0 \text{ KHz}$, Duty Factor = 1/10)	I_{FM}	180	100	mA
Reverse Voltage	V_R	5	5	V
Power Dissipation	P_D	72	84	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	QTLP653C		Condition
		-7	-G	
Luminous Intensity (mcd)	I_V	25	15	$I_F = 20\text{mA}$
Minimum				
Typical		50	35	
Forward Voltage (V)	V_F	2.4	2.8	$I_F = 20\text{mA}$
Maximum				
Typical		1.9	2.1	
Wavelength (nm)	λ_P	660	565	$I_F = 20\text{mA}$
Peak				
Dominant	λ_D	645	570	
Spectral Line Half Width (nm)	$\Delta\lambda$	20	30	$I_F = 20\text{mA}$
Viewing Angle ($^\circ$)	$2\Theta_{1/2}$	130	130	$I_F = 20\text{mA}$

QTLP653C-7 AlGaAs Red

QTLP653C-G Green

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

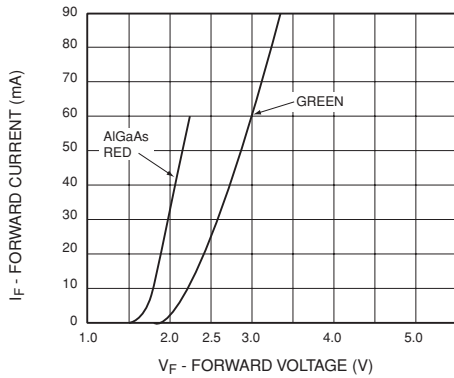


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

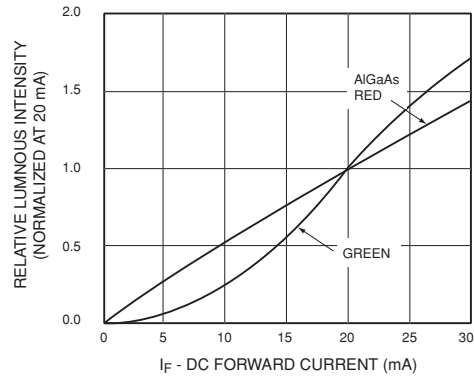


Fig. 3 Relative Intensity vs. Peak Wavelength

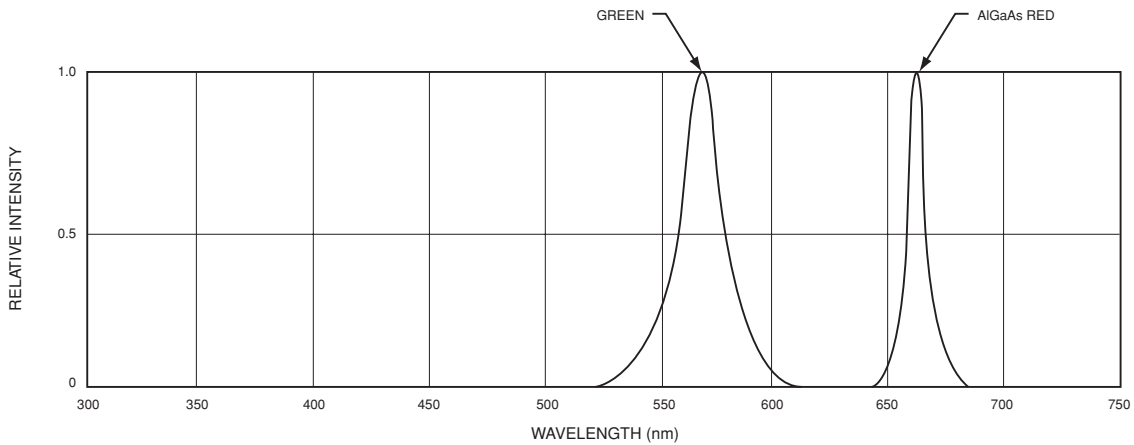


Fig.4 Radiation Diagram

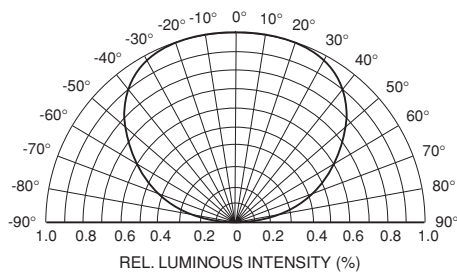
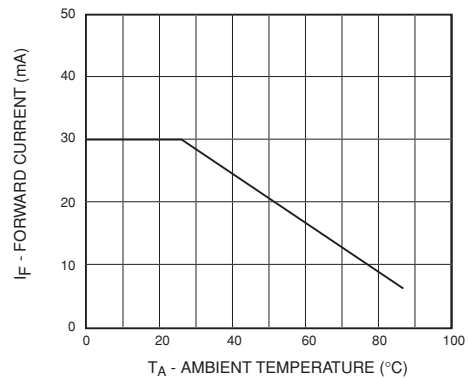


Fig.5 Maximum Forward Current vs. Ambient Temperature



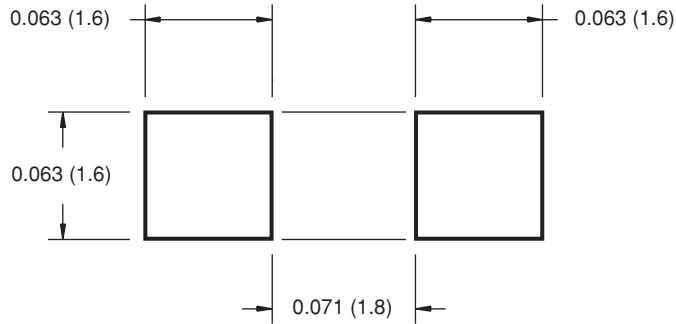
SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Reverse Mount with Inner Lens)

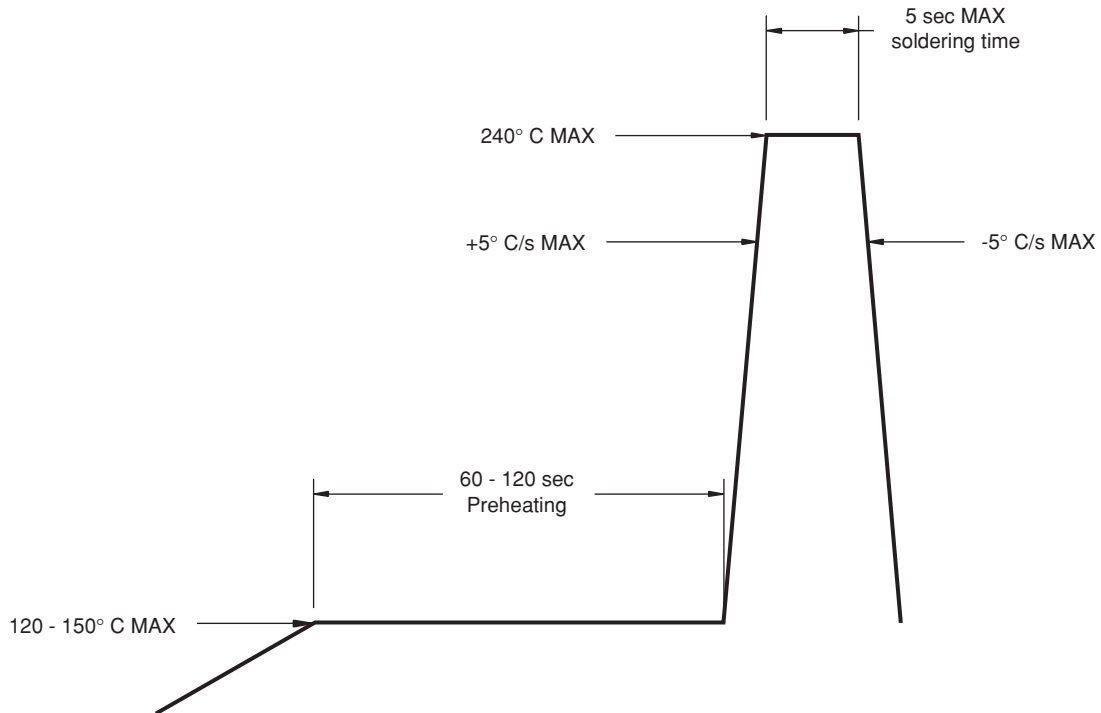
QTLP653C-7 AlGaAs Red

QTLP653C-G Green

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



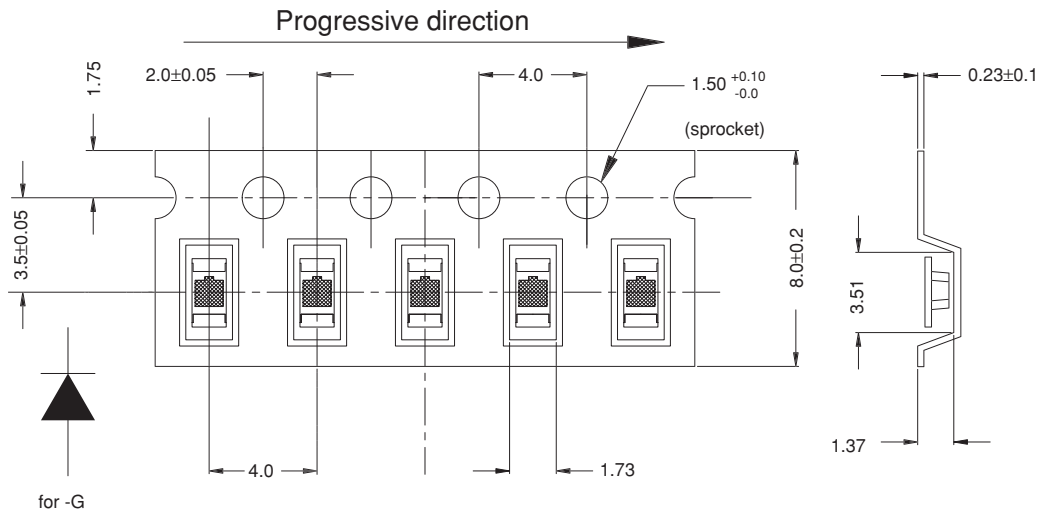
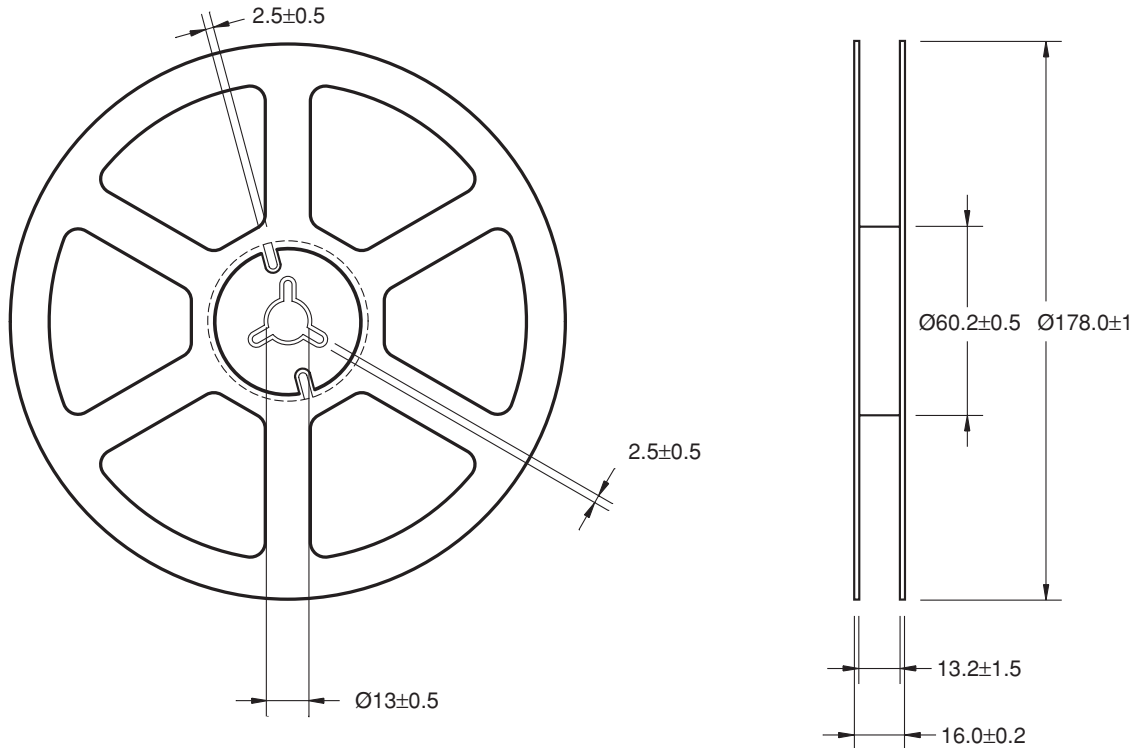
SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Reverse Mount with Inner Lens)

QTLP653C-7 AlGaAs Red

QTLP653C-G Green

TAPE AND REEL DIMENSIONS



Polarity

Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

Polarity marks on the sprocket side.

SURFACE MOUNT LED LAMP

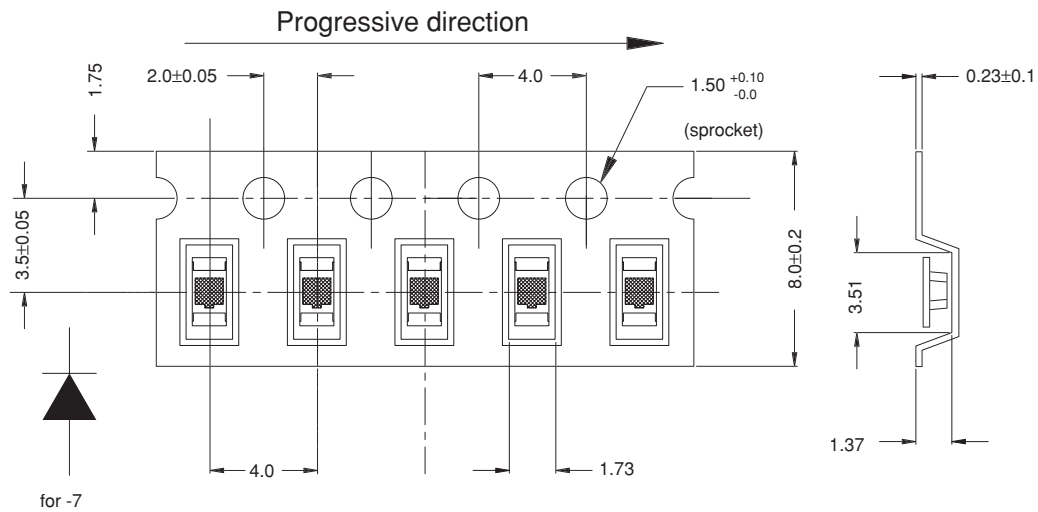
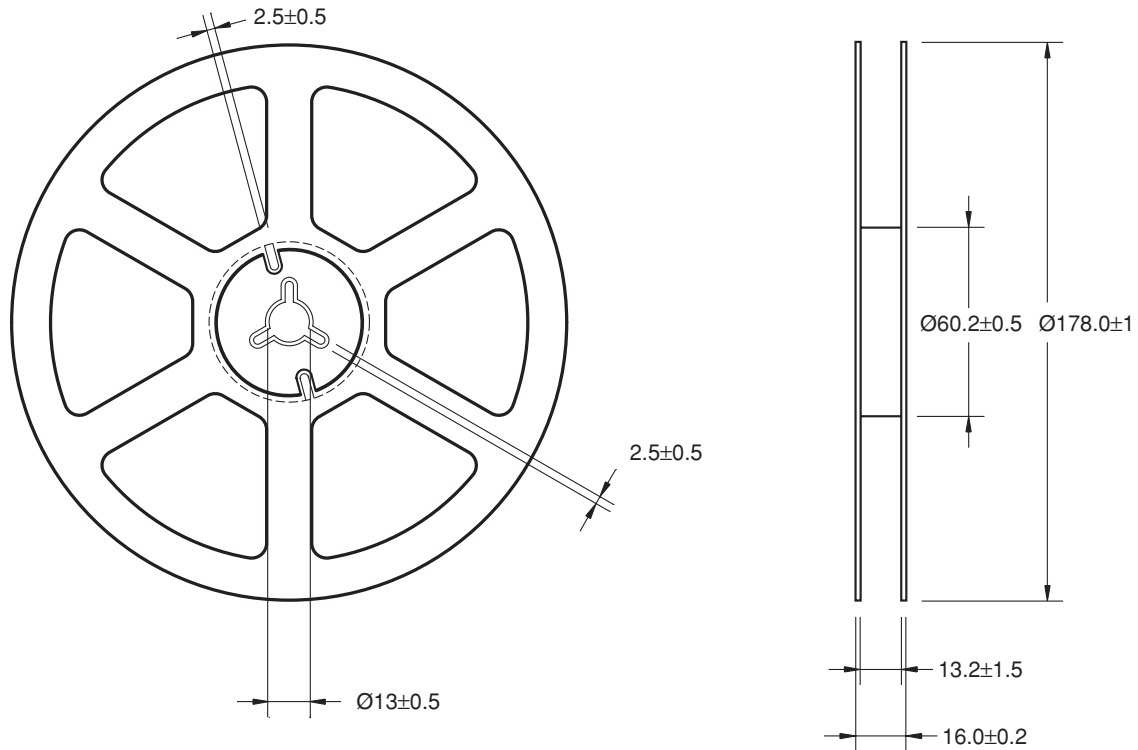
STANDARD BRIGHT 1206

(Reverse Mount with Inner Lens)

QTLP653C-7 AlGaAs Red

QTLP653C-G Green

TAPE AND REEL DIMENSIONS



for -7
Polarity

Dimensional tolerance is $\pm 0.1\text{mm}$ unless otherwise specified
 Angle: ± 0.5
 Unit: mm
 Polarity marks on the opposite sprocket side.

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Reverse Mount with Inner Lens)

QTLP653C-7 AlGaAs Red

QTLP653C-G Green

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