

QTLP652C-2 HER

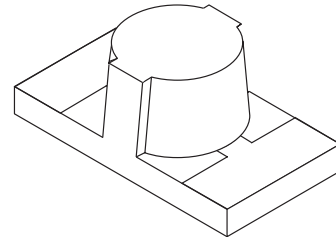
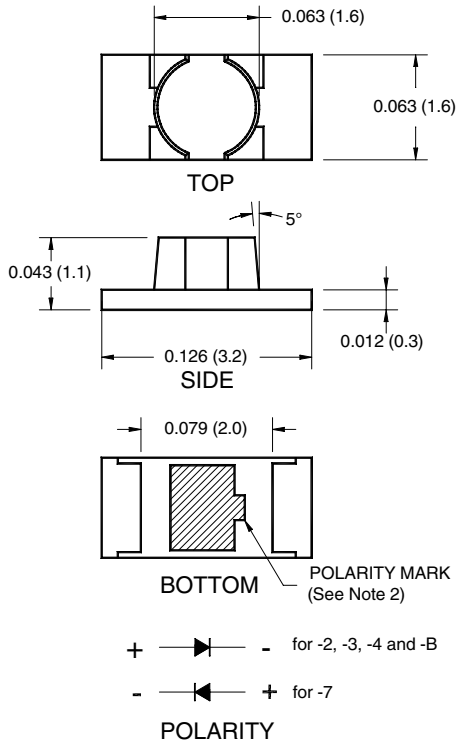
QTLP652C-3 Yellow

QTLP652C-4 Green

QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

PACKAGE DIMENSIONS



NOTE:

- Dimensions for all drawings are in inches (mm).
- 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. 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)

QTLP652C-2 HER

QTLP652C-3 Yellow

QTLP652C-4 Green

QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

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

Parameter	Symbol	QTLP652C					Units
		-2	-3	-4	-7	-B	
Continuous Forward Current	I _F	30	30	30	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	160	160	160	180	100	mA
Reverse Voltage (I _R = 10 μA)	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					°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)

Part Number	Symbol	QTLP652C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I _v	5	3	7	10	15	I _F = 20mA
Minimum		9	5	13	20	20	
Forward Voltage (V)	V _F	2.8	2.8	2.8	2.4	4.5	I _F = 20mA
Maximum		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	λ _P	635	585	565	660	430	I _F = 20mA
Peak		630	590	570	645	465	
Dominant	λ _D	630	590	570	645	465	I _F = 20mA
Spectral Line Half Width (nm)	Δλ	45	35	30	20	65	I _F = 20mA
Viewing Angle (°)	2Θ _{1/2}	130	130	130	130	130	I _F = 20mA

QTLP652C-2 HER

QTLP652C-3 Yellow

QTLP652C-4 Green

QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

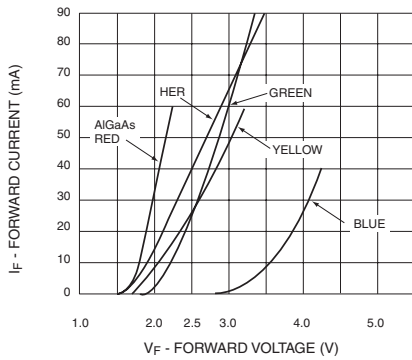


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

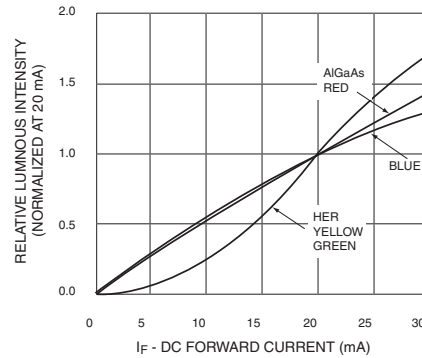


Fig. 3 Relative Intensity vs. Peak Wavelength

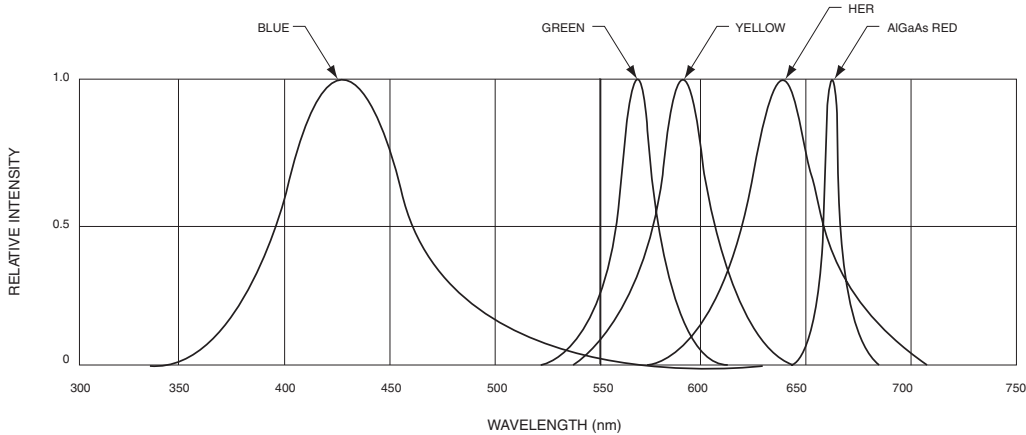


Fig.4 Radiation Diagram

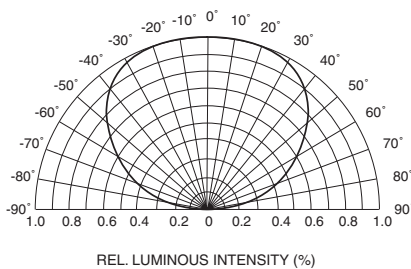
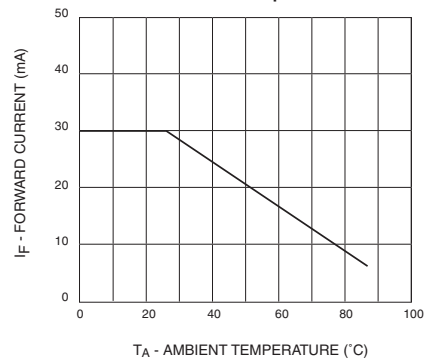


Fig.5 Maximum Forward Current vs. Ambient Temperature



SURFACE MOUNT LED LAMP STANDARD BRIGHT 1206 (Reverse Mount)

QTLP652C-2 HER

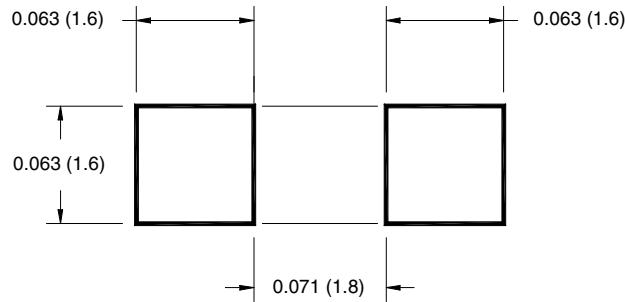
QTLP652C-3 Yellow

QTLP652C-4 Green

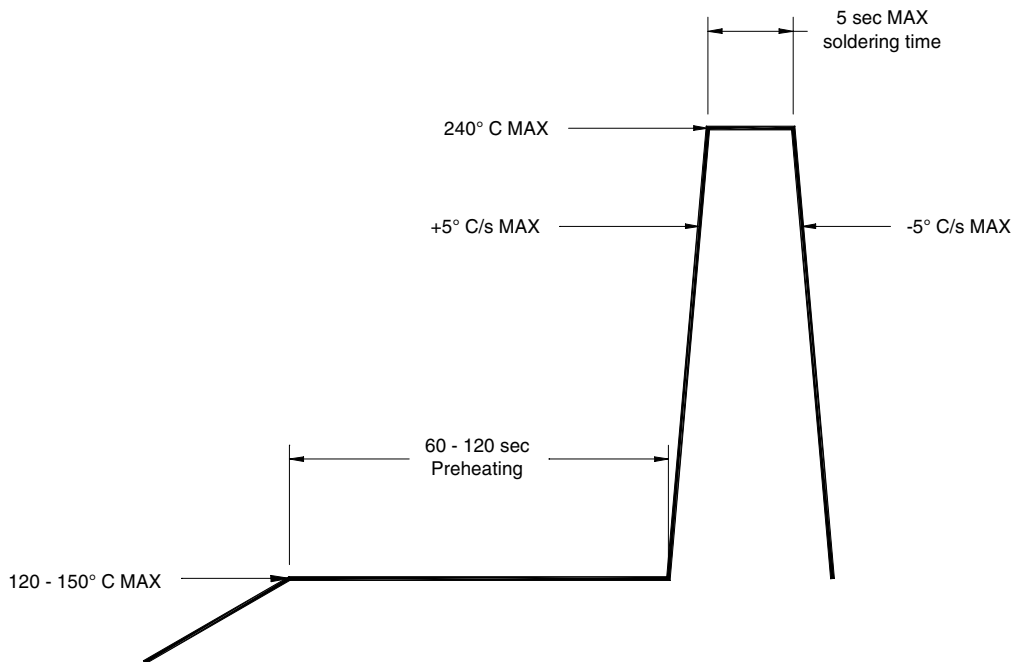
QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



SURFACE MOUNT LED LAMP

STANDARD BRIGHT 1206 (Reverse Mount)

QTLP652C-2 HER

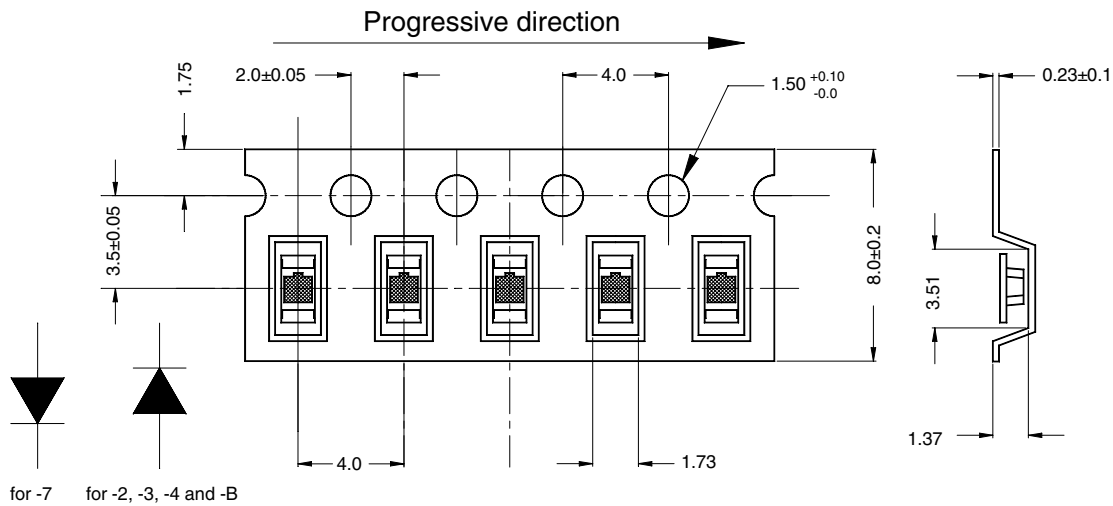
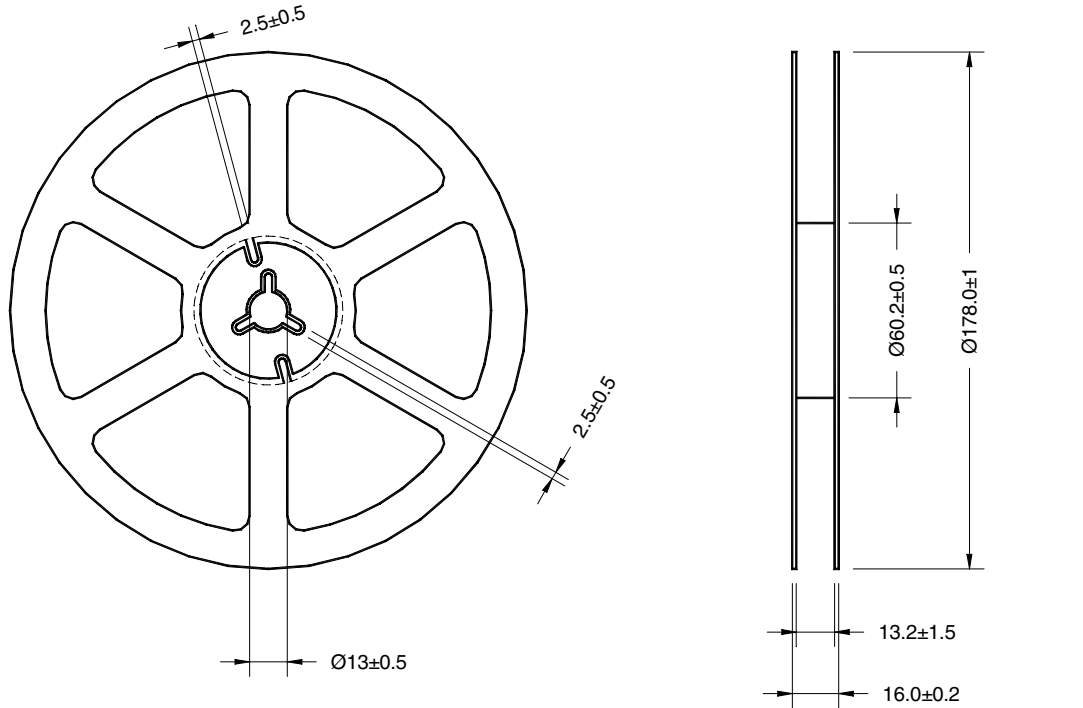
QTLP652C-3 Yellow

QTLP652C-4 Green

QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

TAPE AND REEL DIMENSIONS



Polarity

Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

QTLP652C-2 HER

QTLP652C-3 Yellow

QTLP652C-4 Green

QTLP652C-7 AlGaAs Red

QTLP652C-B Blue

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in labeling, can be reasonably expected to result in a significant injury of the user.
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.