

QTLP630C-2 HER

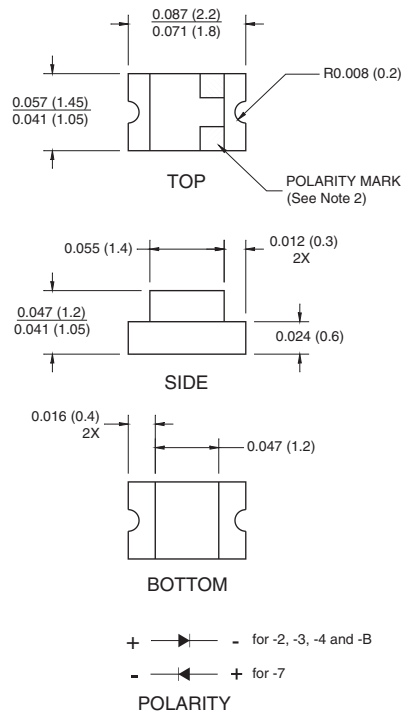
QTLP630C-3 Yellow

QTLP630C-4 Green

QTLP630C-7 AlGaAs Red

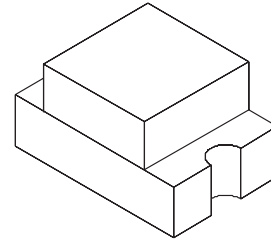
QTLP630C-B Blue

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. Low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

FEATURES

- Small footprint - 2.0(L) X 1.25(W) X 1.1(H) mm
- Wide viewing angle of 140°
- 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 0805

QTLP630C-2 HER

QTLP630C-3 Yellow

QTLP630C-4 Green

QTLP630C-7 AlGaAs Red

QTLP630C-B Blue

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

Parameter	Symbol	QTLP630C					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	QTLP630C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I_V	5	5	6	10	15	IF = 20mA
Minimum Typical		10	10	10	20	20	
Forward Voltage (V)	V_F	2.8	2.8	2.8	2.4	4.5	IF = 20mA
Maximum Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	I_P I_D	635	585	565	660	430	IF = 20mA
Peak Dominant		630	590	570	645	465	
Spectral Line Half Width (nm)	D_l	45	35	30	20	65	IF = 20mA
Viewing Angle ($^\circ$)	$2U_{1/2}$	140	140	140	140	140	IF = 20mA

QTLP630C-2 HER

QTLP630C-3 Yellow

QTLP630C-4 Green

QTLP630C-7 AlGaAs Red

QTLP630C-B Blue

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

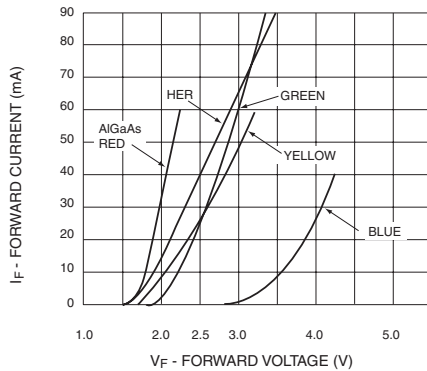


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

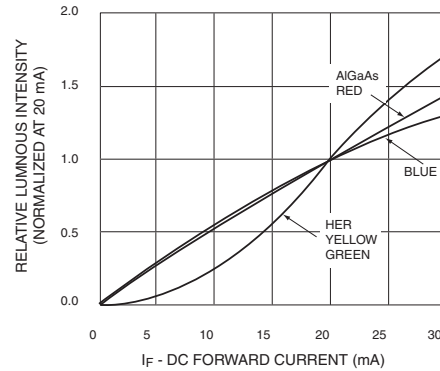


Fig. 3 Relative Intensity vs. Peak Wavelength

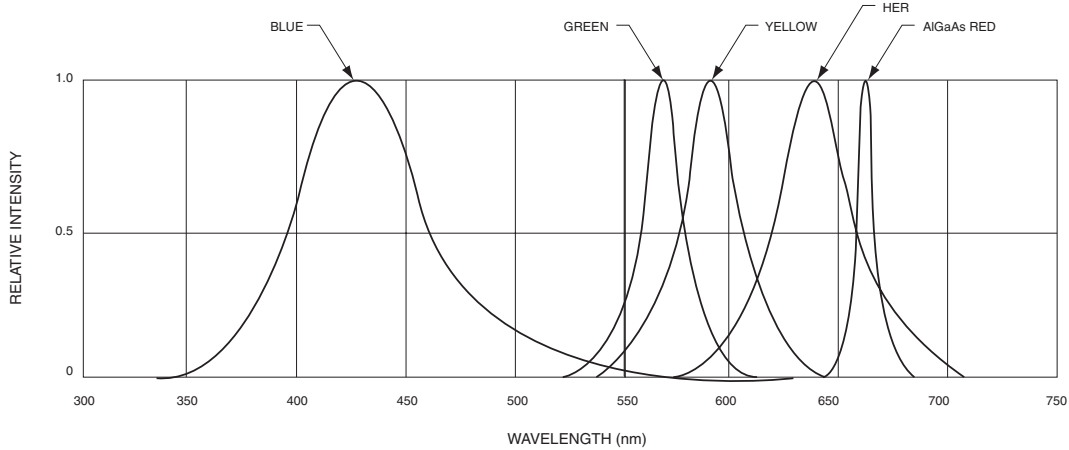


Fig.4 Radiation Diagram

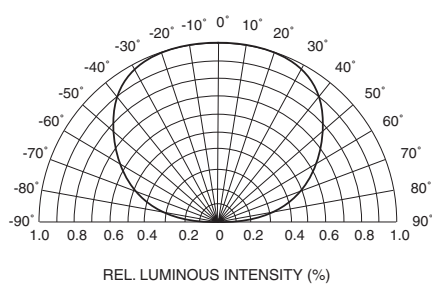
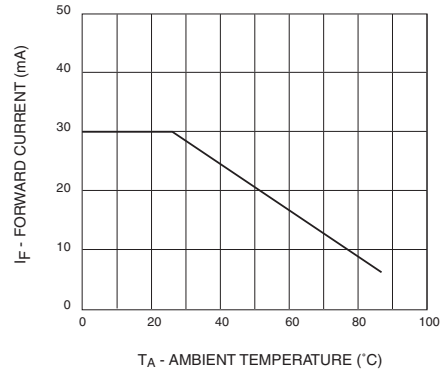


Fig.5 Maximum Forward Current vs. Ambient Temperature



QTLP630C-2 HER

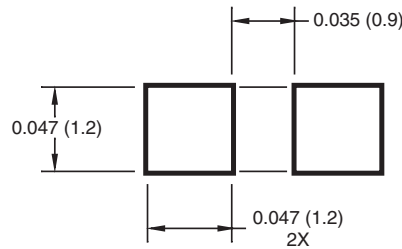
QTLP630C-3 Yellow

QTLP630C-4 Green

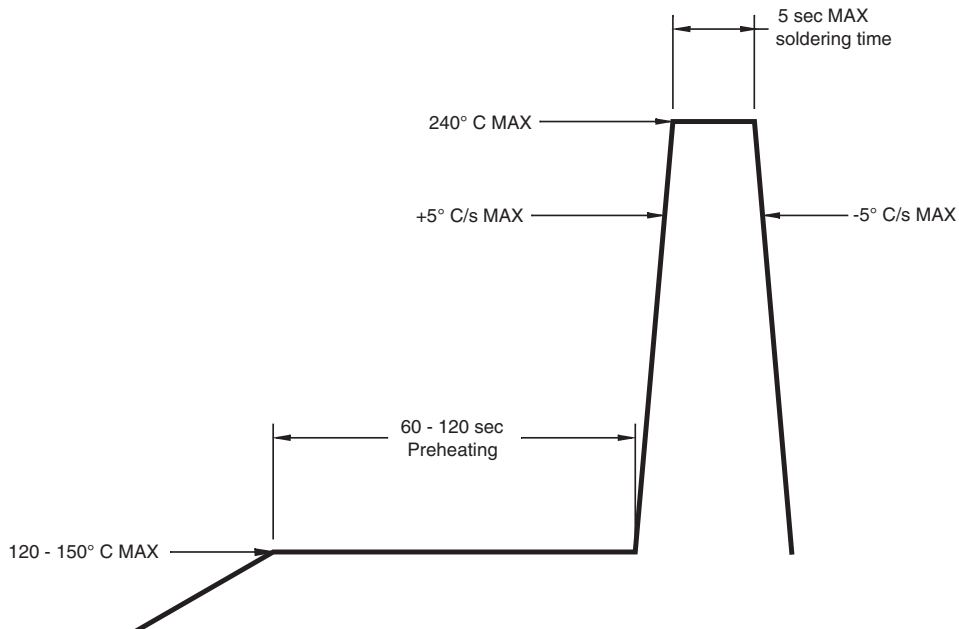
QTLP630C-7 AlGaAs Red

QTLP630C-B Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



QTLP630C-2 HER

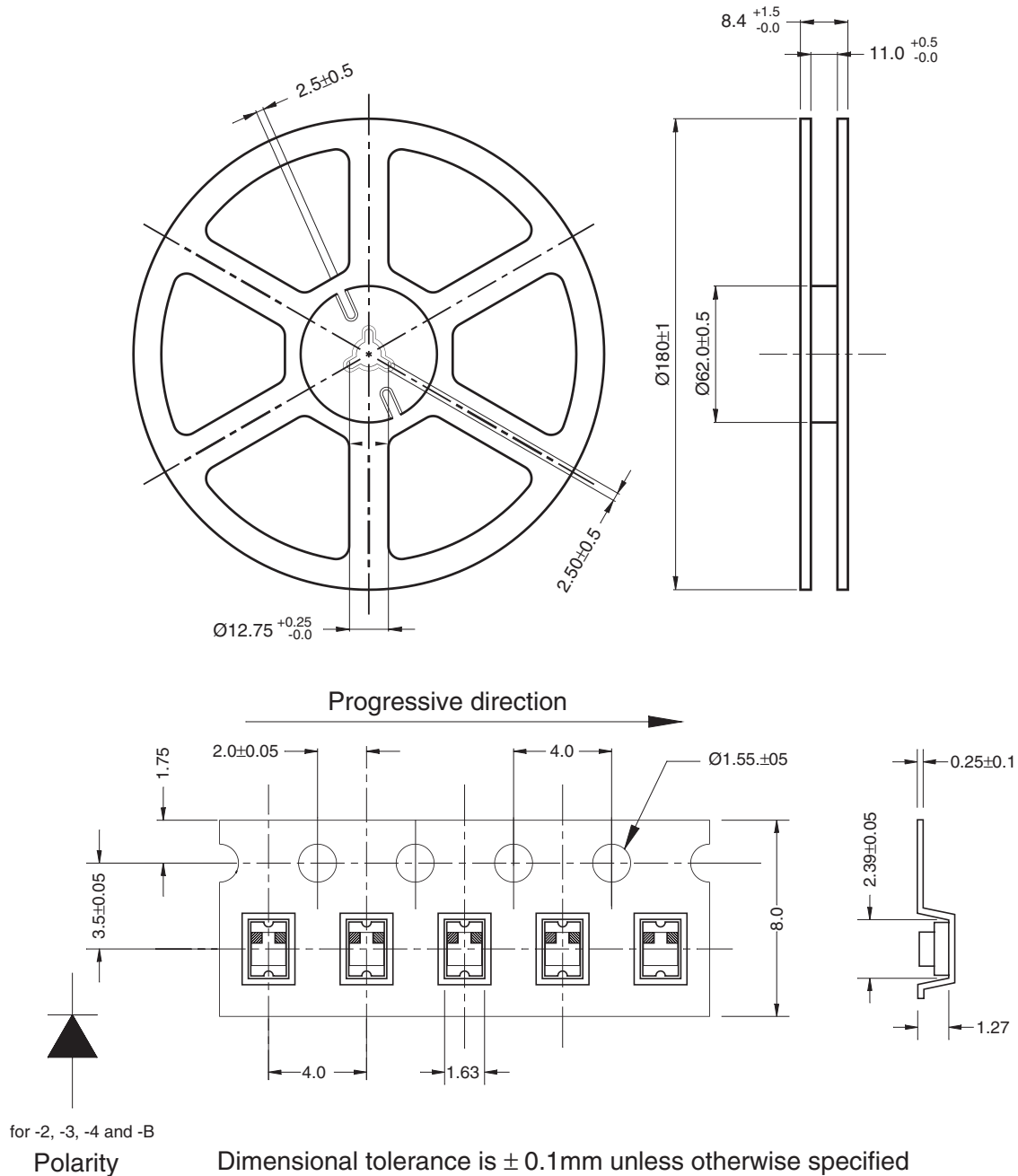
QTLP630C-3 Yellow

QTLP630C-4 Green

QTLP630C-7 AlGaAs Red

QTLP630C-B Blue

TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm

SURFACE MOUNT LED LAMP

STANDARD BRIGHT 0805

QTL P630C-2 HER

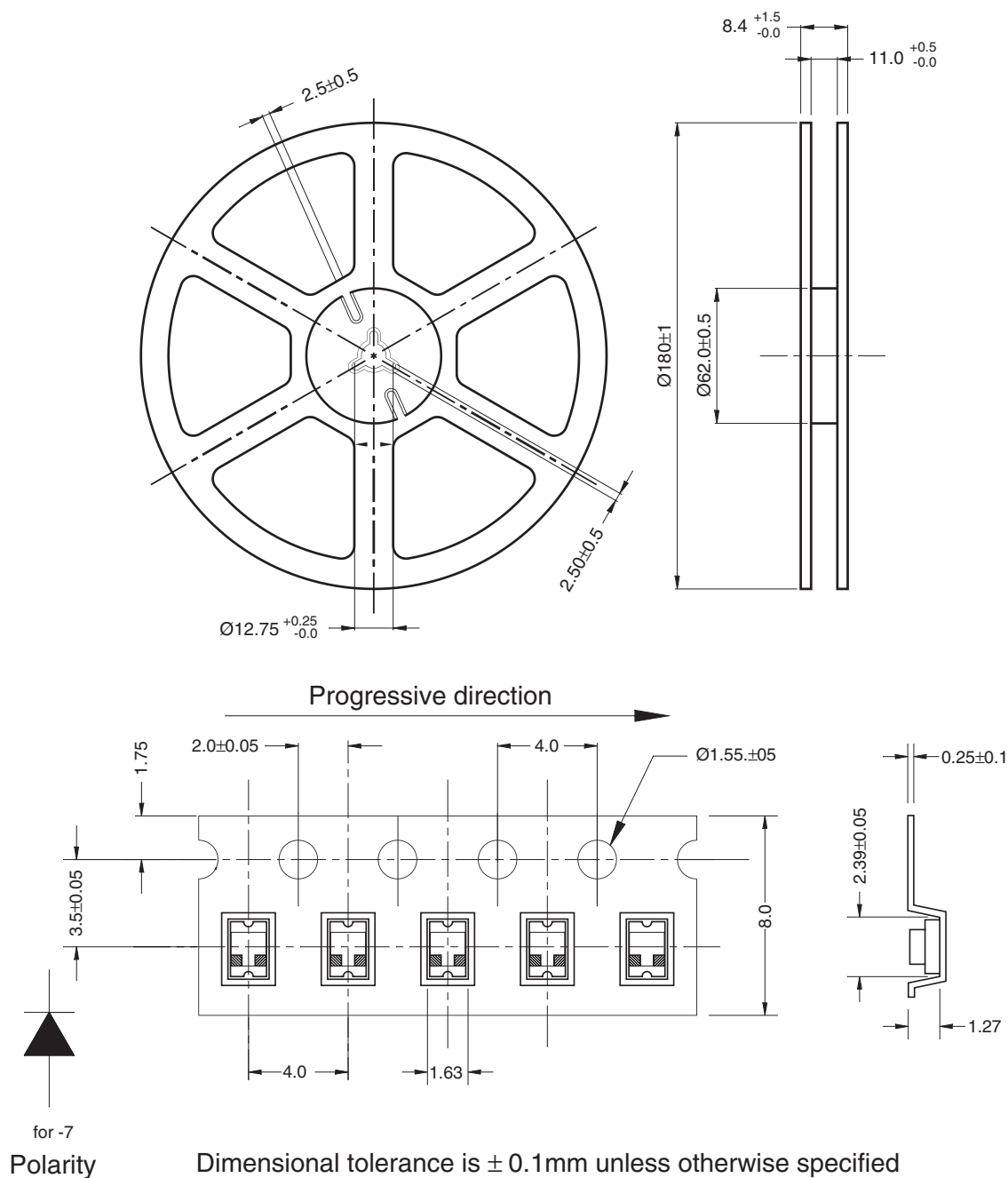
QTL P630C-3 Yellow

QTLP630C-4 Green

QTL P630C-7 AlGaAs Red

QTL P630C-B Blue

TAPE AND REEL DIMENSIONS



Dimensional tolerance is $\pm 0.1\text{mm}$ unless otherwise specified

Angle: ± 0.5

Unit: mm

QTLP630C-2 HER

QTLP630C-3 Yellow

QTLP630C-4 Green

QTLP630C-7 AlGaAs Red

QTLP630C-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 the 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.