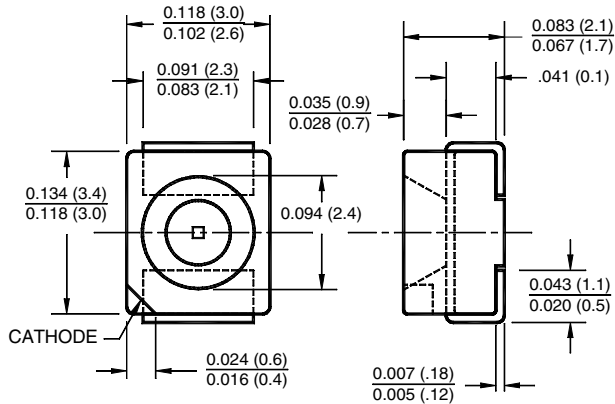


SUPER BRIGHT PLCC-2 PACKAGE

SURFACE MOUNT LED LAMP

PACKAGE DIMENSIONS



NOTE:

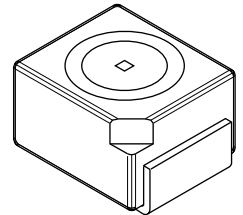
Dimensions for all drawings are in inches (mm).

SUPER BRIGHT RED
SUPER BRIGHT ORANGE
SUPER BRIGHT YELLOW

QTL670C-R
QTL670C-E
QTL670C-Y

FEATURES

- Non-diffused package excellent for back-lighting and coupling to light pipe
- Low package profile
- AlInGaP technology
- Wide viewing angle of 120°



DESCRIPTION

This surface mount lamp is designed with a flat top and sides for automatic placement equipment. It is compatible with convective IR and vapor phase reflow soldering and conductive epoxy attachment process. The package size and configuration conform to EIA-535 BAAC standard specification for case size 3528 tantalum capacitor.

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

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Lead Soldering Time	T_{SOL}	260 for 5 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	30	mA
Peak Forward Current ($f = 1.0 \text{ KHz}$, Duty Factor = 1/10)	I_F	160	mA
Reverse Voltage ($I_R = 10 \mu\text{A}$)	V_R	5	V
Power Dissipation	P_D	100	mW

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Part Number	QTL670C-R	QTL670C-E	QTL670C-Y	Condition
Luminous Intensity (mcd)				$I_F = 20\text{mA}$
Minimum	40	40	40	
Typical	70	70	70	
Forward Voltage (V)				$I_F = 20\text{mA}$
Maximum	2.4	2.8	2.8	
Typical	1.9	2.1	2.1	
Wavelength (nm)				$I_F = 20\text{mA}$
Peak	630	620	590	
Dominant	623	615	589	
Spectral Line Half Width (nm)	20	18	15	$I_F = 20\text{mA}$
Viewing Angle ($^\circ$)	120	120	120	$I_F = 20\text{mA}$

SUPER BRIGHT RED
SUPER BRIGHT ORANGE
SUPER BRIGHT YELLOW

QTLP670C-R
QTLP670C-E
QTLP670C-Y

TYPICAL PERFORMANCE CURVES

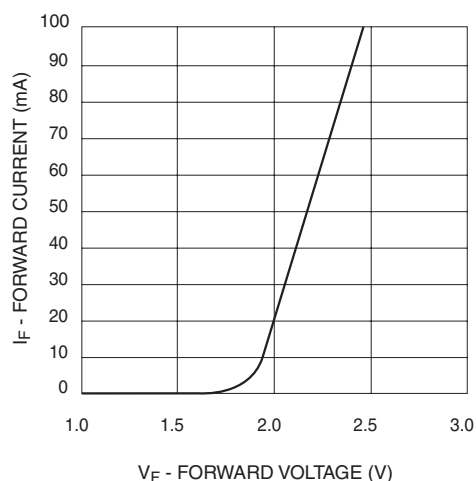


Fig. 1 Forward Current vs. Forward Voltage

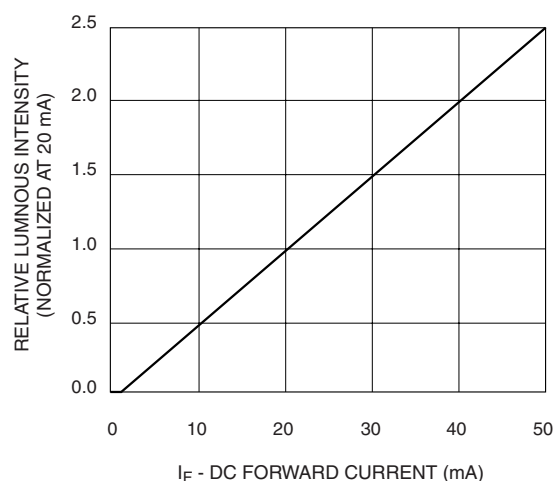


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

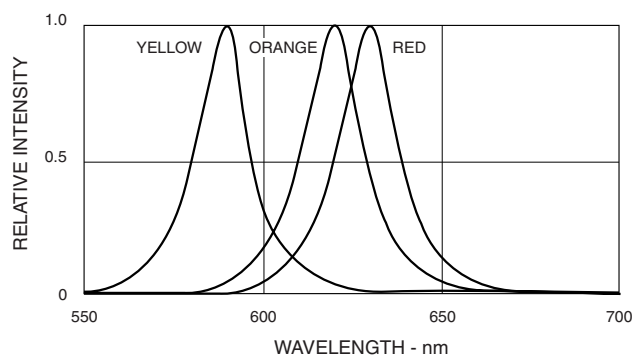


Fig. 3 Relative Intensity vs. Peak Wavelength

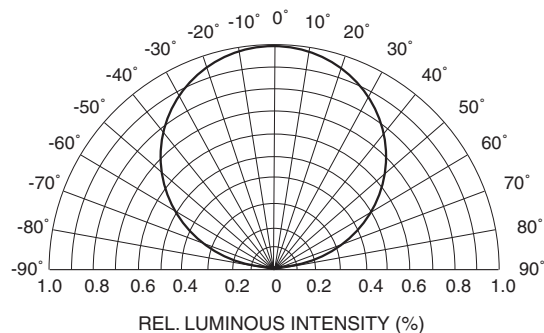


Fig. 4 Radiation Diagram

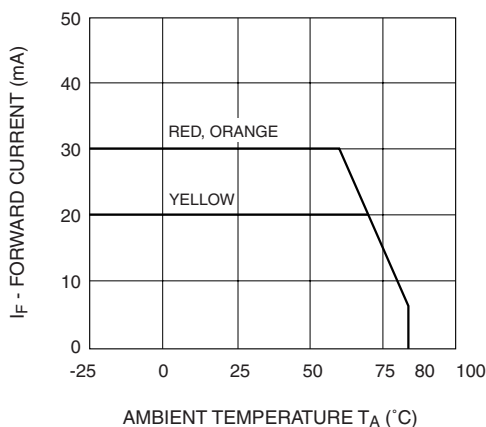


Fig. 5 Forward Current vs. Ambient Temperature

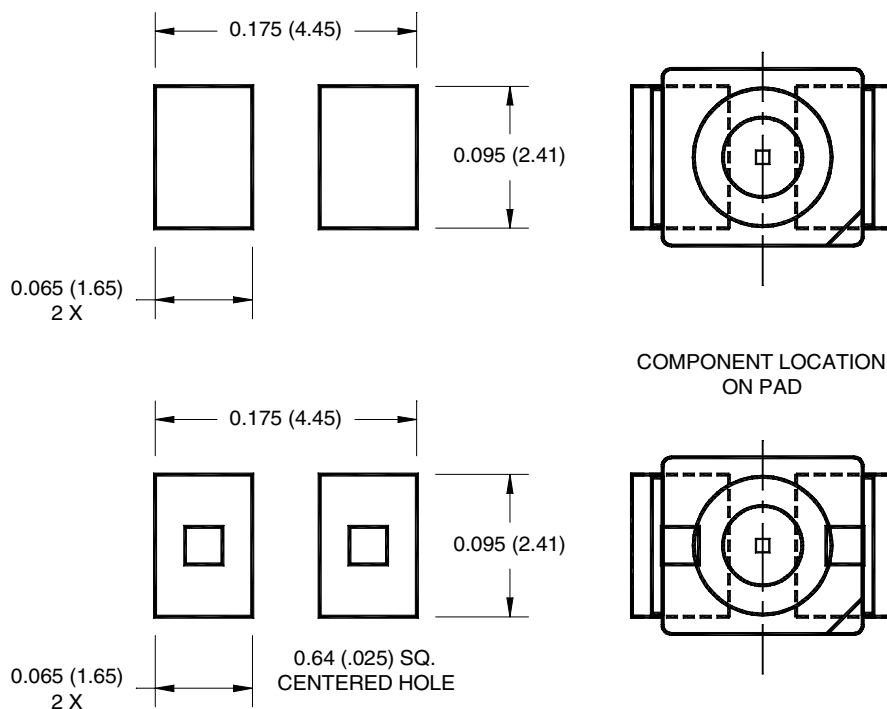
SUPER BRIGHT PLCC-2 PACKAGE

SURFACE MOUNT LED LAMP

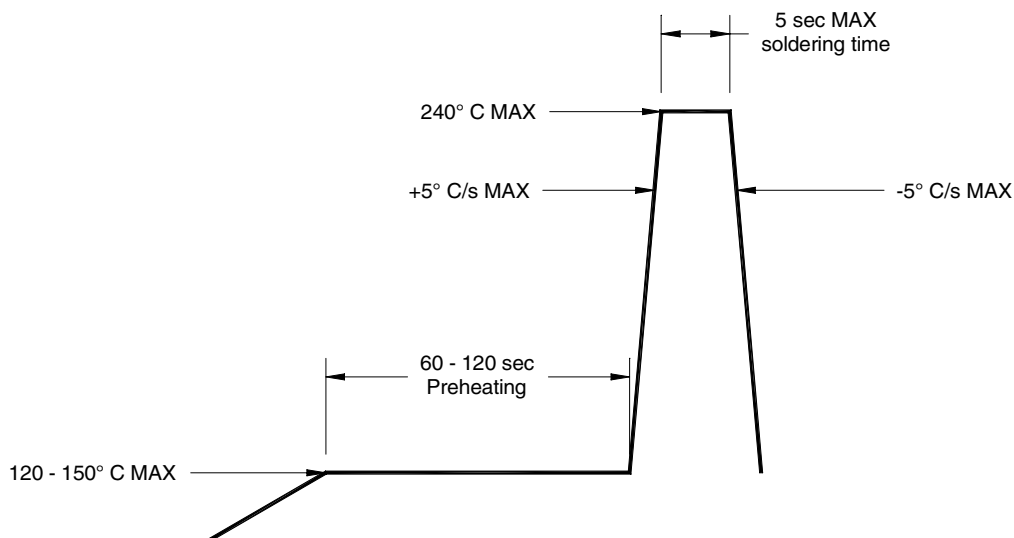
SUPER BRIGHT RED
SUPER BRIGHT ORANGE
SUPER BRIGHT YELLOW

QTLP670C-R
QTLP670C-E
QTLP670C-Y

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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