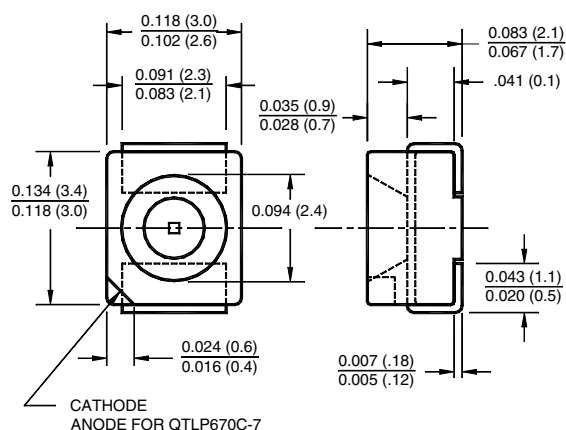


SURFACE MOUNT LED LAMP

PLCC - 2 PACKAGE

PACKAGE DIMENSIONS



NOTE:

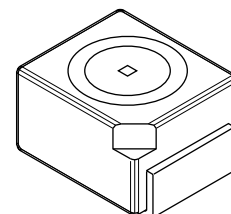
1. Dimensions for all drawings are in inches (mm).
2. QTL670C-7 corner notch denotes anode.
3. QTL670C-2,3,4,9 corner notch denotes cathode.

HER
YELLOW
GREEN
AlGaAs RED

QTL670C-2
QTL670C-3
QTL670C-4
QTL670C-7,9

FEATURES

- Non-diffused package excellent for back-lighting and coupling to light pipe
- Low package profile
- Low power dissipation
- 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	HER QTL670C-2	Yellow QTL670C-3	Green QTL670C-4	AlGaAs Red QTL670C-7,9	Units
Continuous Forward Current - I_F	30	20	30	30	mA
Peak Forward Current - I_F ($f = 1.0 \text{ KHz}$, Duty Factor = 1/10)	160	160	160	160	mA
Reverse Voltage - V_R ($I_R = 10 \mu\text{A}$)	5	5	5	5	V
Power Dissipation - P_D	100	85	100	100	mW
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}					$^\circ\text{C}$
Wave	260 for 5 sec				
Reflow	260 for 10 sec				

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

Part Number	HER QTL670C-2	Yellow QTL670C-3	Green QTL670C-4	AlGaAs Red QTL670C-7,9	Condition
Luminous Intensity (mcd)					$I_F = 20\text{mA}$
Minimum	6	6	15	25	
Typical	10	10	25	40	
Forward Voltage (V)					$I_F = 20\text{mA}$
Maximum	2.8	2.8	2.8	2.4	
Typical	2.0	2.0	2.1	1.9	
Peak Wavelength (nm)	635	585	565	660	$I_F = 20\text{mA}$
Spectral Line Half Width (nm)	45	35	30	20	$I_F = 20\text{mA}$
Viewing Angle ($^\circ$)	120	120	120	120	$I_F = 20\text{mA}$

HER
YELLOW
GREEN
AlGaAs RED

QTLP670C-2
QTLP670C-3
QTLP670C-4
QTLP670C-7,9

TYPICAL PERFORMANCE CURVES

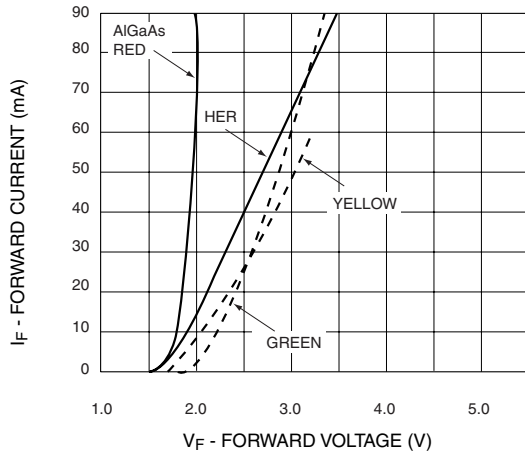


Fig. 1 Forward Current vs. Forward Voltage

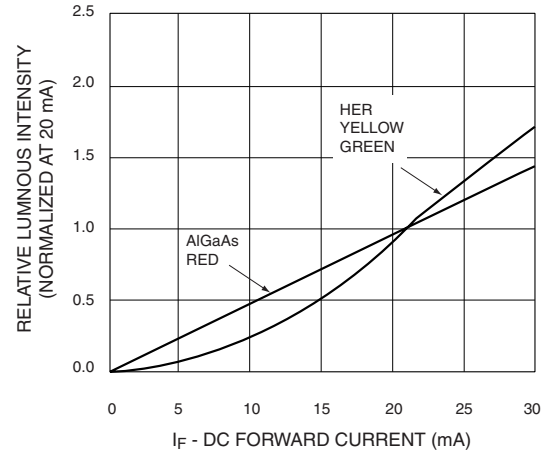


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

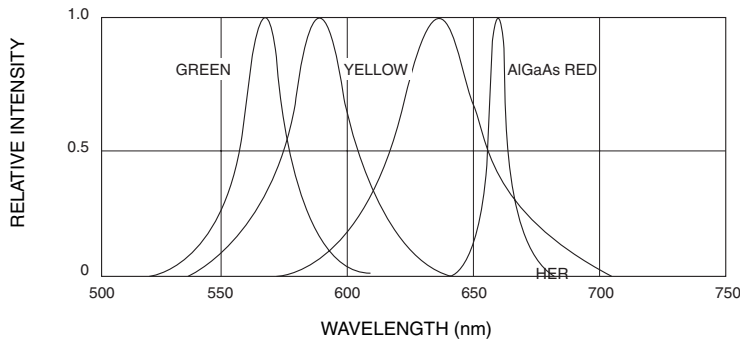


Fig. 3 Relative Intensity vs. Peak Wavelength

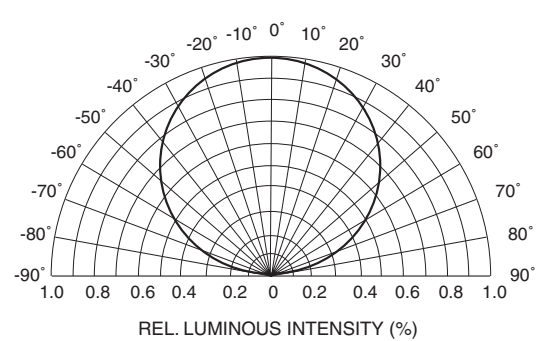


Fig. 4 Radiation Diagram

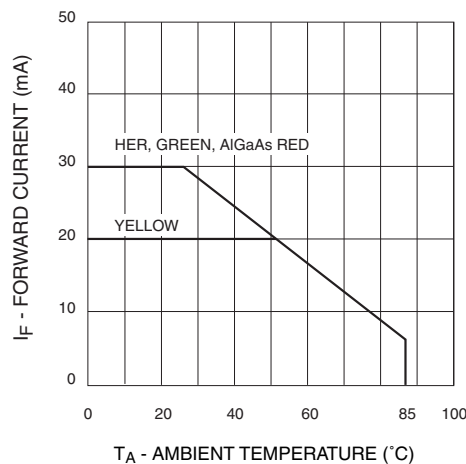


Fig. 5 Current Derating Curve

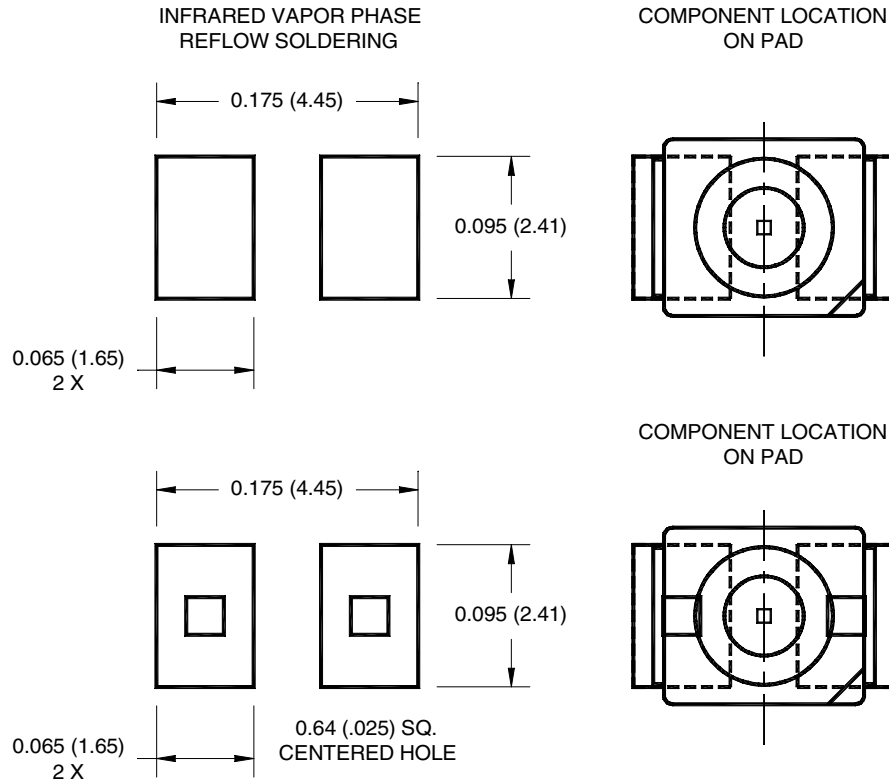
SURFACE MOUNT LED LAMP

PLCC - 2 PACKAGE

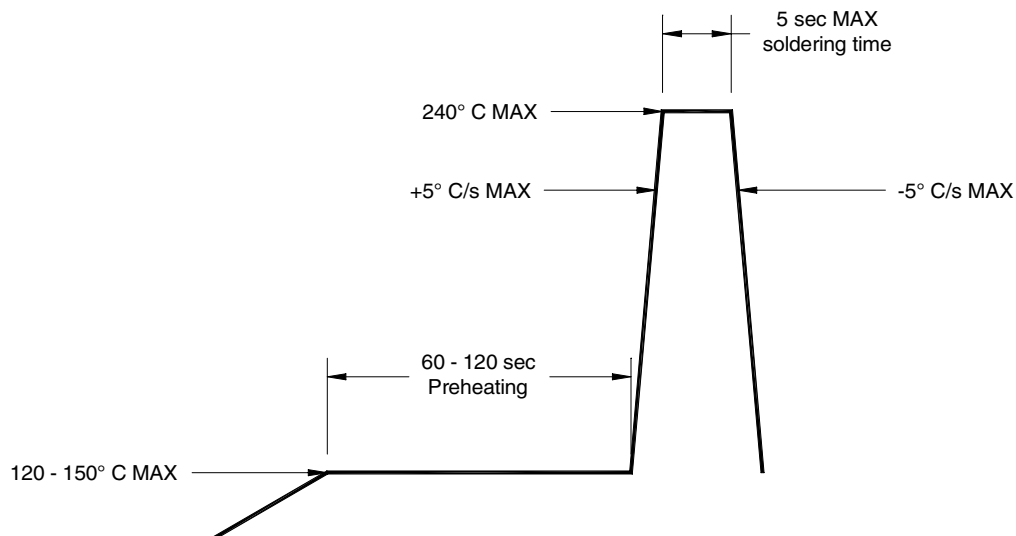
HER
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QTLP670C-4
QTLP670C-7,9

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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