

SURFACE MOUNT LED LAMP

STANDARD BRIGHT PLCC-2

QTLP670C

QTLP670C-2 HER

QTLP670C-3 Yellow

QTLP670C-4 Green

QTLP670C-7 AlGaAs Red

QTLP670C-B Blue

QTLP670C-W White

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless otherwise specified)								
Parameter	Symbol	QTLP670C						Units
		-2	-3	-4	-7	-B	-W	
Continuous Forward Current	I_F	30	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	100	mA
Reverse Voltage ($I_R = 10 \mu\text{A}$)	V_R	5	5	5	5	5	5	V
Power Dissipation	P_D	84	84	84	72	135	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	QTLP670C						Condition
		-2	-3	-4	-7	-B	-W	
Luminous Intensity (mcd)	I_V	5	5	15	25	20	20	$I_F = 20\text{mA}$
Minimum		10	10	25	40	30	30	
Typical	V_F	2.8	2.8	2.8	2.4	4.5	4.5	$I_F = 20\text{mA}$
Forward Voltage (V)		2.0	2.0	2.1	1.9	3.8	3.8	
Maximum	λ_P	635	585	565	660	430	—	$I_F = 20\text{mA}$
Typical		630	590	570	645	465	—	
Wavelength (nm)	λ_D	—	—	—	—	—	x = 0.26 y = 0.28	$I_F = 20\text{mA}$
Peak	x,y	45	35	30	20	65	—	$I_F = 20\text{mA}$
Dominant	$\Delta\lambda$	120	120	120	120	120	120	$I_F = 20\text{mA}$
Chromatic Coordinate	$2\theta_{1/2}$							
Spectral Line Half Width (nm)								
Viewing Angle ($^\circ$)								

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

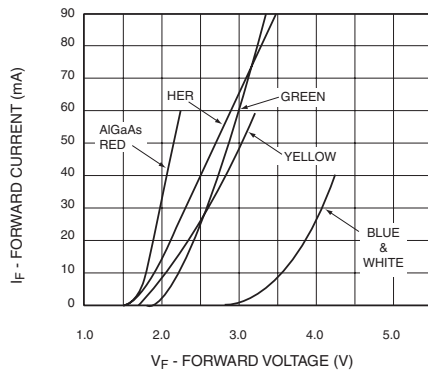


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

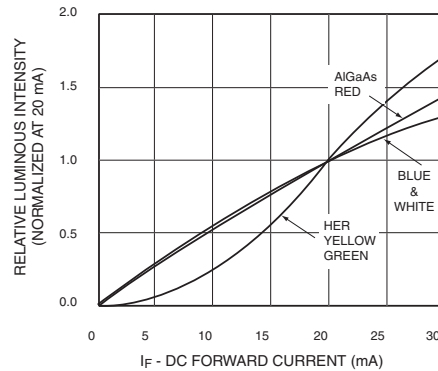


Fig. 3 Relative Intensity vs. Peak Wavelength

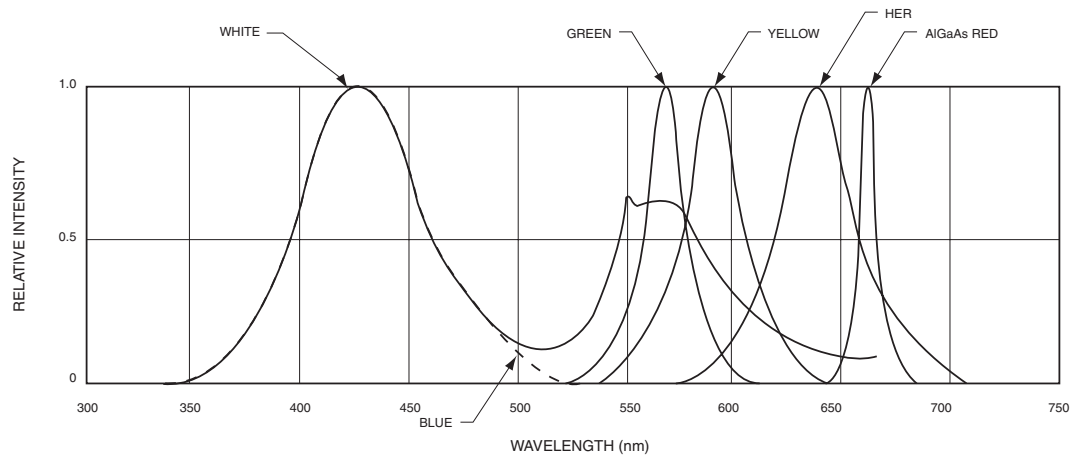


Fig. 4 Radiation Diagram

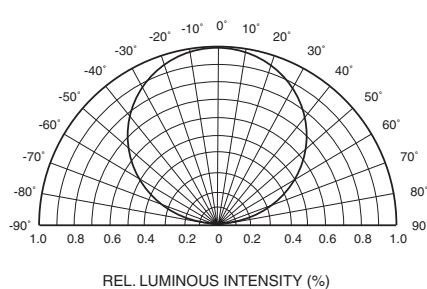
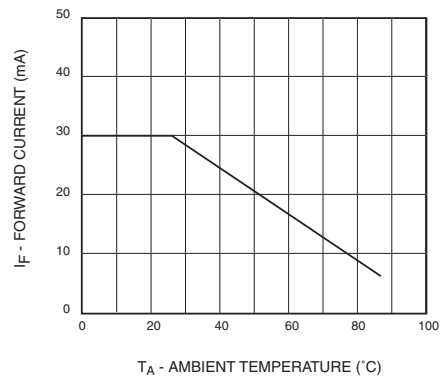


Fig. 5 Maximum Forward Current vs. Ambient Temperature



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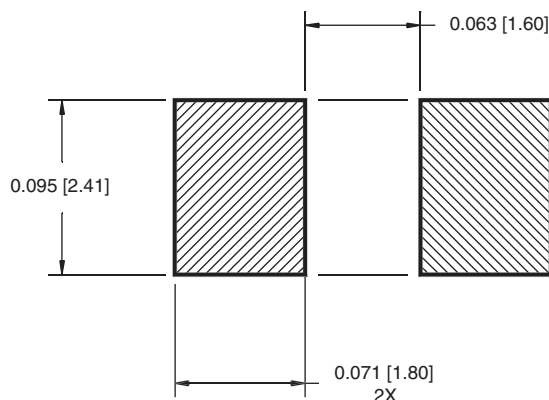
QTLP670C-4 Green

QTLP670C-7 AlGaAs Red

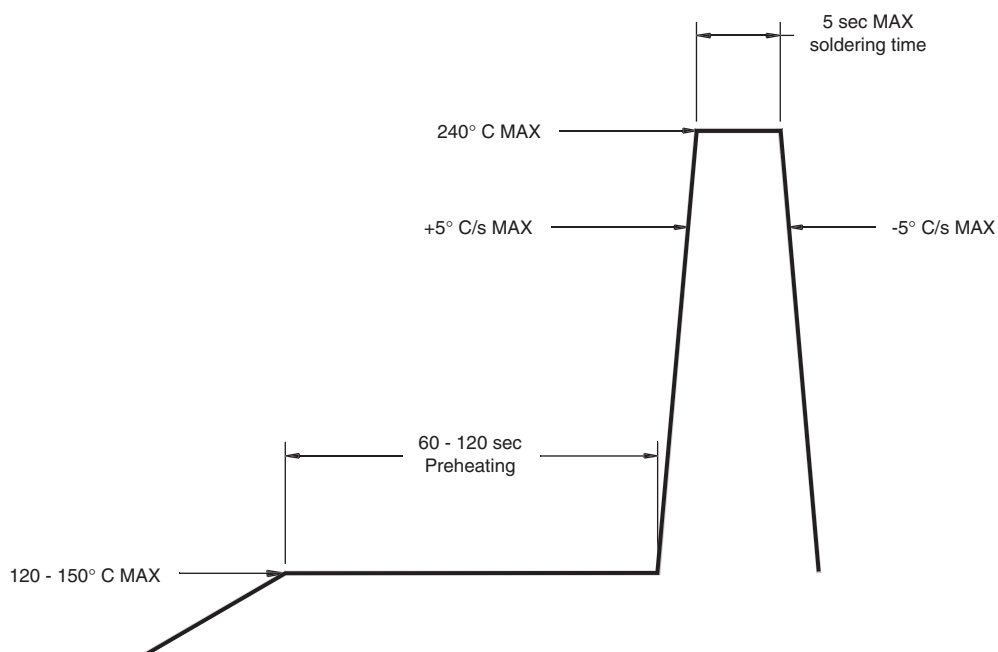
QTLP670C-B Blue

QTLP670C-W White

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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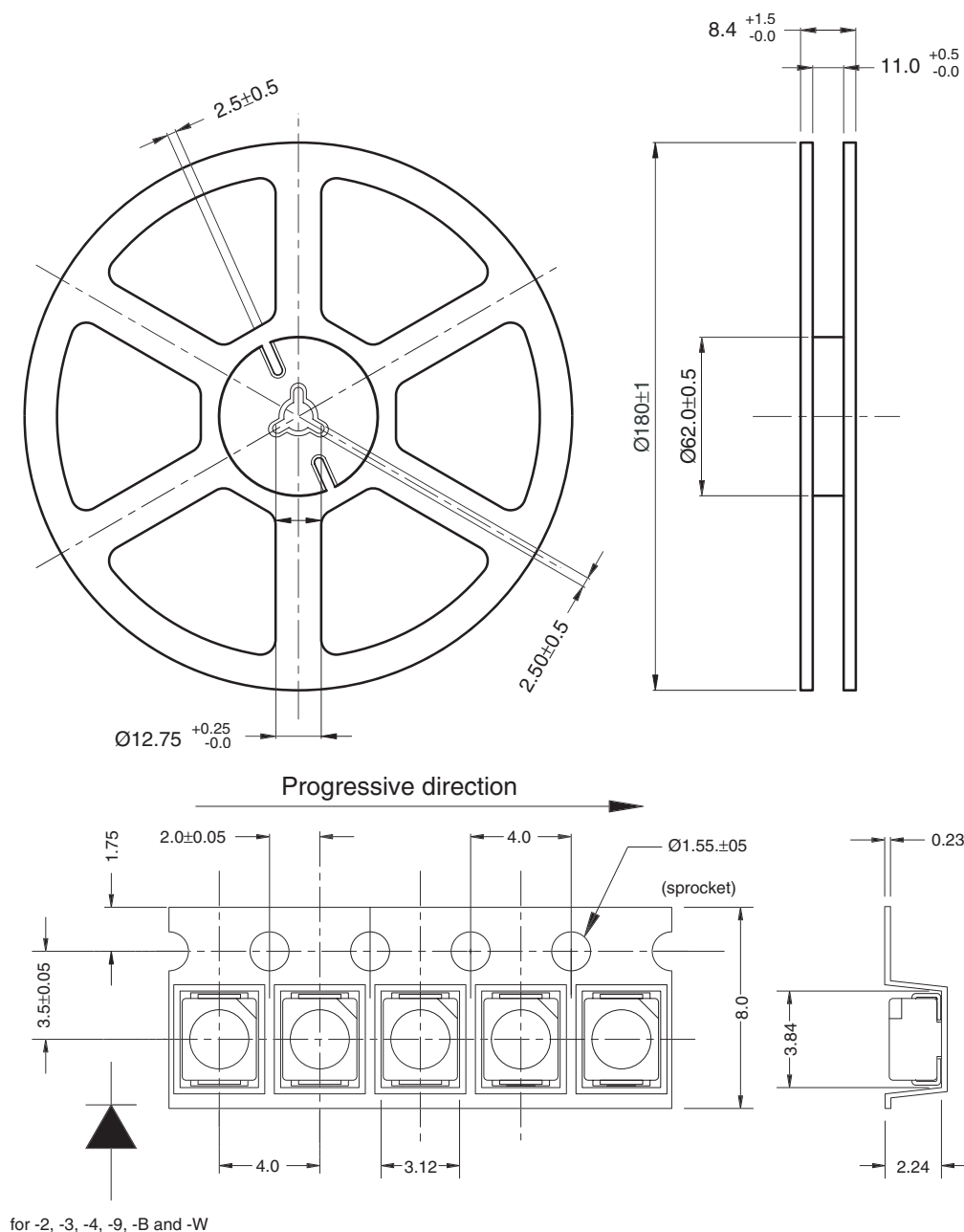
QTLP670C-4 Green

QTL P670C-7 AlGaAs Red

QTL P670C-B Blue

QTLP670C-W White

TAPE AND REEL DIMENSIONS



Polarity

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

Angle: ± 0.5

Unit: mm

Polarity marks are on the sprocket side.

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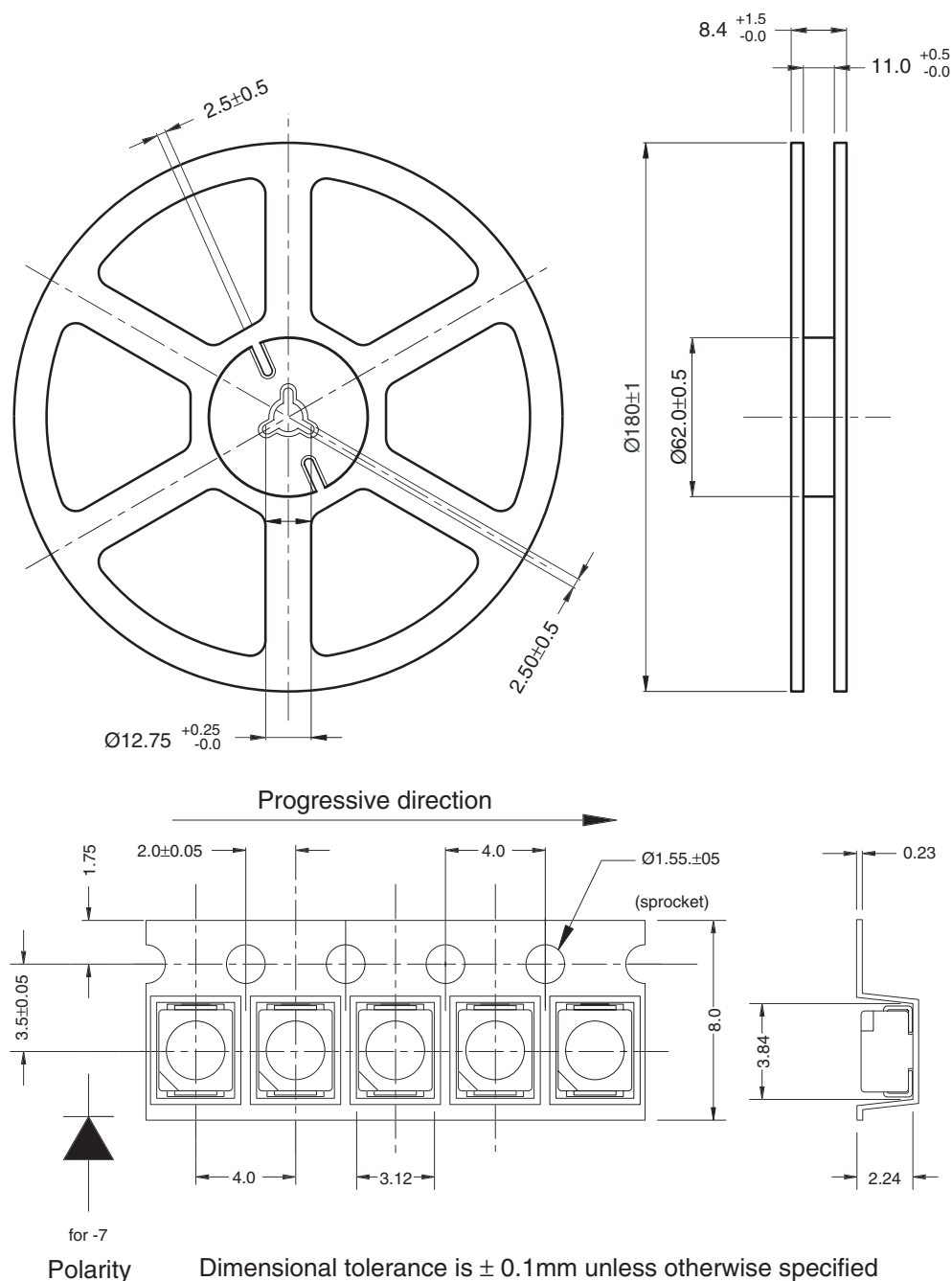
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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.