

QTLP680C-2 HER

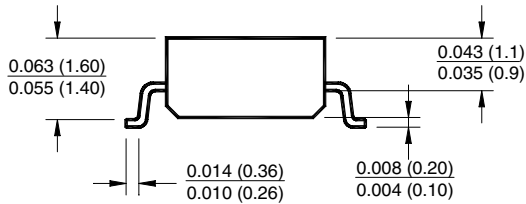
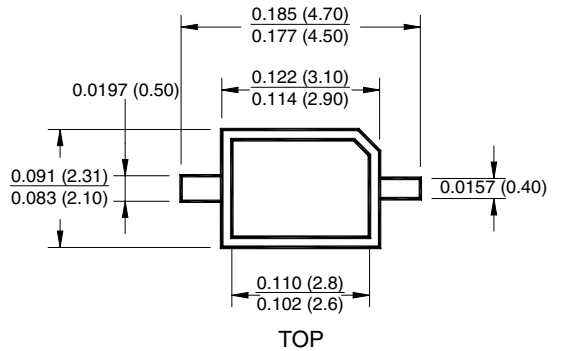
QTLP680C-3 Yellow

QTLP680C-4 Green

QTLP680C-7 AlGaAs Red

QTLP680C-B Blue

## PACKAGE DIMENSIONS

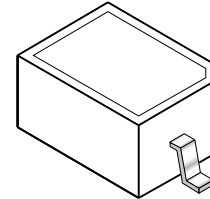


- — ◀ + for -2, -3, -4 and -B  
+ — ▶ - for -7

POLARITY

NOTE:

Dimensions for all drawings are in inches (mm).



## APPLICATIONS

- Backlighting
- Status indication for consumer electronics and other equipment

## DESCRIPTION

Designed with a reflective housing, these surface mount LEDs offer uniform lighting and high light output performance.

## FEATURES

- 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 REFLECTOR

QTLP680C-2 HER

QTLP680C-3 Yellow

QTLP680C-4 Green

QTLP680C-7 AlGaAs Red

QTLP680C-B Blue

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> =25°C Unless otherwise specified)

Parameter	Symbol	QTLP680C					Units
		-2	-3	-4	-7	-B	
Continuous Forward Current	I <sub>F</sub>	30	30	30	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>FM</sub>	160	160	160	180	100	mA
Reverse Voltage (I <sub>R</sub> = 10 μA)	V <sub>R</sub>	5	5	5	5	5	V
Power Dissipation	P <sub>D</sub>	84	84	84	72	135	mW
Operating Temperature	T <sub>OPR</sub>	-40 to +85					°C
Storage Temperature	T <sub>STG</sub>	-40 to +100					°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec					°C

### ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> =25°C)

Part Number	Symbol	QTLP680C					Condition
		-2	-3	-4	-7	-B	
Luminous Intensity (mcd)	I <sub>v</sub>	7	7	15	25	15	I <sub>F</sub> = 20mA
Minimum							
Typical		15	15	25	40	20	
Forward Voltage (V)	V <sub>F</sub>	2.8	2.8	2.8	2.4	4.5	I <sub>F</sub> = 20mA
Maximum							
Typical		2.0	2.0	2.1	1.9	3.8	
Wavelength (nm)	λ <sub>P</sub>	635	585	565	660	430	I <sub>F</sub> = 20mA
Peak							
Dominant	λ <sub>D</sub>	630	590	570	645	465	
Spectral Line Half Width (nm)	Δλ	45	35	30	20	65	I <sub>F</sub> = 20mA
Viewing Angle (°)	2Θ <sub>1/2</sub>	130	130	130	130	130	I <sub>F</sub> = 20mA

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**TYPICAL PERFORMANCE CURVES**

Fig. 1 Forward Current vs. Forward Voltage

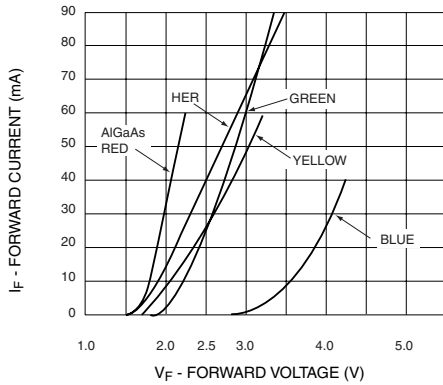


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

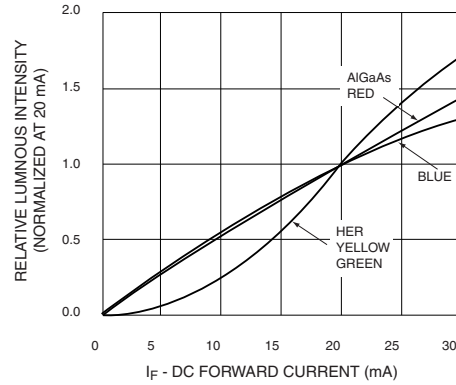


Fig. 3 Relative Intensity vs. Peak Wavelength

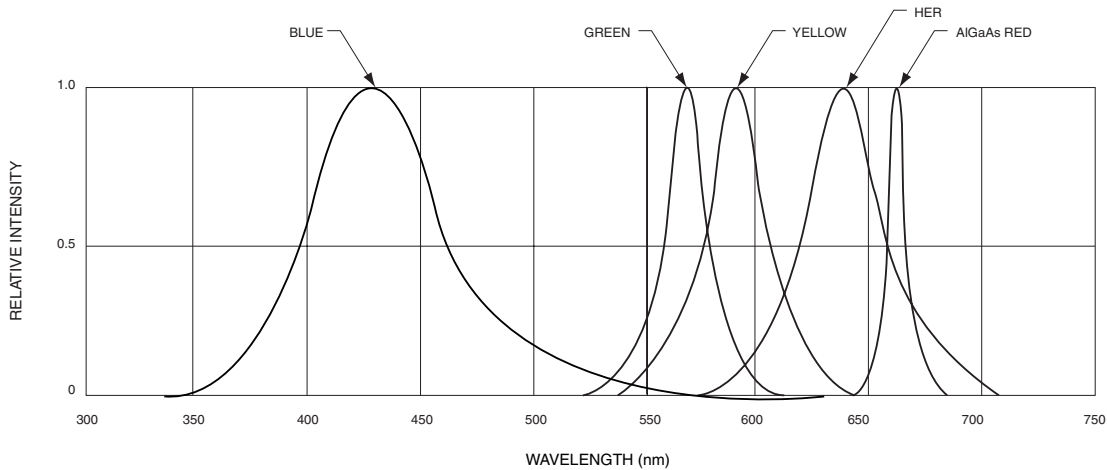


Fig. 4 Radiation Diagram

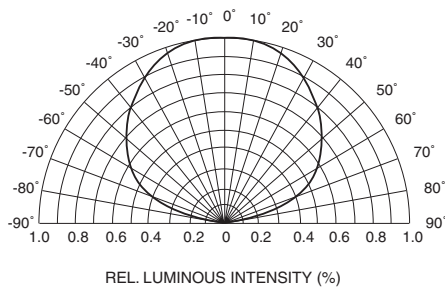
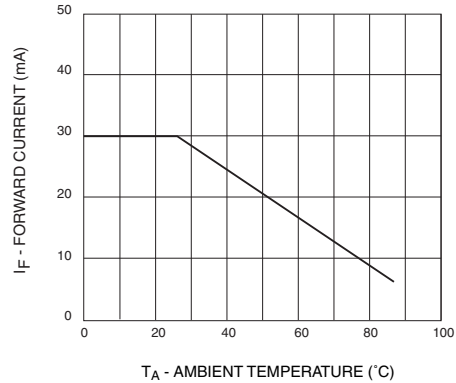


Fig. 5 Maximum Forward Current vs. Ambient Temperature



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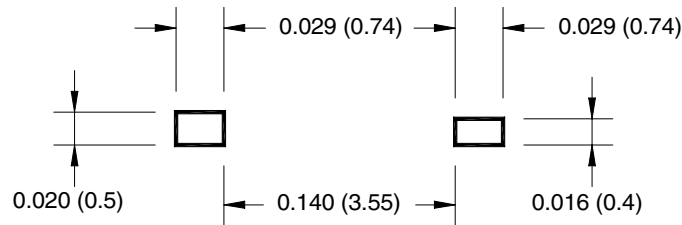
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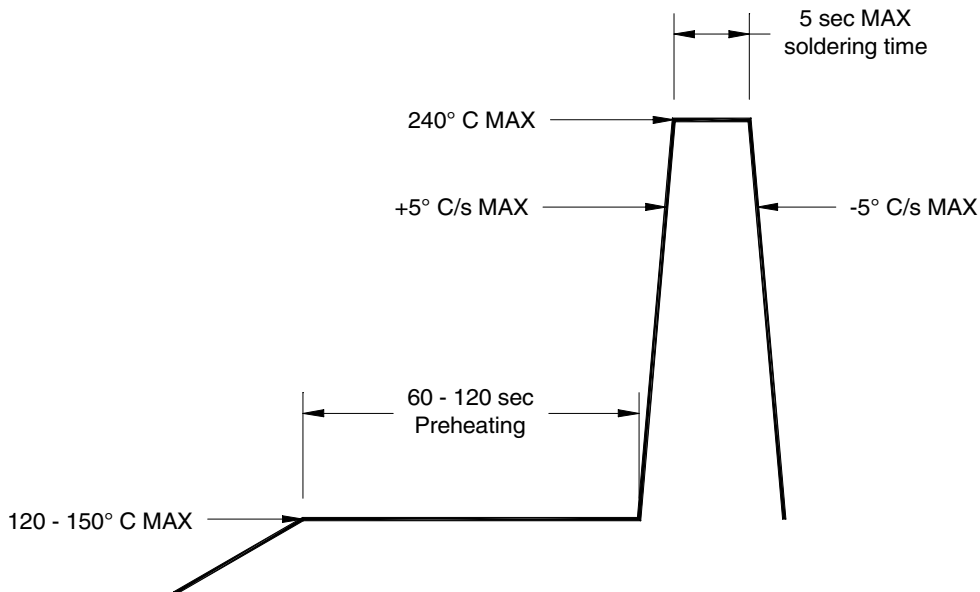
QTLP680C-7 AlGaAs Red

QTLP680C-B Blue

**RECOMMENDED PRINTED CIRCUIT BOARD PATTERN**



**RECOMMENDED IR REFLOW SOLDERING PROFILE**





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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.