

SURFACE MOUNT LED LAMP STANDARD BRIGHT REFLECTOR

QTLP680C-2 HER

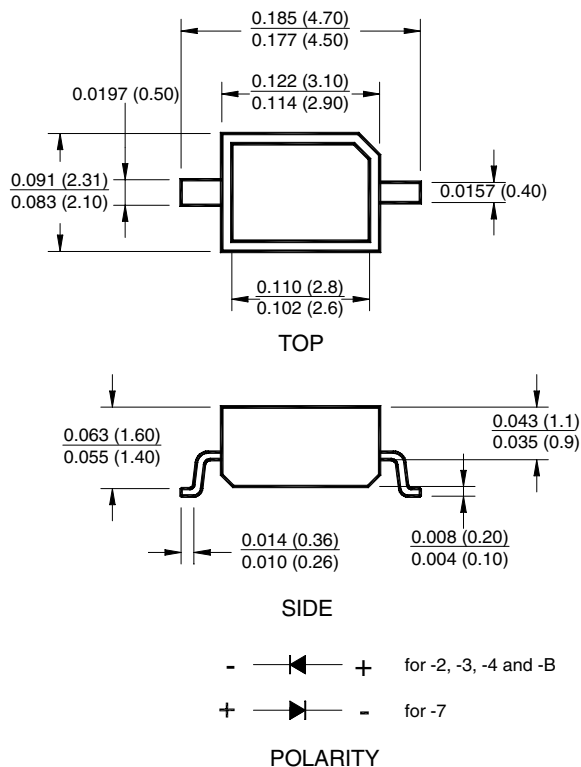
QTLP680C-3 Yellow

QTLP680C-4 Green

QTLP680C-7 AlGaAs Red

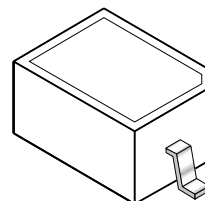
QTLP680C-B Blue

PACKAGE DIMENSIONS



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

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ABSOLUTE MAXIMUM RATINGS (T_A = 25°C Unless otherwise specified)

Parameter	Symbol	QTLP680C					Units
		-2	-3	-4	-7	-B	
Continuous Forward Current	I _F	30	30	30	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	160	160	160	180	100	mA
Reverse Voltage (I _R = 10 μA)	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					°C
Storage Temperature	T _{STG}	-40 to +100					°C
Lead Soldering Time	T _{SOL}	260 for 5 sec					°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

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

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

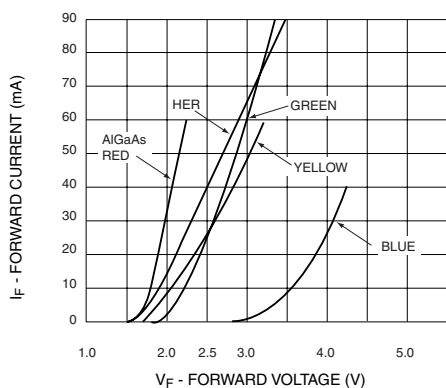


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

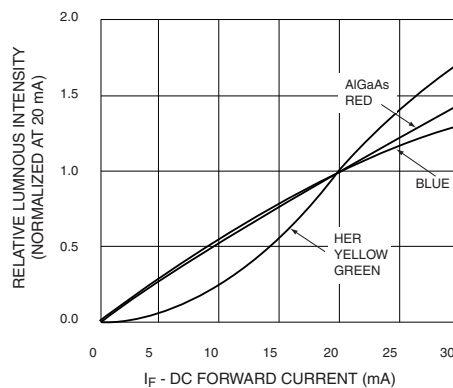


Fig. 3 Relative Intensity vs. Peak Wavelength

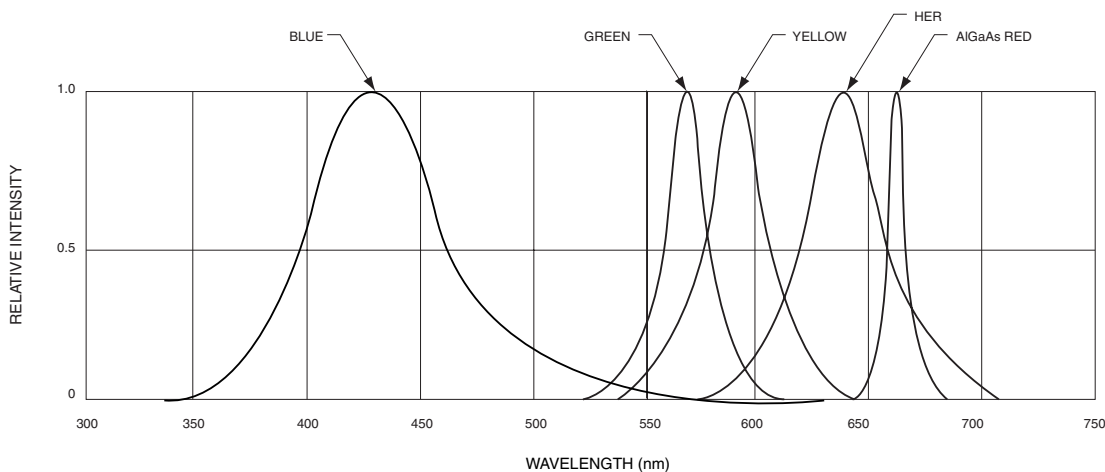


Fig. 4 Radiation Diagram

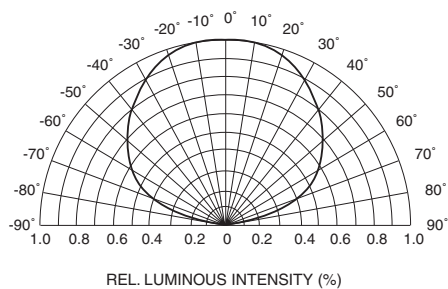
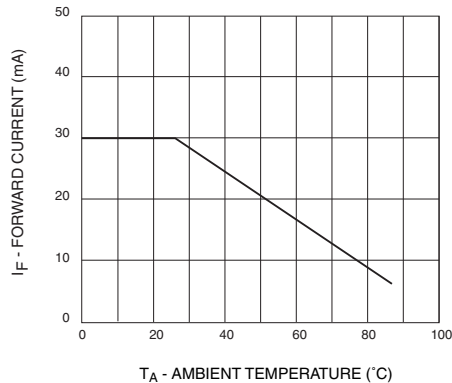


Fig. 5 Maximum Forward Current vs. Ambient Temperature



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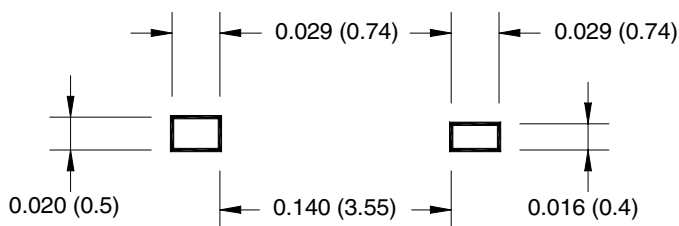
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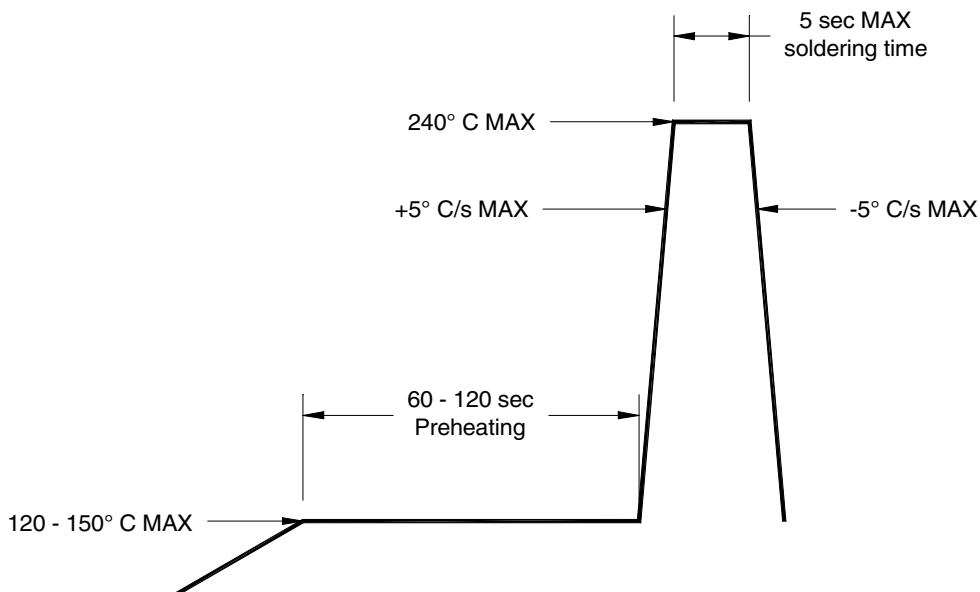
QTLP680C-7 AlGaAs Red

QTLP680C-B Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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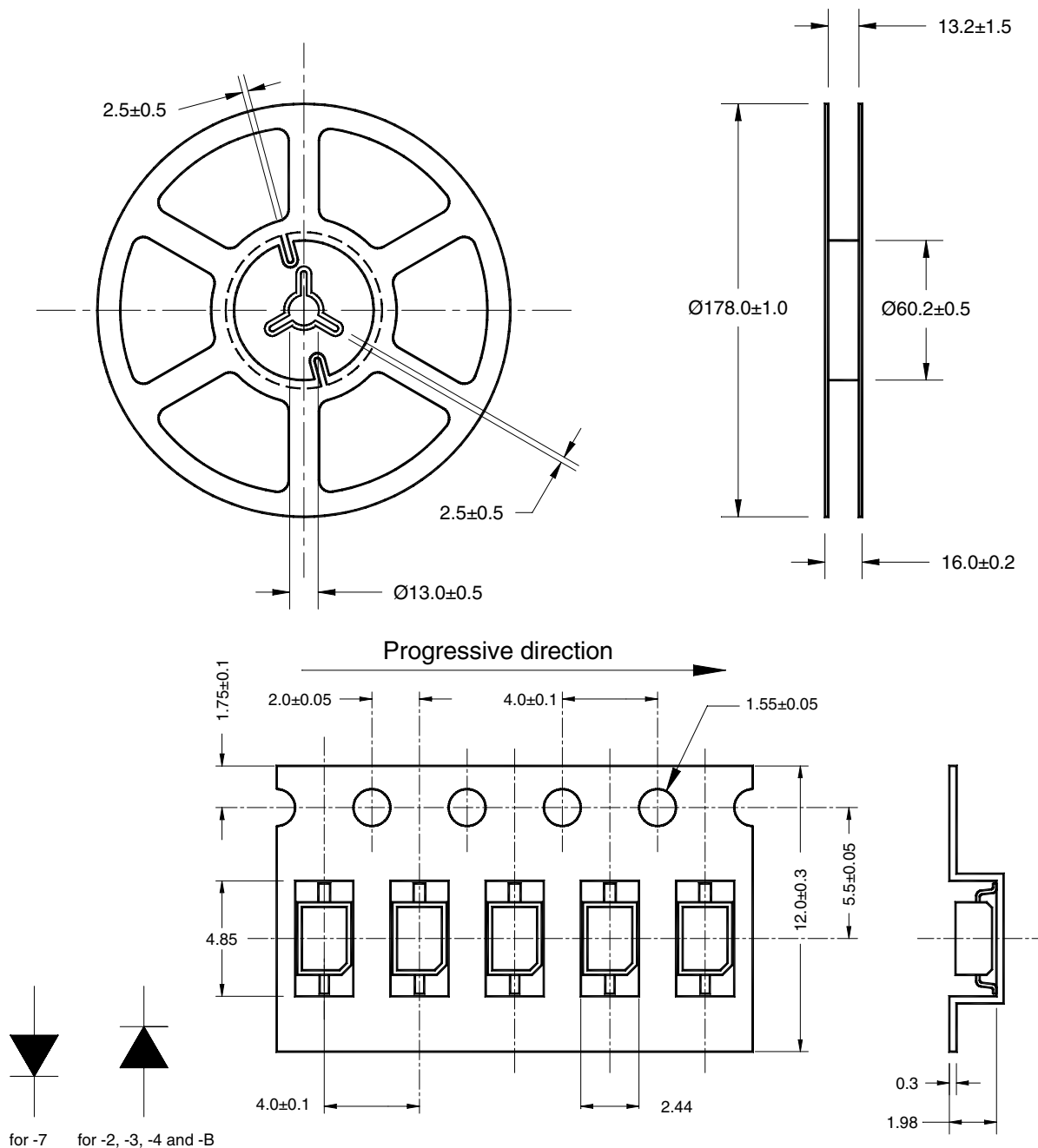
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TAPE AND REEL DIMENSIONS



Polarity

Dimensional tolerance is ± 0.1 mm unless otherwise specified
Angle: ± 0.5
Unit: mm

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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.