

FAIRCHILD
SEMICONDUCTOR®

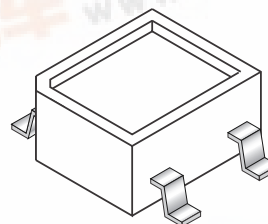
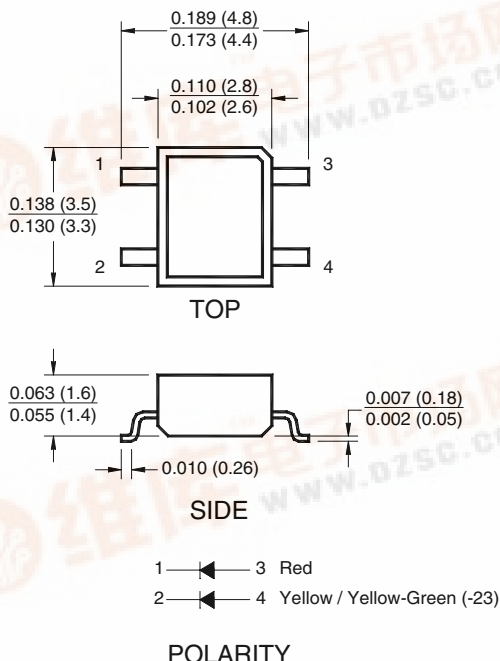
SURFACE MOUNT LED LAMP

SUPER BRIGHT REFLECTOR (DUAL COLOR)

QTLP680C-RY Red/Yellow

QTLP680C-RAG Red/Yellow-Green

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 super bright surface mount LEDs offer uniform lighting and high light output performance.

FEATURES

- Reflector package
- AlInGaP technology
- 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
		-RY	-RAG	
Continuous Forward Current	I _F	30 / 25	30 / 30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	160 / 120	160 / 160	mA
Reverse Voltage	V _R	5	5	V
Power Dissipation	P _D	72 / 60	72 / 72	mW
Operating Temperature	T _{OPR}	-40 to +85		°C
Storage Temperature	T _{STG}	-40 to +90		°C
Lead Soldering Time	T _{SOL}	260 for 5 sec		°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

Parameter	Symbol	QTLP680C		Units
		-RY	-RAG	
Luminous Intensity (mcd)	I _V	15 / 15	15 / 10	I _F = 20mA
Minimum		35 / 35	35 / 20	
Typical				
Forward Voltage (V)	V _F	2.4 / 2.4	2.4 / 2.4	I _F = 20mA
Maximum		2.0 / 2.0	2.0 / 2.0	
Typical				
Wavelength (nm)	λ _P	630 / 590	630 / 575	I _F = 20mA
Peak		624 / 589	624 / 573	
Dominant	λ _D			
Spectral Line Half Width (nm)	Δλ	20 / 15	20 / 20	I _F = 20mA
Viewing Angle (°)	2θ _{1/2}	130	130	I _F = 20mA

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TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

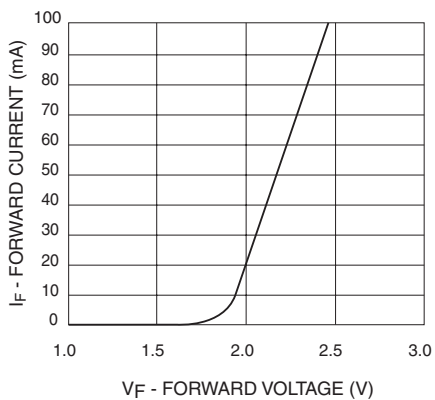


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

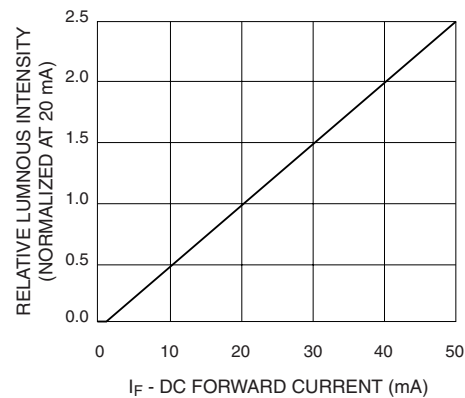


Fig. 3 Relative Intensity vs. Peak Wavelength

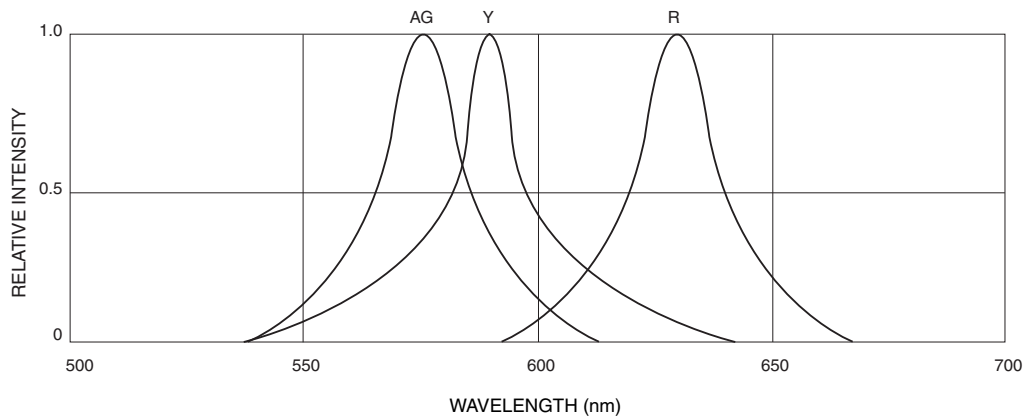


Fig.4 Radiation Diagram

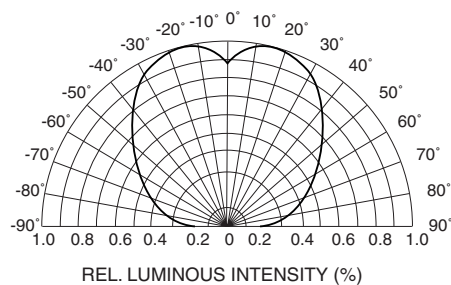
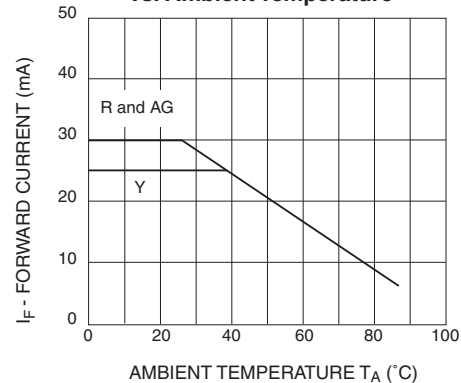


Fig.5 Maximum Forward Current vs. Ambient Temperature

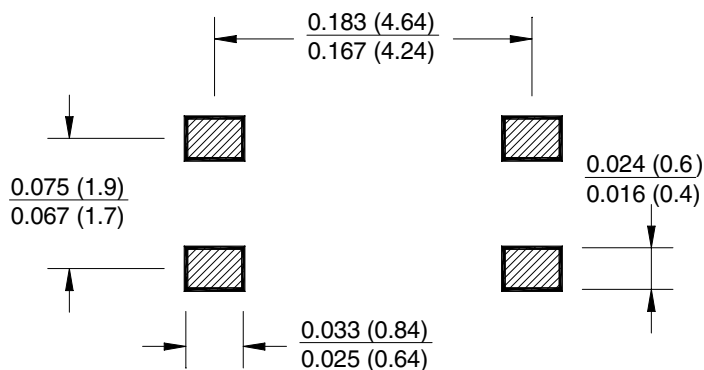


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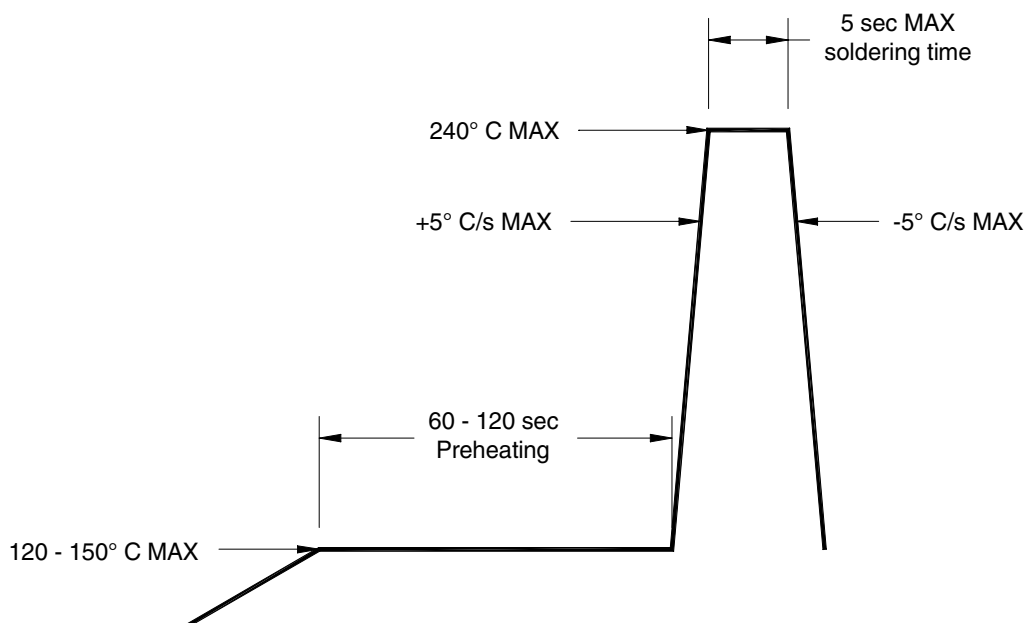
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RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE

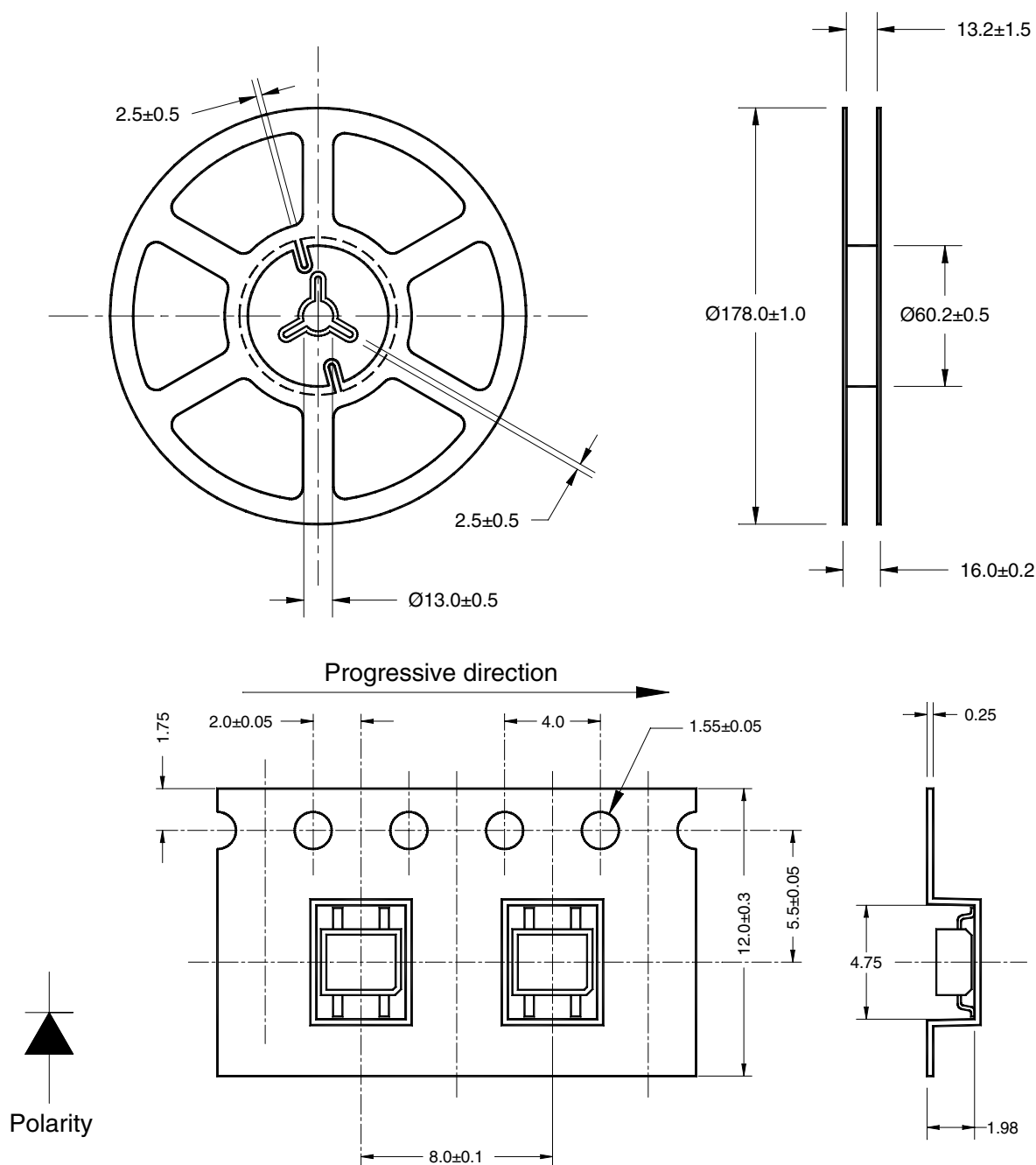


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TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1 mm unless otherwise specified

Angle: ± 0.5

Unit: mm



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DISCLAIMER

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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.