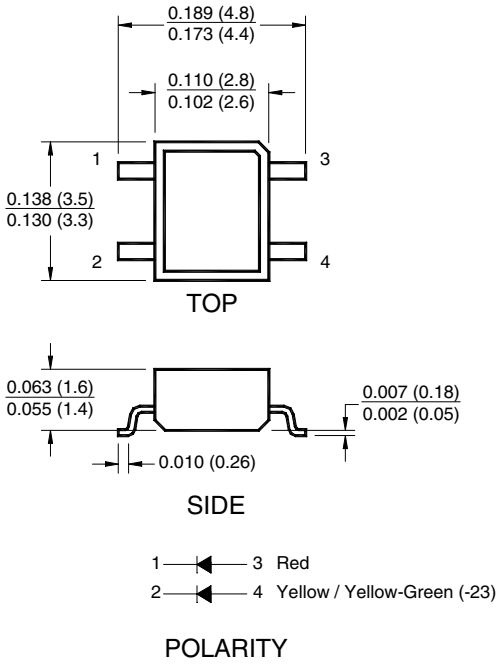
FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT REFLECTOR (DUAL COLOR)

QTLP680C-RY Red/Yellow

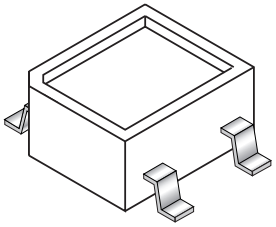
QTLP680C-RAG Red/Yellow-Green

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)				
Minimum	I_V	15 / 15	15 / 10	I_F = 20mA
Typical		35 / 35	35 / 20	
Forward Voltage (V)				
Maximum	V_F	2.4 / 2.4	2.4 / 2.4	I_F = 20mA
Typical		2.0 / 2.0	2.0 / 2.0	
Wavelength (nm)				
Peak	λ_P	630 / 590	630 / 575	I_F = 20mA
Dominant	λ_D	624 / 589	624 / 573	
Spectral Line Half Width (nm)	$\Delta\lambda$	20 / 15	20 / 20	I_F = 20mA
Viewing Angle (°)	$2\Theta_{1/2}$	130	130	I_F = 20mA

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

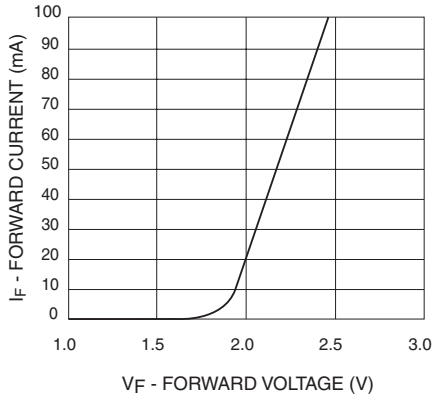


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

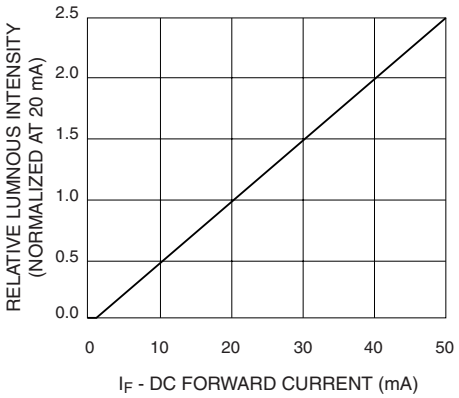


Fig. 3 Relative Intensity vs. Peak Wavelength

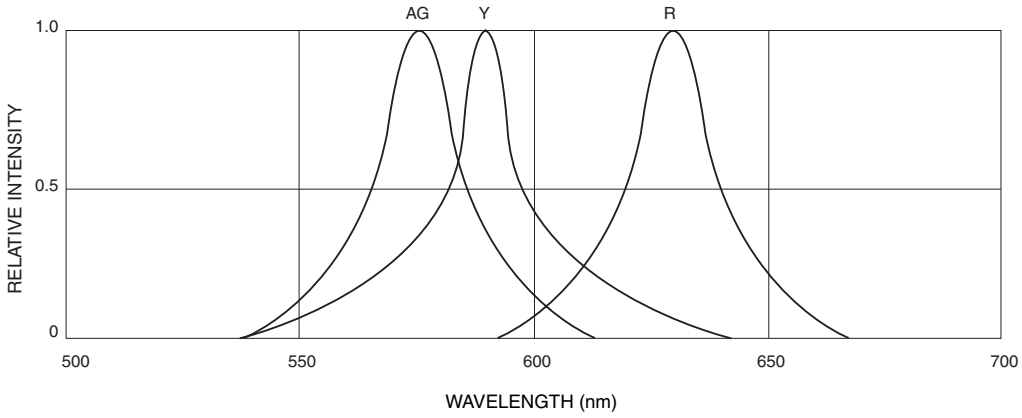


Fig.4 Radiation Diagram

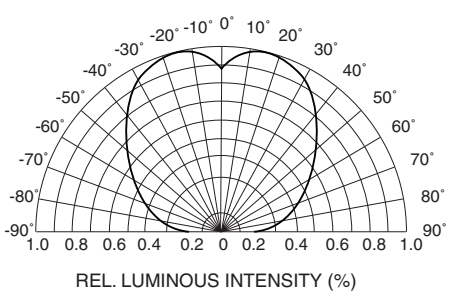
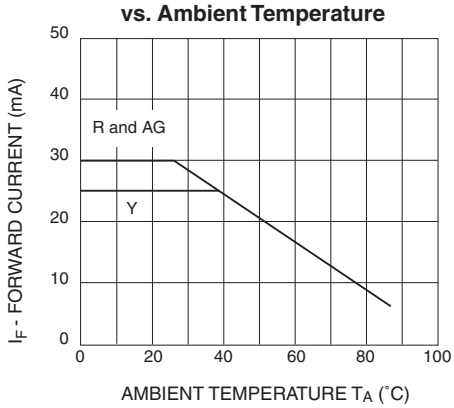


Fig.5 Maximum Forward Current vs. Ambient Temperature



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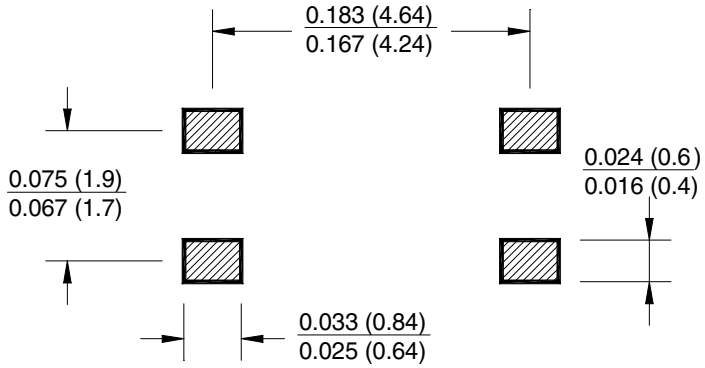
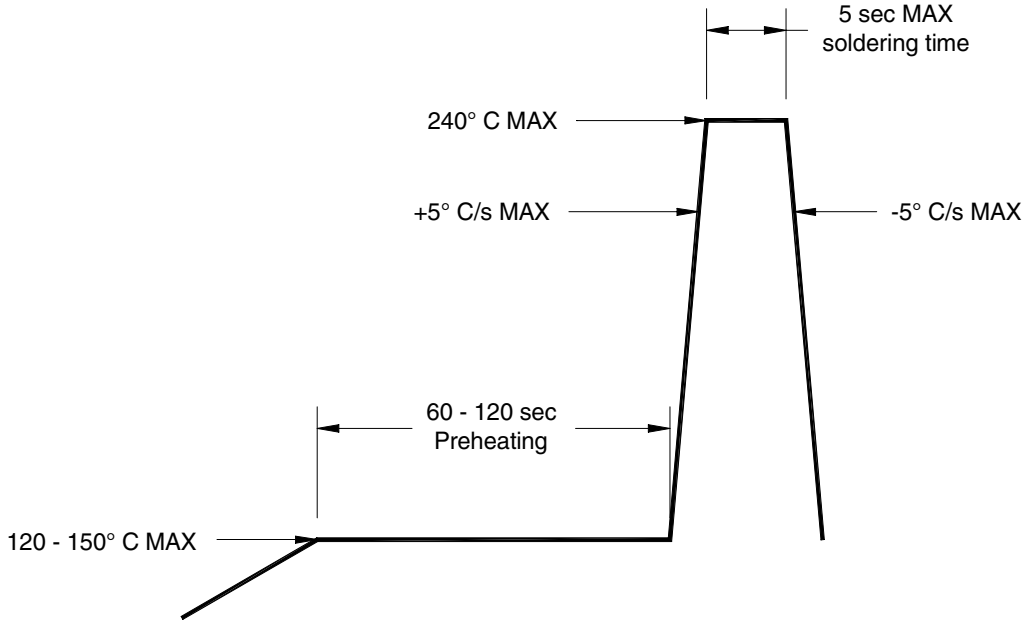
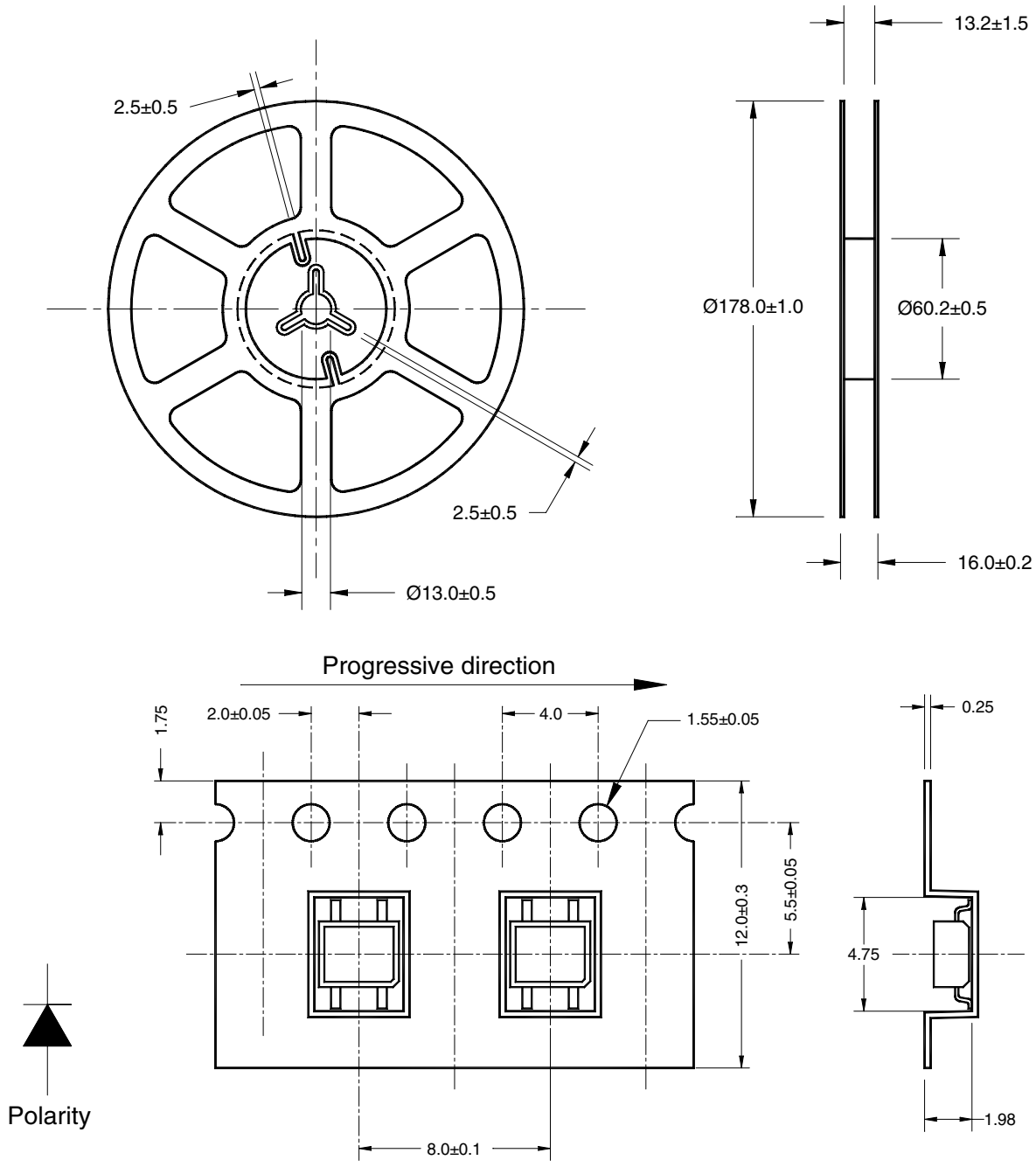
RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1mm 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.