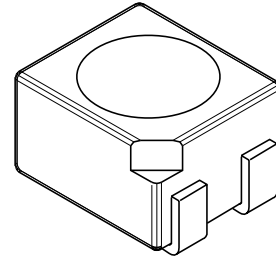
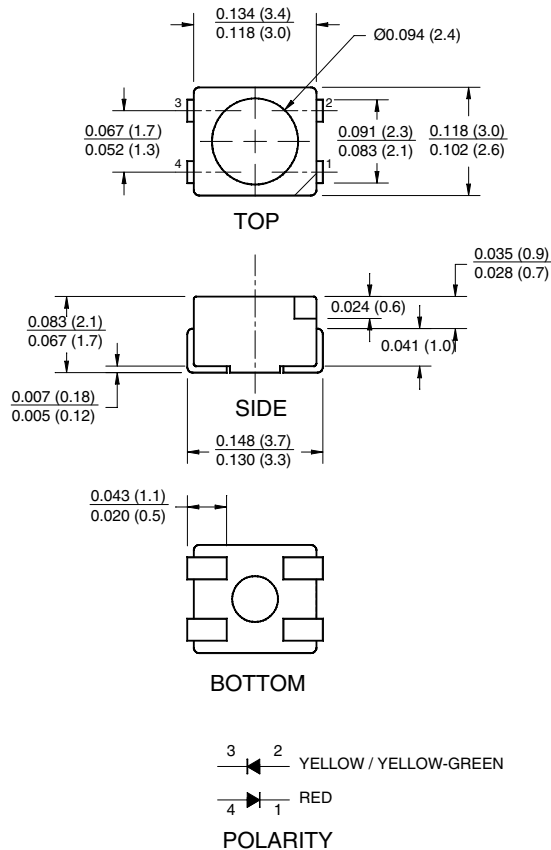


QTLP670C-RY Red/Yellow

QTLP670C-RAG Red/Yellow-Green

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).

APPLICATIONS

- Automotive interior lighting
- Status indication for consumer electronics and office equipment

DESCRIPTION

These super bright dual color surface mount LEDs are designed with flat top and sides for the ease of pick-and-place by automatic placement equipment. They are compatible with convective IR and vapor phase reflow soldering. The package size and configuration conform to EIA-535 BAAC standard specification for case size 3528 tantalum capacitor. These LEDs are ideal for backlighting and optical coupling into light pipes.

FEATURES

- AllnGaP technology for -R, -Y and -AG
- Wide viewing angle of 120°
- Water clear optics
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

QTLP670C-RY Red/Yellow

QTLP670C-RAG Red/Yellow-Green

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

Parameter	Symbol	QTLP670C		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
Junction Temperature	T _J	100 / 100	100 / 100	°C
Thermal Resistance (Junction-Air)	R _{th JA}	550 ¹ / 750 ²	550 ¹ / 750 ²	K/W
Operating Temperature	T _{OPR}	-40 to +95		°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)

Parameter	Symbol	QTLP670C		Units
		-RY	-RAG	
Luminous Intensity (mcd)	I _v			I _F = 20mA
Minimum		20 / 20	20 / 15	
Typical		55 / 55	55 / 25	
Forward Voltage (V)	V _F			I _F = 20mA
Maximum		2.4 / 2.4	2.4 / 2.4	
Typical		2.0 / 2.0	2.0 / 2.0	
Wavelength (nm)	λ _P			I _F = 20mA
Peak		630 / 590	630 / 575	
Dominant	λ _D	624 / 589	624 / 573	
Spectral Line Half Width (nm)	Δλ	20 / 15	20 / 20	I _F = 20mA
Viewing Angle (°)	2Θ _{1/2}	120	120	I _F = 20mA

¹ One chip on

² Two chips on

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

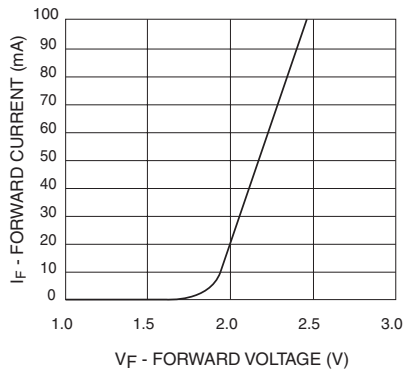


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

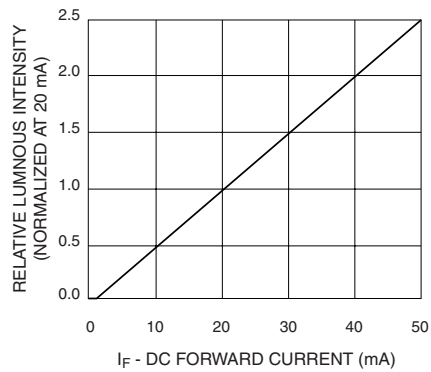


Fig. 3 Relative Intensity vs. Peak Wavelength

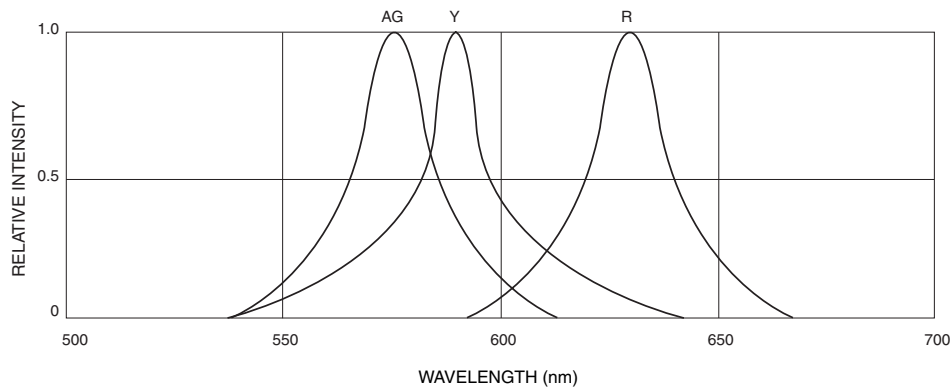


Fig.4 Radiation Diagram

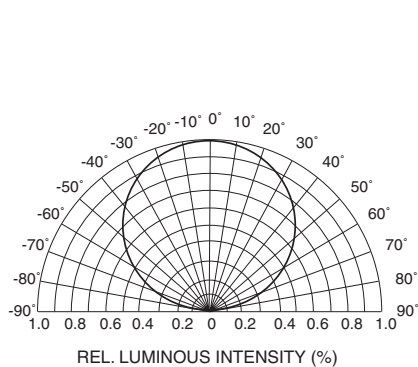
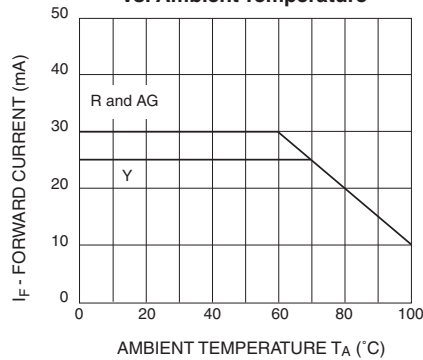


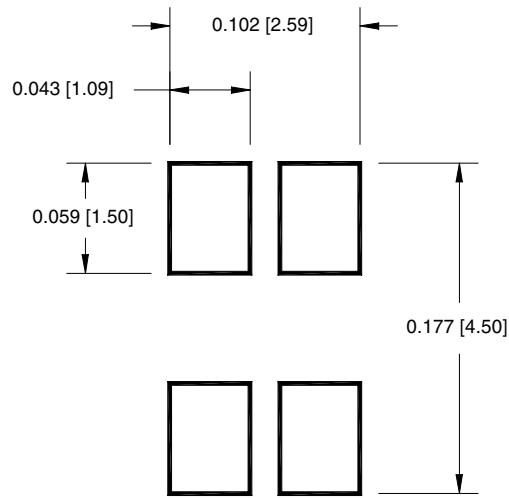
Fig.5 Maximum Forward Current vs. Ambient Temperature



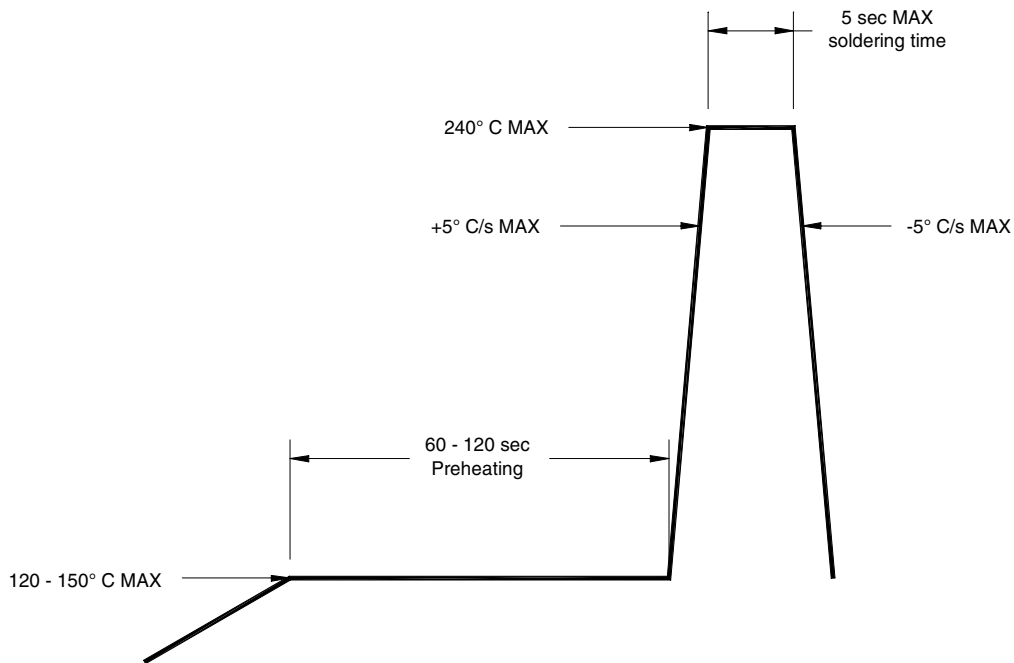
QTLP670C-RY Red/Yellow

QTLP670C-RAG Red/Yellow-Green

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



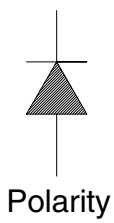
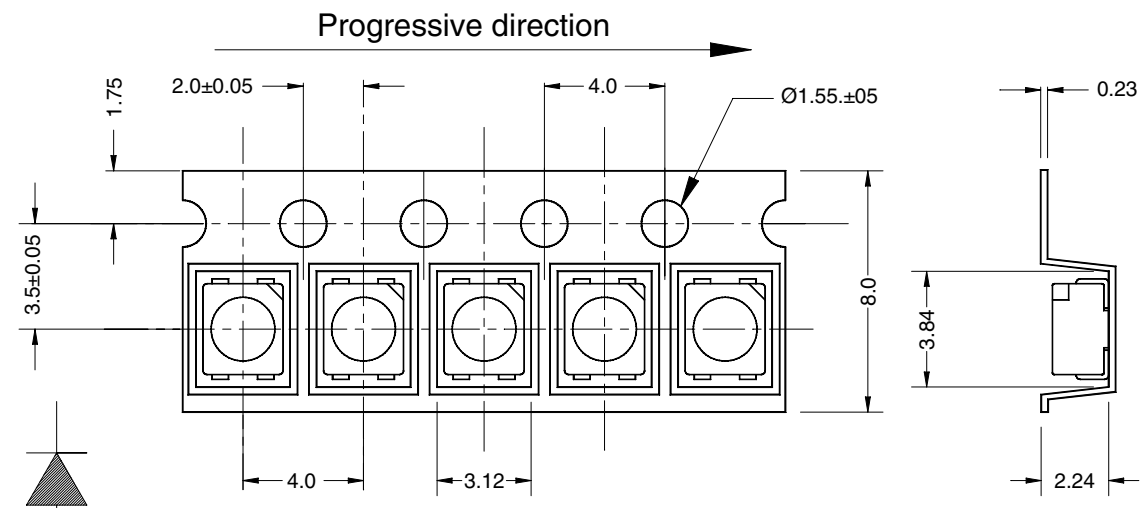
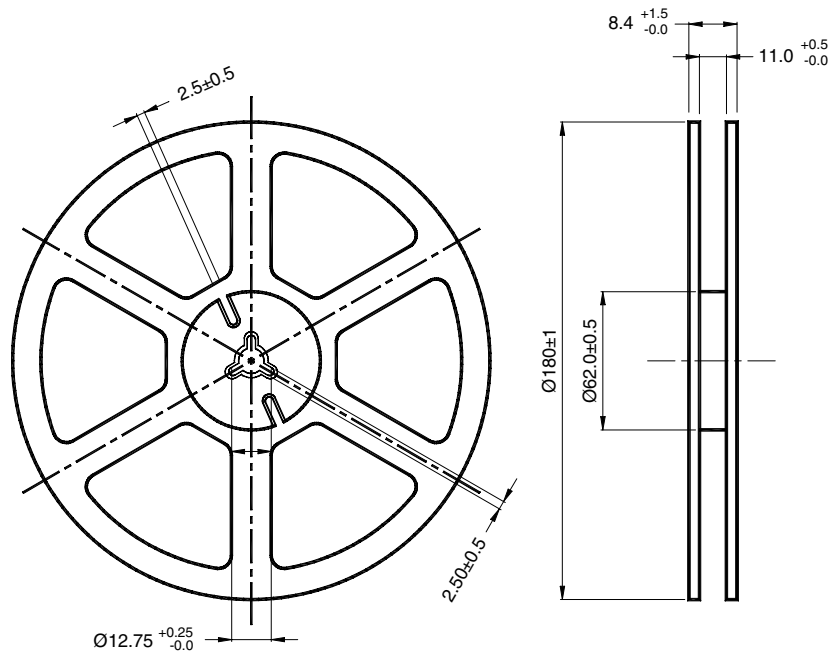
RECOMMENDED IR REFLOW SOLDERING PROFILE



QTLP670C-RY Red/Yellow

QTLP670C-RAG Red/Yellow-Green

TAPE AND REEL DIMENSIONS



Dimensional tolerance is $\pm 0.1\text{mm}$ unless otherwise specified
 Angle: ± 0.5
 Unit: mm

QTLP670C-RY Red/Yellow

QTLP670C-RAG Red/Yellow-Green

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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.