

# SURFACE MOUNT LED LAMP STANDARD BRIGHT REFLECTOR (DUAL COLOR)

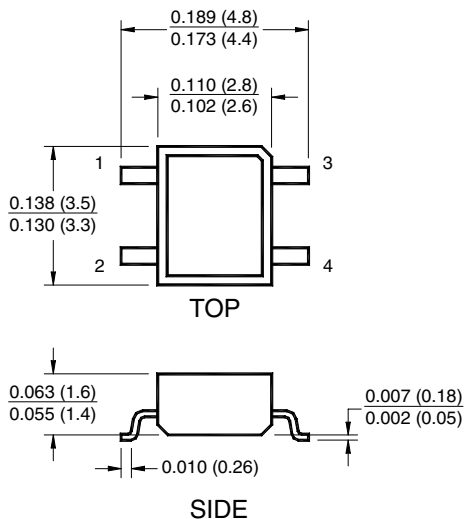
QTLP680C-23 HER/Yellow

QTLP680C-24 HER/Green

QTLP680C-34 Yellow/Green

QTLP680C-74 AlGaAs Red/Green

## PACKAGE DIMENSIONS

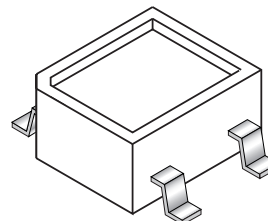


1 — 3 HER / AlGaAs Red / Yellow (-34)  
2 — 4 Green / Yellow (-23)

### 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

- Reflector package
- 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 (DUAL COLOR)

**QTLP680C-23** HER/Yellow

**QTLP680C-24** HER/Green

**QTLP680C-34** Yellow/Green

**QTLP680C-74** AlGaAs Red/Green

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

Parameter	Symbol	QTLP680C				Units
		-23	-24	-34	-74	
Continuous Forward Current	I <sub>F</sub>	30 / 30	30 / 30	30 / 30	30 / 30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>FM</sub>	160 / 160	160 / 160	160 / 160	180 / 160	mA
Reverse Voltage	V <sub>R</sub>	5	5	5	5	V
Power Dissipation	P <sub>D</sub>	84 / 84	84 / 84	84 / 84	72 / 84	mW
Operating Temperature	T <sub>OPR</sub>	-40 to +85				°C
Storage Temperature	T <sub>STG</sub>	-40 to +90				°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec				°C

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

Parameter	Symbol	QTLP680C				Units
		-23	-24	-34	-74	
Luminous Intensity (mcd)	I <sub>v</sub>	7 / 7	7 / 10	7 / 10	9 / 10	I <sub>F</sub> = 20mA
Minimum		15 / 15	15 / 20	15 / 20	15 / 20	
Forward Voltage (V)	V <sub>F</sub>	2.8 / 2.8	2.8 / 2.8	2.8 / 2.8	2.4 / 2.8	I <sub>F</sub> = 20mA
Typical		2.0 / 2.0	2.0 / 2.0	2.0 / 2.0	1.9 / 2.0	
Wavelength (nm)	λ <sub>P</sub>	635 / 585	635 / 565	585 / 565	660 / 565	I <sub>F</sub> = 20mA
Peak		630 / 590	630 / 570	590 / 570	645 / 570	
Dominant	λ <sub>D</sub>	630 / 590	630 / 570	590 / 570	645 / 570	I <sub>F</sub> = 20mA
Spectral Line Half Width (nm)	Δλ	45 / 35	45 / 30	35 / 30	20 / 30	I <sub>F</sub> = 20mA
Viewing Angle (°)	2θ <sub>1/2</sub>	130	130	130	130	I <sub>F</sub> = 20mA

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## TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

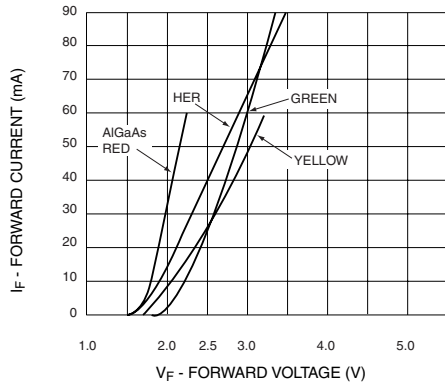


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

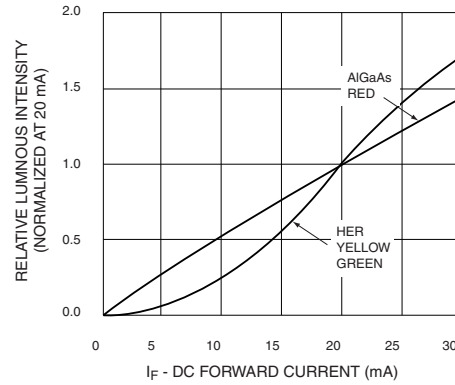


Fig. 3 Relative Intensity vs. Peak Wavelength

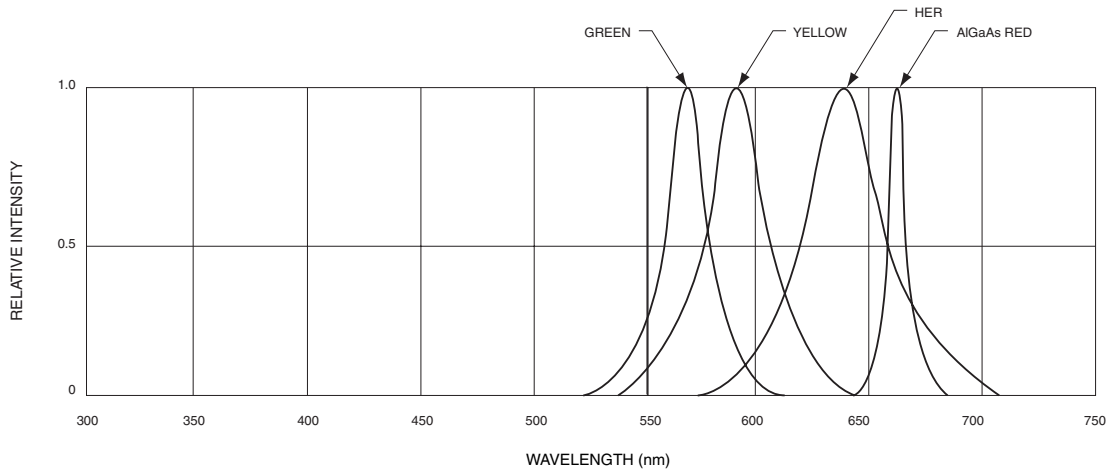


Fig. 4 Radiation Diagram

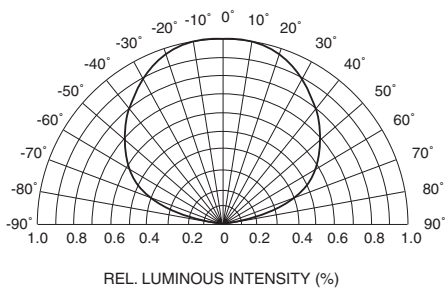
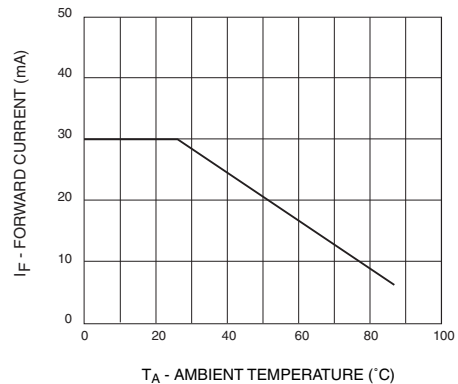


Fig. 5 Maximum Forward Current vs. Ambient Temperature



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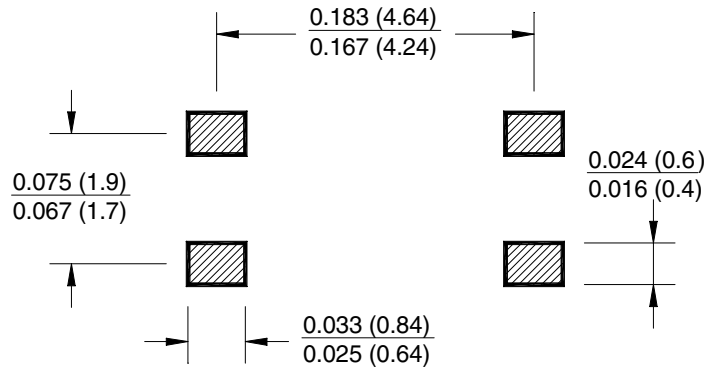
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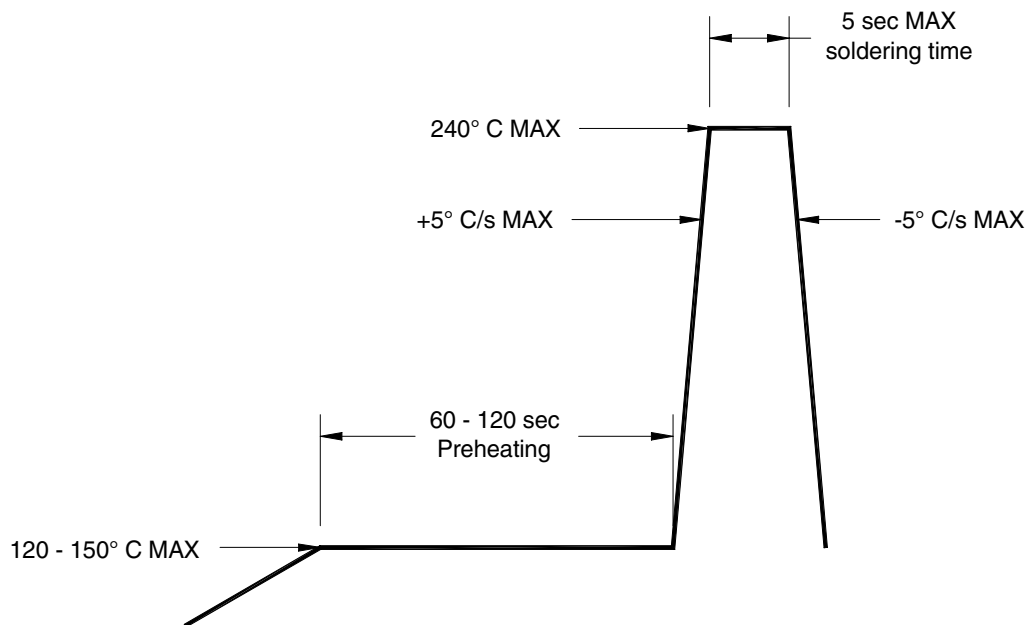
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**RECOMMENDED PRINTED CIRCUIT BOARD PATTERN**



**RECOMMENDED IR REFLOW SOLDERING PROFILE**



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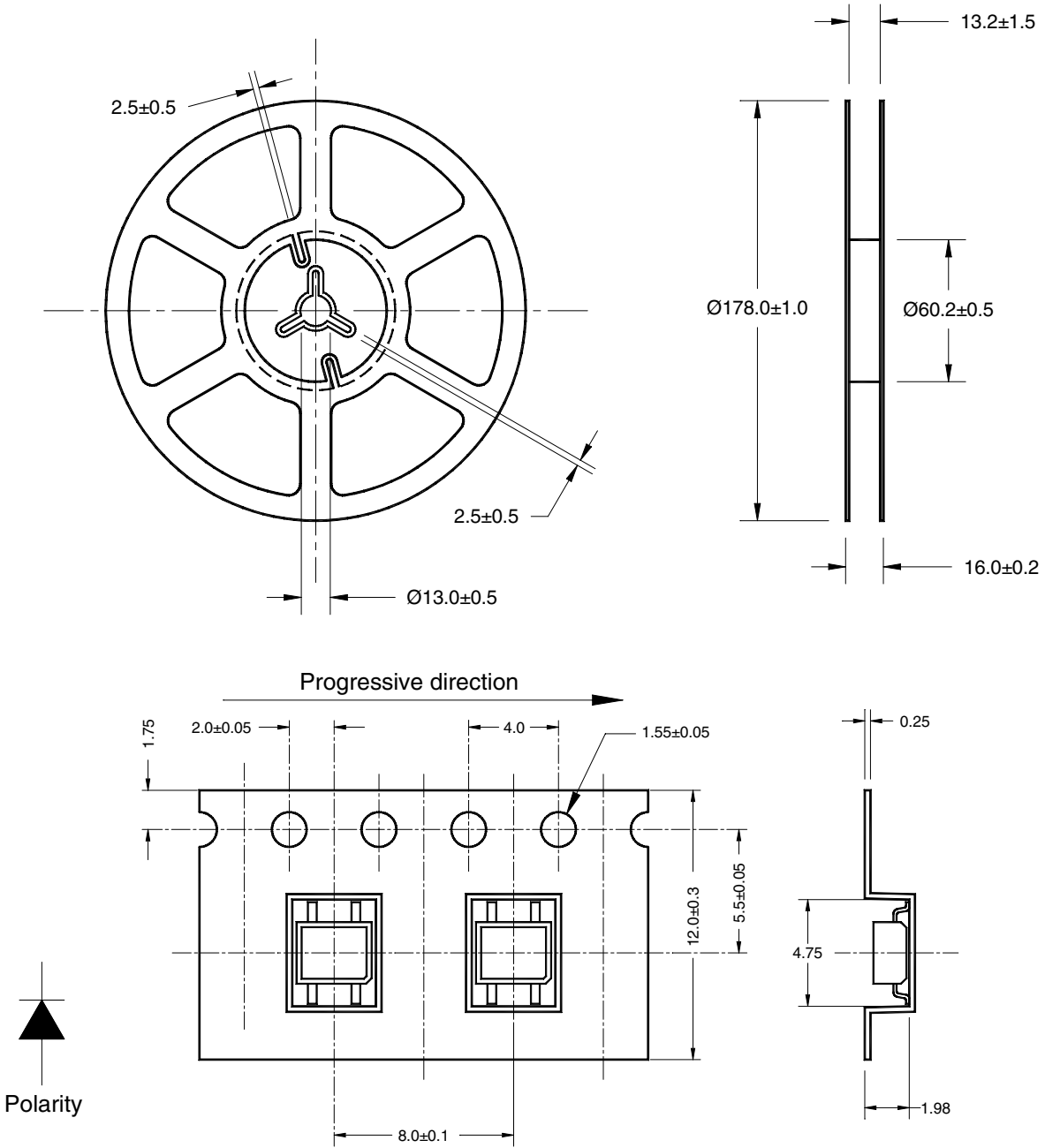
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**TAPE AND REEL DIMENSIONS**



Dimensional tolerance is  $\pm 0.1$ mm unless otherwise specified  
 Angle:  $\pm 0.5$   
 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.