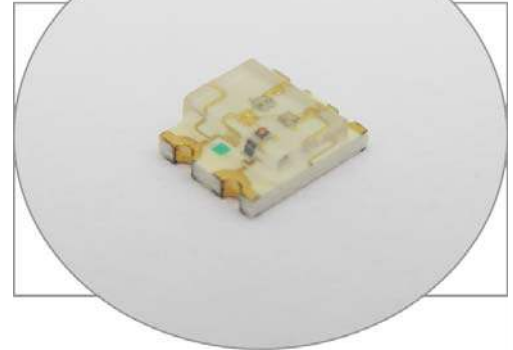


# SURFACE MOUNT LED RED/GREEN/YELLOW, 1210 PACKAGE

# BIVAR

## SM1210RGY

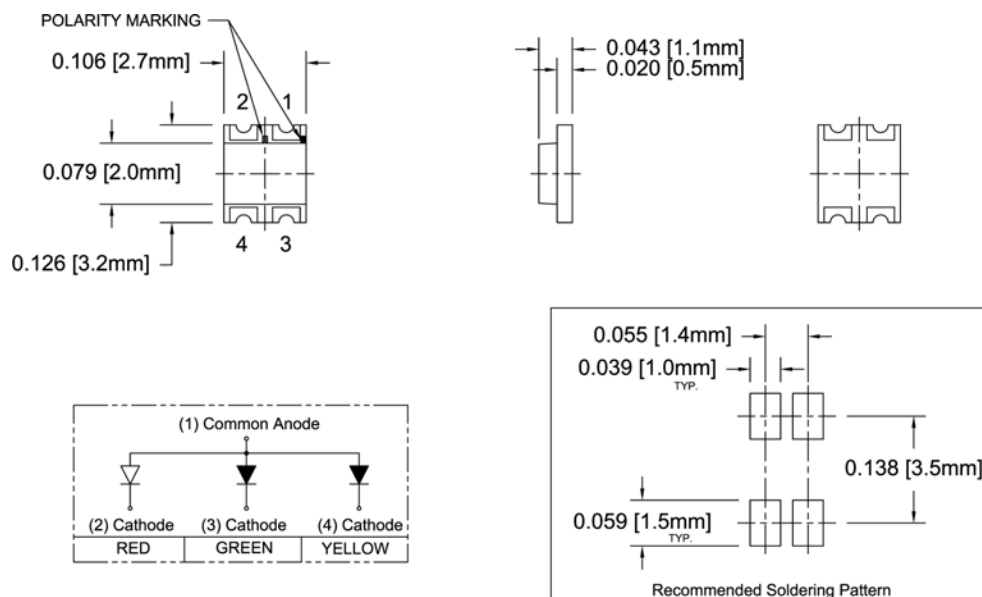
- ◆ Industry Standard Package
- ◆ RoHS Compliant
- ◆ Three Chips in One Package
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Lighting



Bivar Surface Mount 1210 package RGY LED combines three chips in a single package. They are ideal for small scale applications where multiple signals need to be displayed. Wide variety of colors can be created by simply mixing the three chips in different combinations. Bivar offers water clear LED lens for high luminous intensity and wide viewing angles making them suitable for lighting and display applications. The SM1210 RGY LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Peak Wavelength $\lambda_p$ (nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM1210RGY	GaAsP/GaP	HE RED	635	Water Clear	16	140°
	GaP	GREEN	568		15	
	GaAsP/GaP	YELLOW	585		10	

## Outline Dimensions



### Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance:  $\pm 0.010$ " unless otherwise noted.



Bivar reserves the right to make changes at any time without notice.

# SURFACE MOUNT LED RED/GREEN/YELLOW, 1210 PACKAGE



## Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$  unless otherwise noted

Power Dissipation	100 mW
Forward Current ( DC )	30 mA
Peak Forward Current <sup>1</sup>	150 mA
Reverse Voltage	5 V
Operating Temperature Range	-25 ~ +85°C
Storage Temperature Range	-30 ~ +100°C
Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) <sup>2</sup>	260°C

Notes: 1. 10% Duty Cycle, Pulse Width  $\leq$  0.1 msec.    2. Solder time less than 5 seconds at temperature extreme.

## Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$  &  $I_F = 20\text{ mA}$  unless otherwise noted

Part Number	Emitted color	Forward Voltage (V) <sup>1</sup>			Recommend Forward Current (mA)			Reverse Current ( $\mu\text{A}$ )	Dominant Wavelength (nm) <sup>2</sup>			Luminous Intensity $I_v$ (mcd)			Viewing Angle $2\theta_{1/2}$ (deg)
		MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM1210RGY	HE RED	/	1.9	2.6	/	20	/	100	/	/	/	/	16	/	140
	GREEN	/	2.1	2.6	/	20	/	100	/	/	/	/	15	/	
	YELLOW	/	2.1	2.6	/	20	/	100	/	/	/	/	10	/	

Notes: 1. Tolerance of forward voltage :  $\pm 0.05\text{V}$ .    2. Tolerance of dominant wavelength :  $\pm 1.0\text{nm}$ .

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# SURFACE MOUNT LED RED/GREEN/YELLOW, 1210 PACKAGE



## Typical Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

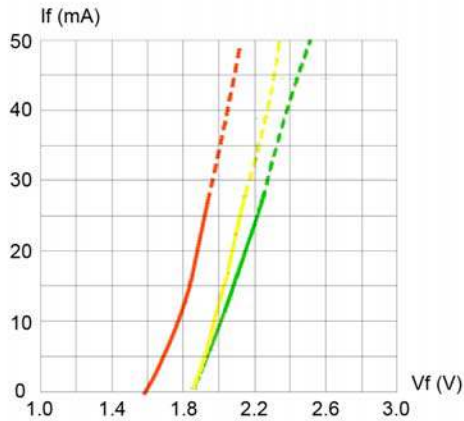


Fig. 1 Forward Current vs. Forward Voltage

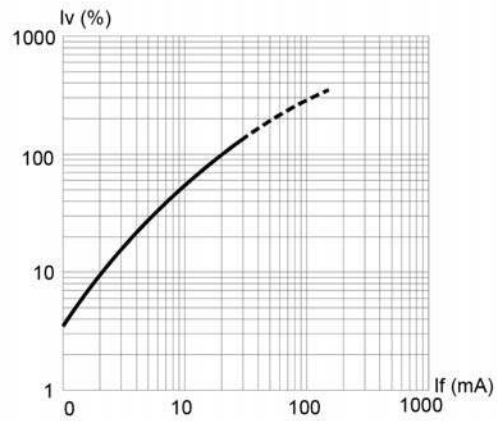


Fig. 2 Relative Luminous Intensity vs. Forward Current

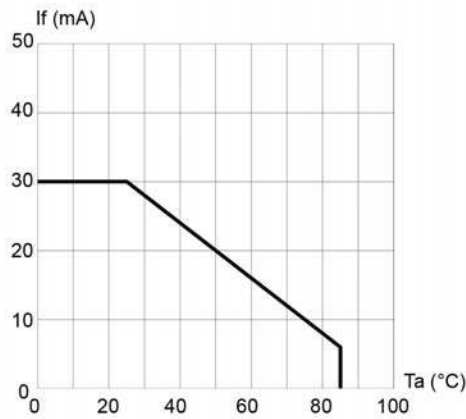


Fig. 3 Forward Current vs. Temperature

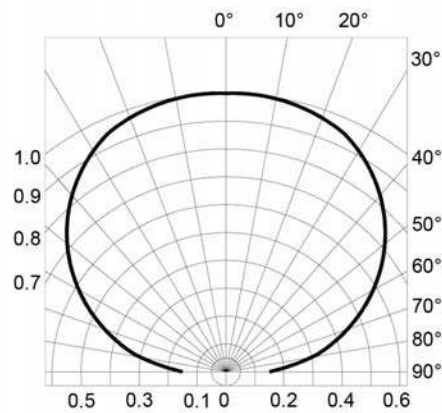


Fig. 4 Directivity Radiation Diagram

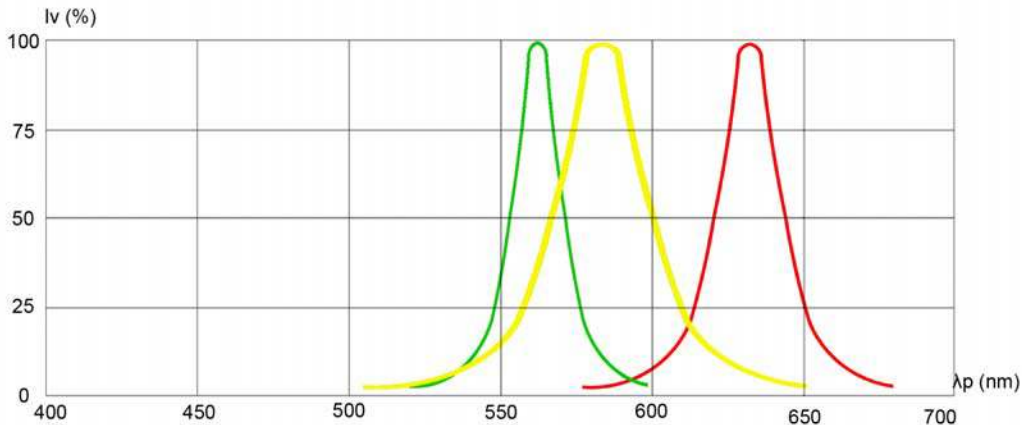


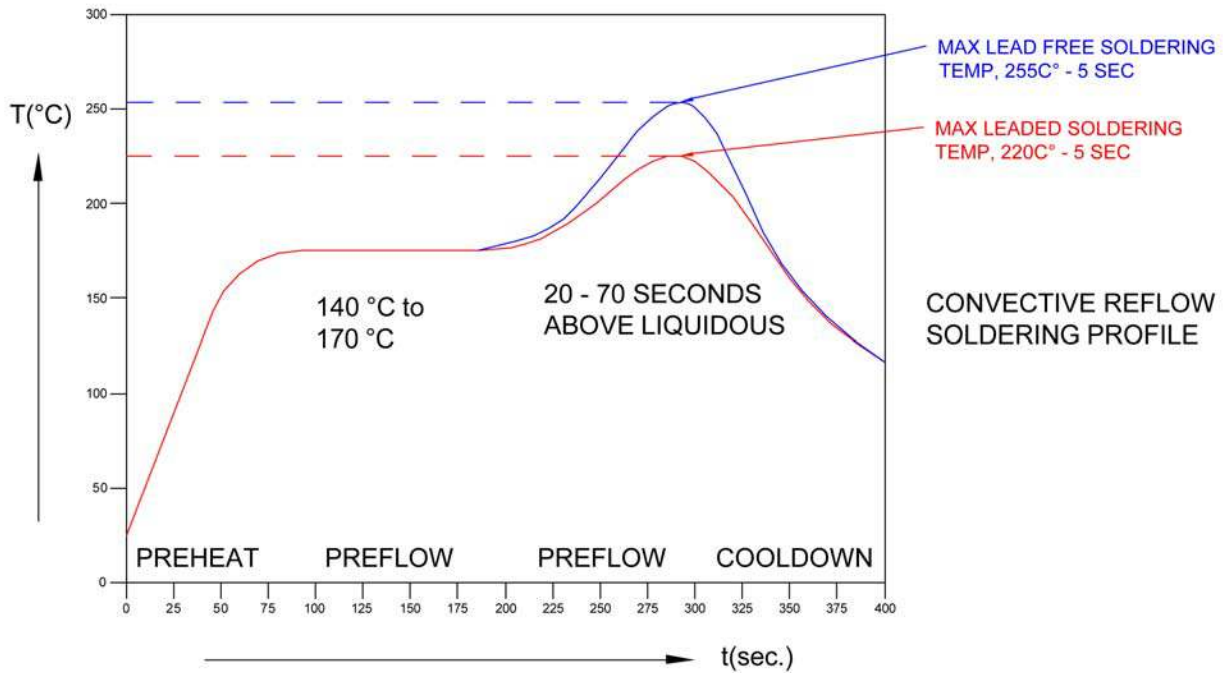
Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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# SURFACE MOUNT LED RED/GREEN/YELLOW, 1210 PACKAGE

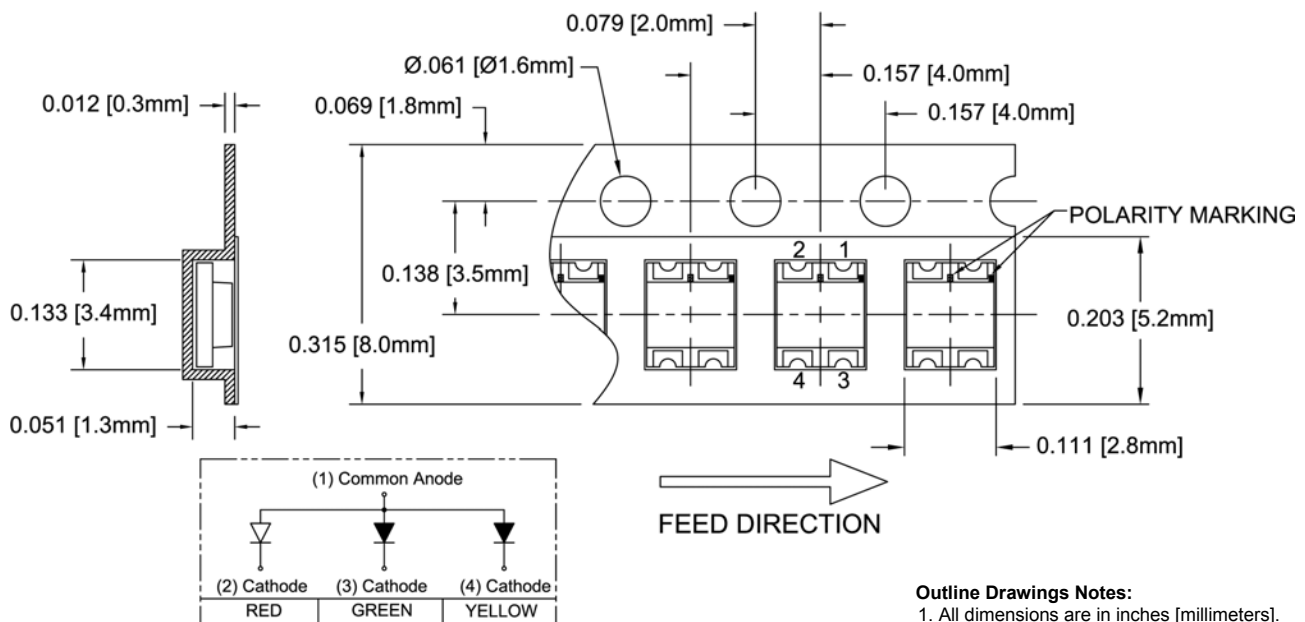


## Recommended Soldering Conditions



## Tape and Reel Dimensions

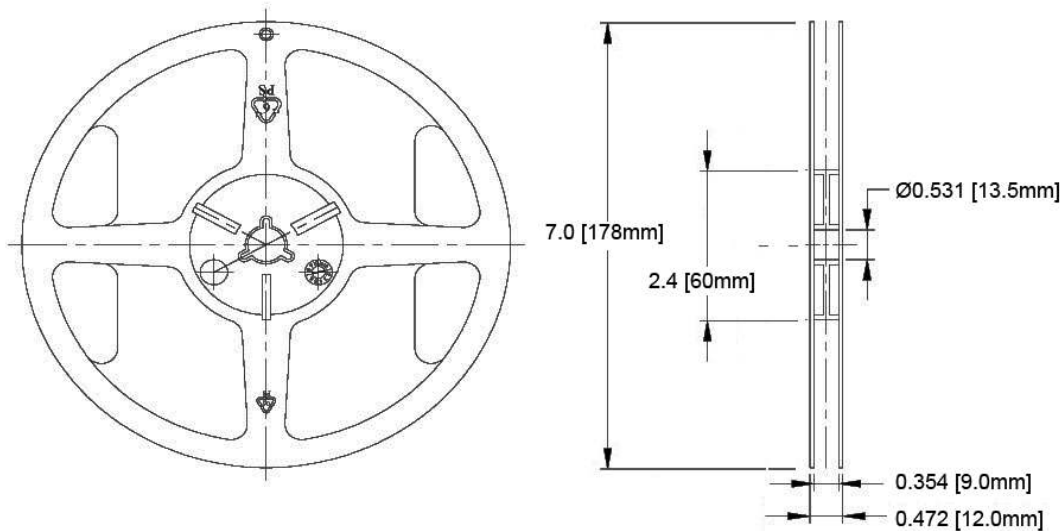
Note: 3000 pcs/Reel



- Outline Drawings Notes:**
1. All dimensions are in inches [millimeters].
  2. Standard tolerance:  $\pm 0.010''$  unless otherwise noted.

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# SURFACE MOUNT LED RED/GREEN/YELLOW, 1210 PACKAGE



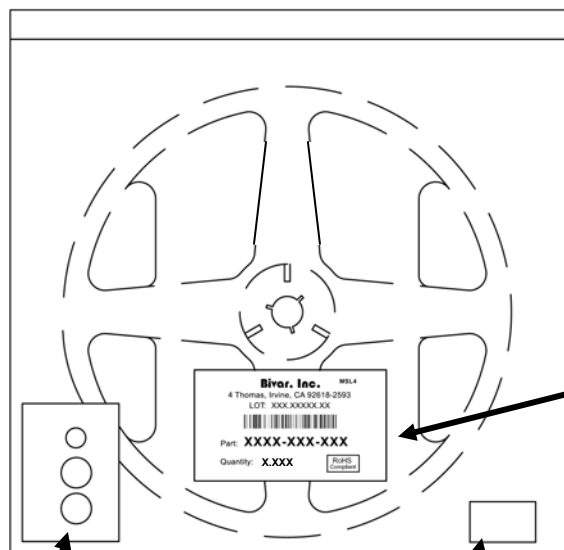
**Outline Drawings Notes:**

1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"  
X.X ± 0.1"

## Packaging and Labeling Plan

**Note: 1 Reel / Bag**

Sealed ESD and Moisture Barrier Bag



Humidity Indicator Card

Desiccant



Bivar Standard Packaging Label

Bivar reserves the right to make changes at any time without notice.