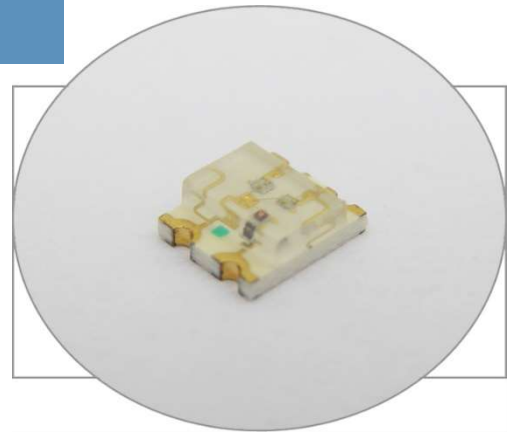


SURFACE MOUNT LED RED/GREEN, 1210 PACKAGE

BIVAR

SM1210BC-SR/HG

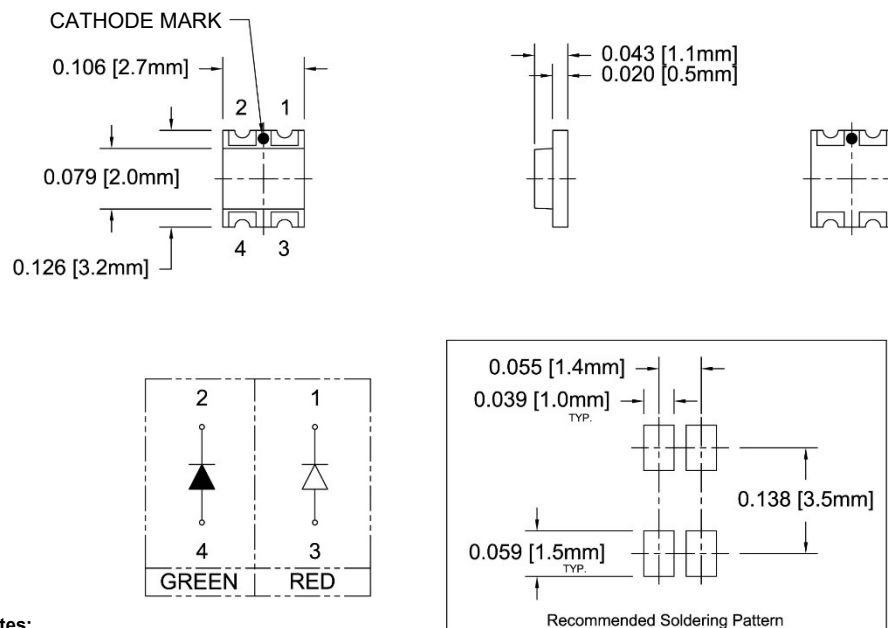
- ◆ Industry Standard Package
- ◆ RoHS Compliant
- ◆ Two Chips in One Package
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Lighting



Bivar Surface Mount 1210 package Bi-Color LED combines two chips in a single package. They are ideal for small scale applications where multiple signals need to be displayed. When needed, the third color can be created by powering up both chips together. Bivar offers water clear LED lens for high luminous intensity and wide viewing angles. Wide variety of color and intensity combinations are available to meet any illumination need. The SM1210 LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Peak Wavelength λ_p (nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM1210BC-SR/HG	AlGaInP	RED	655	Water Clear	22.5	130°
	GaP	GREEN	568		11.5	

Outline Dimensions



Outline Drawings Notes:

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



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

SURFACE MOUNT LED RED/GREEN, 1210 PACKAGE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	78 mW
Forward Current (DC)	30 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Operating Temperature Range	-30 ~ +80°C
Storage Temperature Range	-40 ~ +85°C
Lead Soldering Temperature (3 mm from the base of the epoxy bulb) ²	260°C
Electrostatic Discharge (HBM)	2000 V

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

Electrical / Optical Characteristics

T_A = 25°C & I_F = 20 mA unless otherwise noted

Part Number	Emitted color	Forward Voltage (V) ¹			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm) ²			Luminous Intensity I _v (mcd)			Viewing Angle 2 Θ ½ (deg)
		MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM1210BC-SR/HG	RED	/	2.00	2.60	/	20	/	10	632	640	660	11.5	22.5	45	130
	GREEN	/	2.10	2.60	/	20	/	10	568	570	576	7.2	11.5	18	130

Notes: 1. Tolerance of forward voltage : ±0.05V. 2. Tolerance of dominant wavelength : ±1.0nm. 3. Tolerance of luminous intensity : ±10%.

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Typical Electrical / Optical Characteristics

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

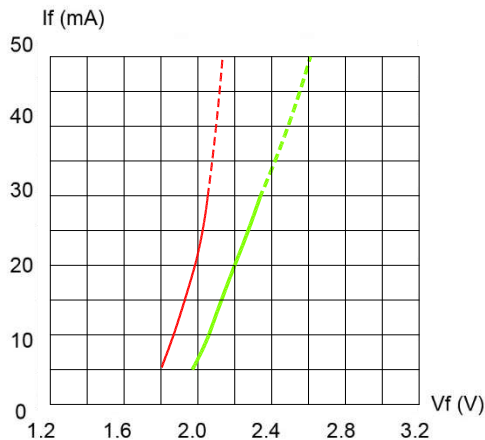


Fig. 1 Forward Current vs. Forward Voltage

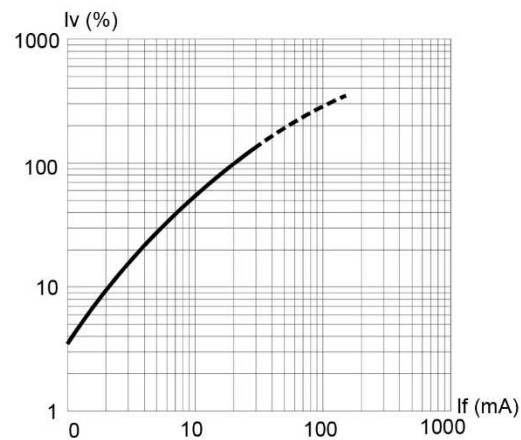


Fig. 2 Relative Luminous Intensity vs. Forward Current

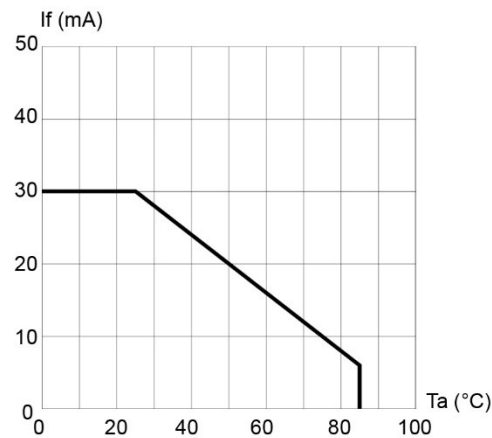


Fig. 3 Forward Current vs. Temperature

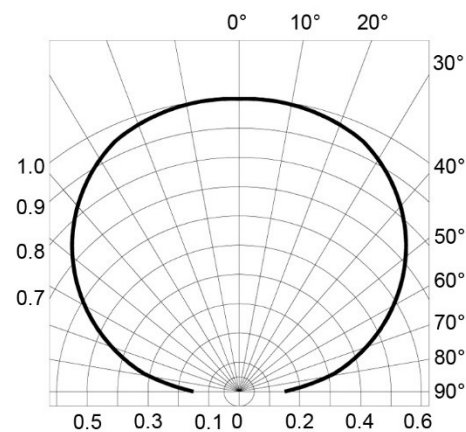


Fig. 4 Directivity Radiation Diagram

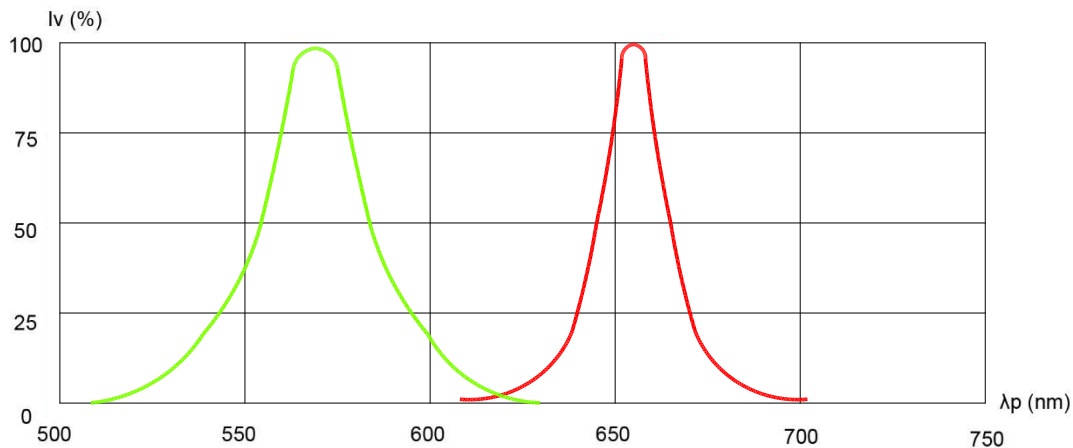


Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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

SURFACE MOUNT LED RED/GREEN, 1210 PACKAGE



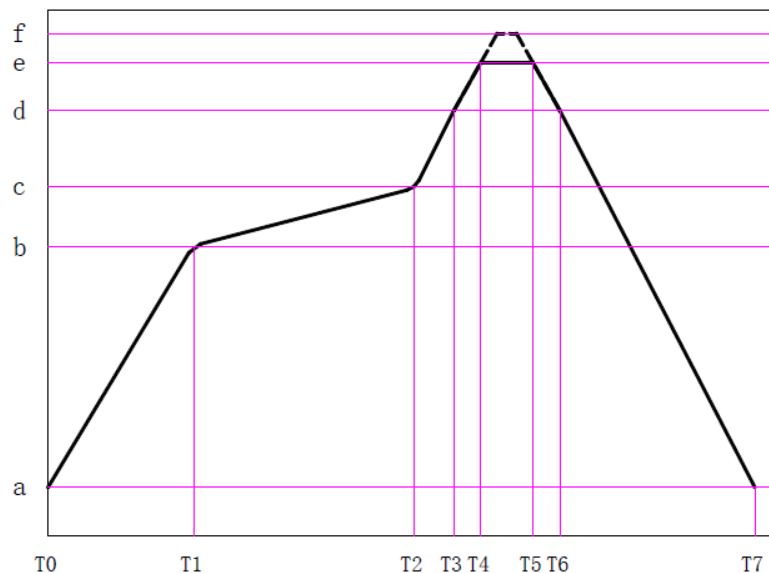
Soldering Iron

1. Temperature at tip of iron: 300 °C Max. (25 W Max.)
2. Soldering Time: 5 ± 1 sec.

Recommended Soldering Conditions

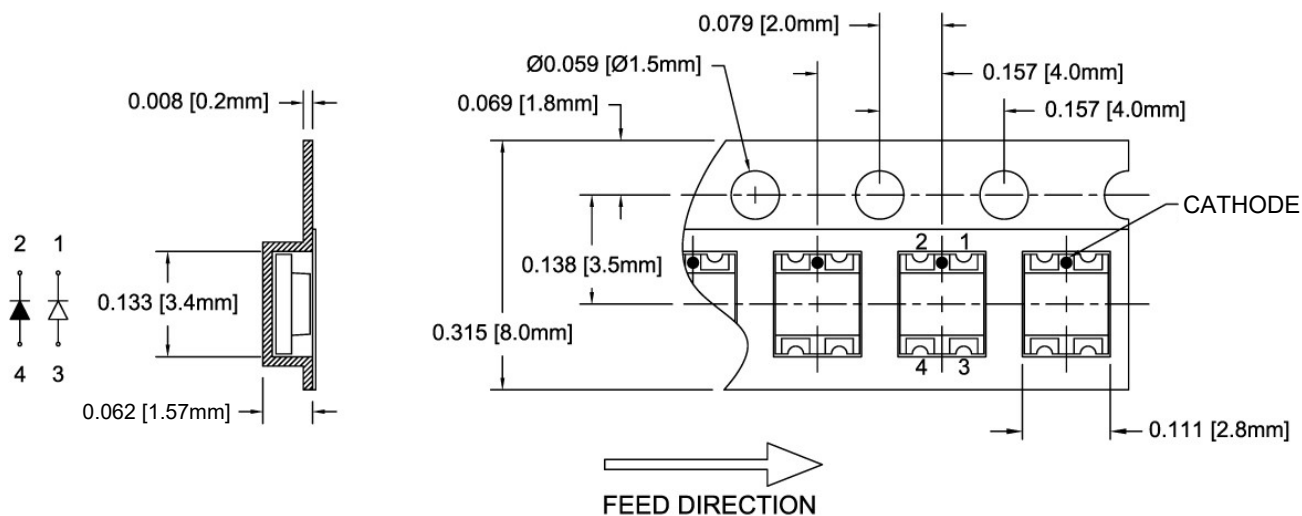
Temp. (°C)		Time (sec)	
a	25	T0~T1	Max. 3 °C/sec
b	150	T1~T2	90~130 sec
c	200	T2~T4	Max. 3 °C/sec
d	220	T3~T6	Max. 50 sec
e	245		
f	Max. 260		Max. 10 sec
		T5~T7	Max. -3 °C/sec
Belt Speed		70~90 cm/min	

Note: Will vary based on equipment and process used.



Tape and Reel Dimensions

Note: 3000 pcs/Reel



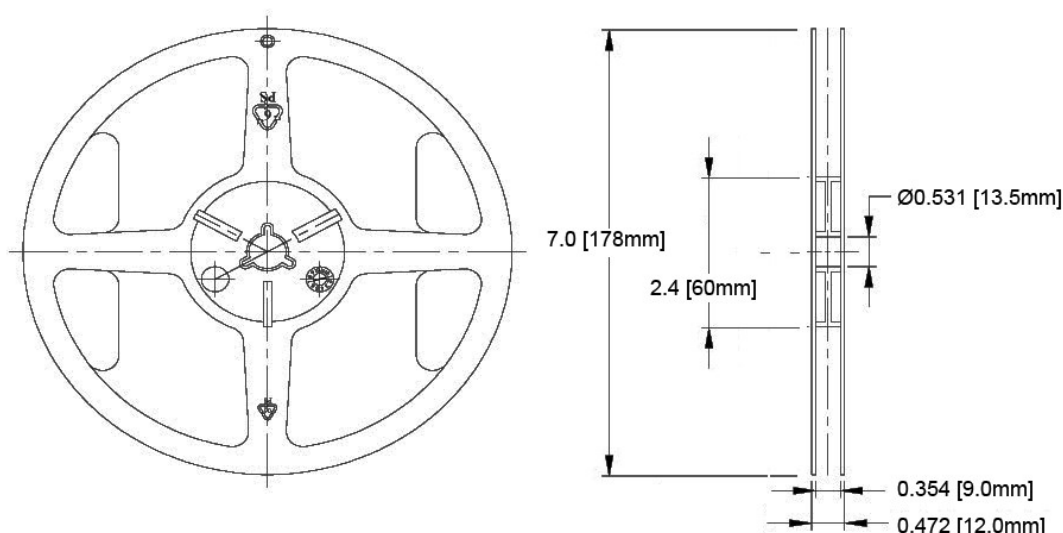
Outline Drawings Notes:

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

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SURFACE MOUNT LED RED/GREEN, 1210 PACKAGE

BIVAR

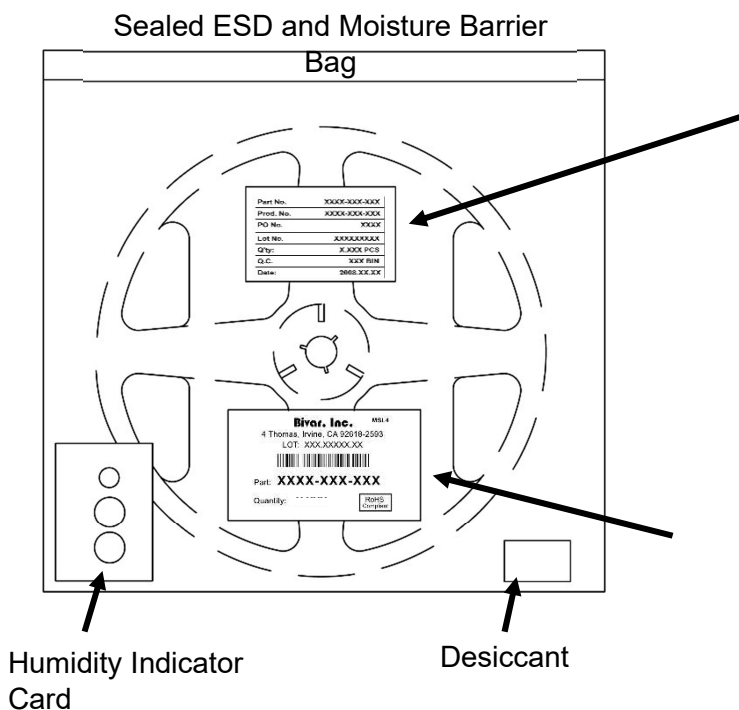


Outline Drawings Notes:

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



Part No.	XXXX-XXX-XXX
Prod. No.	XXXX-XXX-XXX
PO No.	XXXX
Lot No.	XXXXXXXXXX
Q'ty:	X.XXX PCS
Q.C.	XXX BIN
Date:	2008.XX.XX

Internal Quality Control Label



Bivar Standard Packaging Label

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