



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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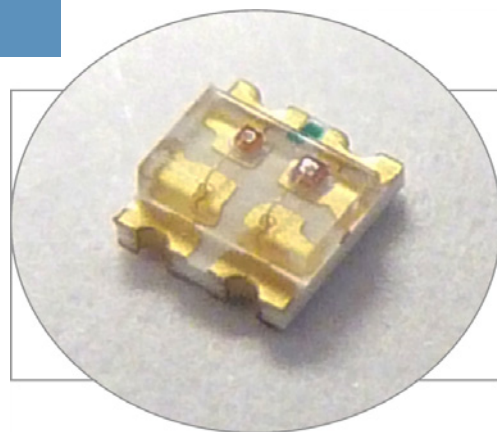


# SURFACE MOUNT LED RED/GREEN, 0605 PACKAGE

# BIVAR

## SM0605BC-R/G

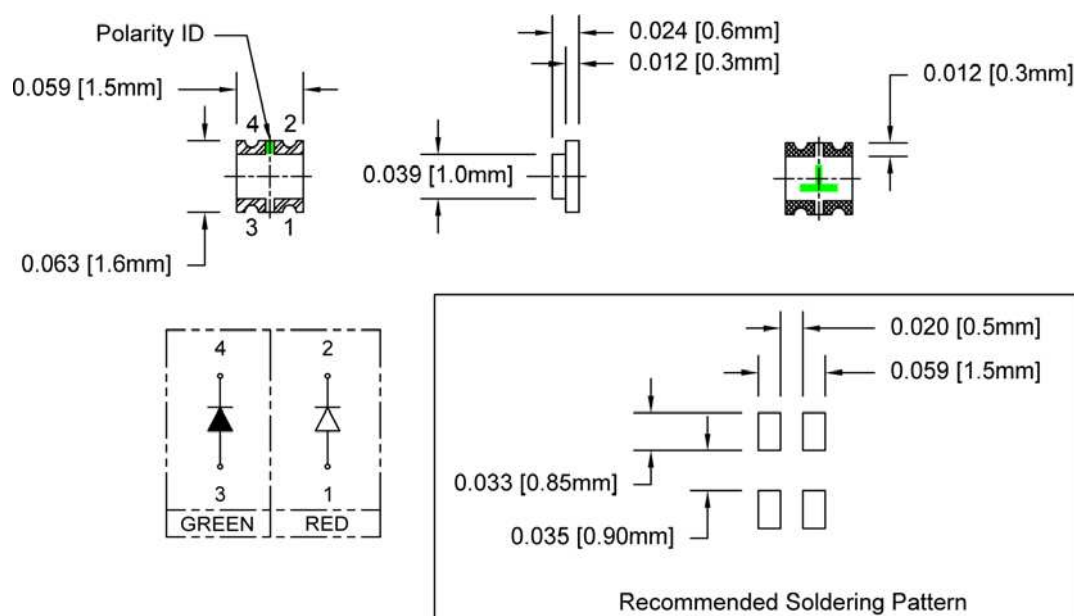
- ◆ Industry Standard 0605 Package
- ◆ RoHS Compliant
- ◆ 2 Chips in One Small Package and Footprint
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication, Display, and Backlighting



Bivar now offers its smallest Bi-Color Surface Mount LED to date which gives designers the edge they need for smaller board designs that require multiple color outputs. Its miniature size makes it ideal for almost any application where board space is a priority without compromise to quality, and it's long life and low power consumption are more than suitable for battery powered hand held devices and other portable products. This SM0605 LED is packaged in standard tape and reels for auto pick and place assemblies.

| Part Number  | Material | Emitted Color | Peak Wavelength $\lambda_p$ (nm) TYP. | Lens Appearance | Luminous Intensity (mcd) TYP. | Viewing Angle |
|--------------|----------|---------------|---------------------------------------|-----------------|-------------------------------|---------------|
| SM0605BC-R/G | AlGaInP  | RED           | 630                                   | Water Clear     | 120                           | 120°          |
|              | AlGaInP  | GREEN         | 575                                   |                 | 60                            |               |

## Outline Dimensions



### Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance:  $\pm 0.10^\circ$  unless otherwise noted.



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

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## Absolute Maximum Ratings

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

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| Power Dissipation                       | Red - 72 mW<br>Green - 72 mW    |
| Continuous Forward Current              | Red - 30 mA<br>Green - 30 mA    |
| Peak Forward Current <sup>1</sup>       | 100 mA                          |
| Reverse Voltage                         | 5 V                             |
| Derating Linear From $25^\circ\text{C}$ | $0.4 \text{ mA}/^\circ\text{C}$ |
| Electrostatic Discharge (HBM)           | 2000 V                          |
| Operating Temperature Range             | $-30 \sim +80^\circ\text{C}$    |
| Storage Temperature Range               | $-40 \sim +85^\circ\text{C}$    |
| Lead Soldering Temperature <sup>2</sup> | $260^\circ\text{C}$             |

Notes: 1.  $\leq 10\%$  Duty Cycle, Pulse Width  $\leq 0.1 \text{ msec}$ . 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) |     |     | Recommend Forward Current (mA) |     |     | Dominant Wavelength (nm) |     |     | Luminous Intensity $I_v$ (mcd) |     |     | Viewing Angle $2\theta_{1/2}$ (deg) |
|--------------|---------------|---------------------|-----|-----|--------------------------------|-----|-----|--------------------------|-----|-----|--------------------------------|-----|-----|-------------------------------------|
|              |               | MIN                 | TYP | MAX | MIN                            | TYP | MAX | MIN                      | TYP | MAX | MIN                            | TYP | MAX |                                     |
| SM0605BC-R/G | Red           | /                   | 1.9 | 2.4 | /                              | 20  | /   | /                        | 625 | /   | 72                             | 120 | /   | 120                                 |
|              | Green         | /                   | 1.9 | 2.4 | /                              | 20  | /   | /                        | 574 | /   | 36                             | 60  | /   |                                     |

## Typical Electrical / Optical Characteristics

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

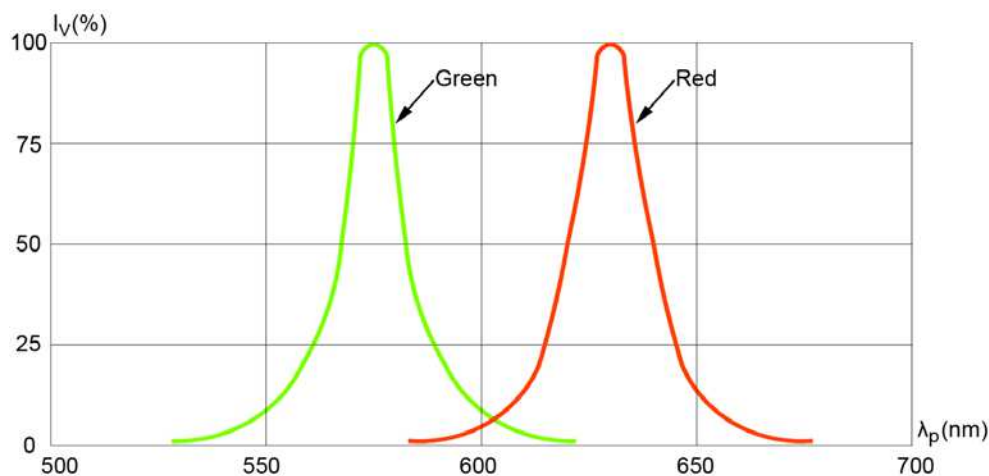


Fig. 1 Relative Luminous Intensity vs. Peak Wavelength

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## Typical Electrical / Optical Characteristics (Continued)

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

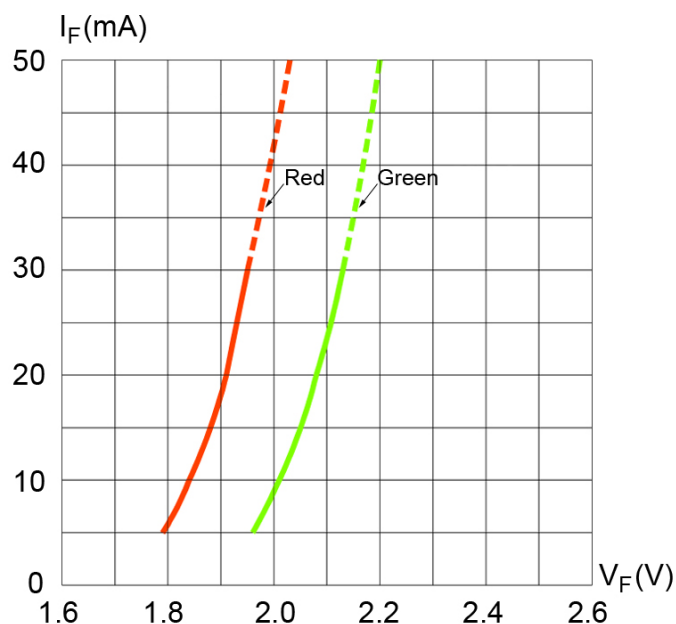


Fig. 2 Forward Current vs. Forward Voltage

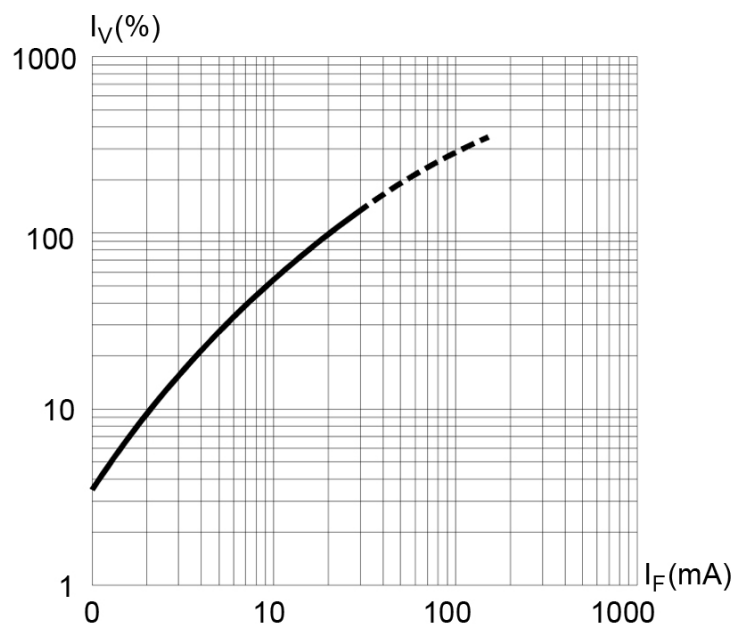


Fig. 3 Relative Luminous Intensity vs. Forward Current

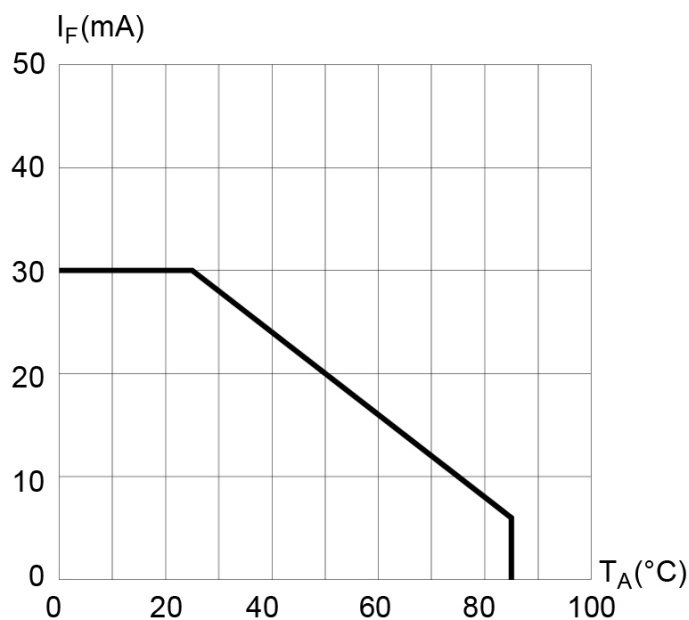


Fig. 4 Forward Current vs. Ambient Temperature

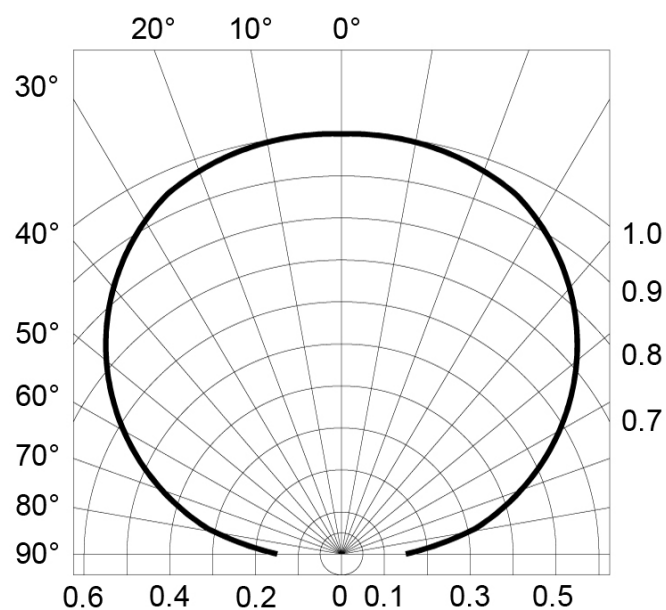


Fig. 5 Directivity Radiation Diagram

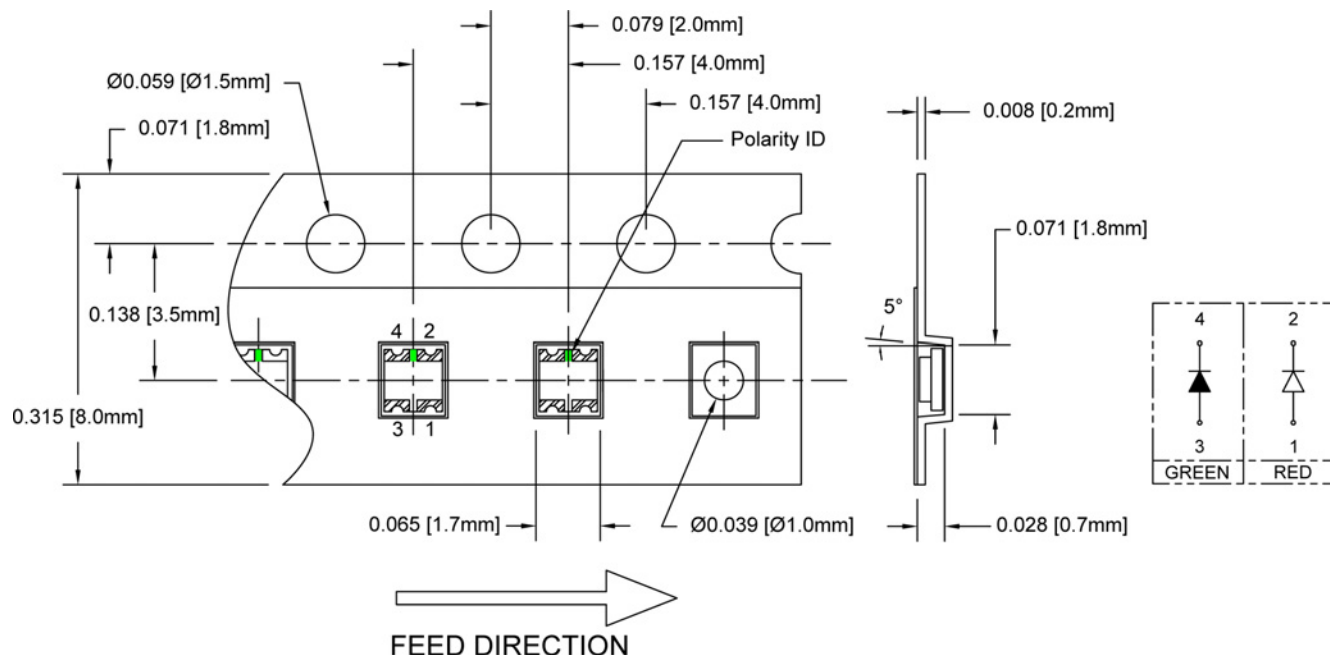
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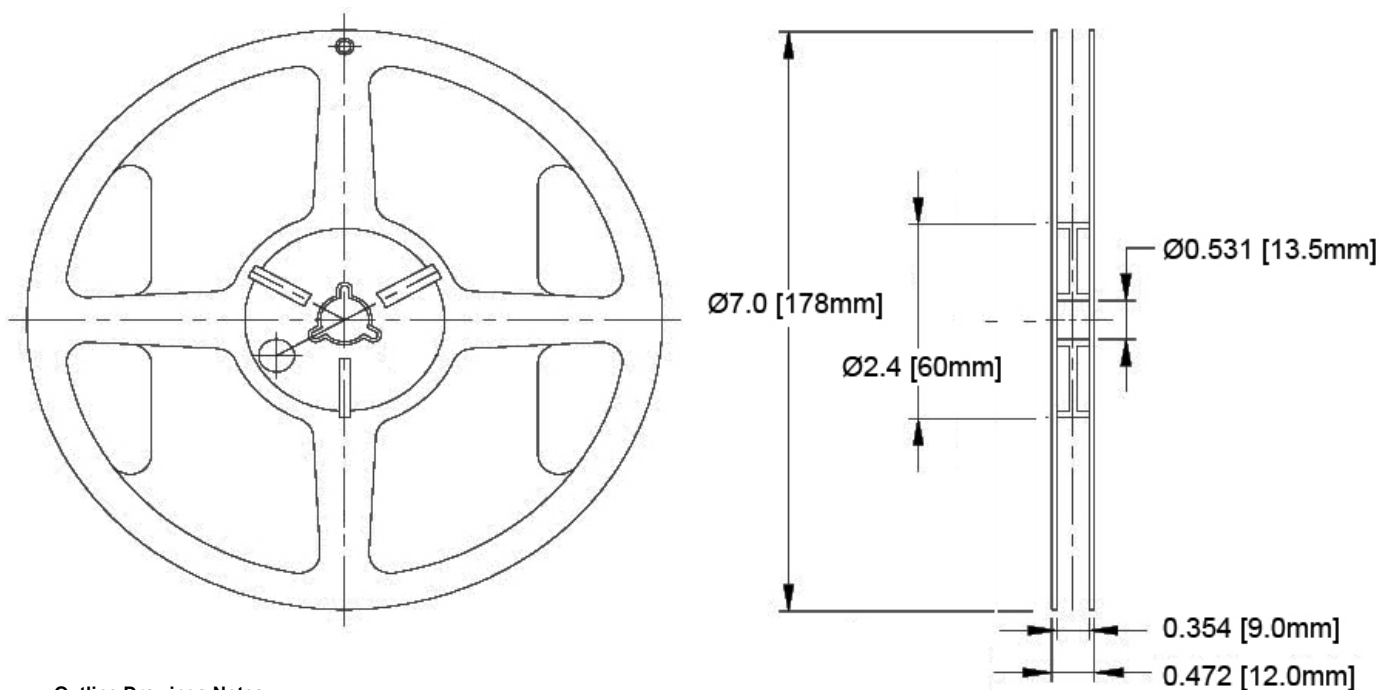
## Tape and Reel Dimensions

Note: 4000 pcs / Reel



### Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance:  $\pm 0.10^\circ$  unless otherwise noted.



### Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance:  $.xxx \pm 0.10^\circ$ ,  $.x \pm .1^\circ$  unless otherwise noted.

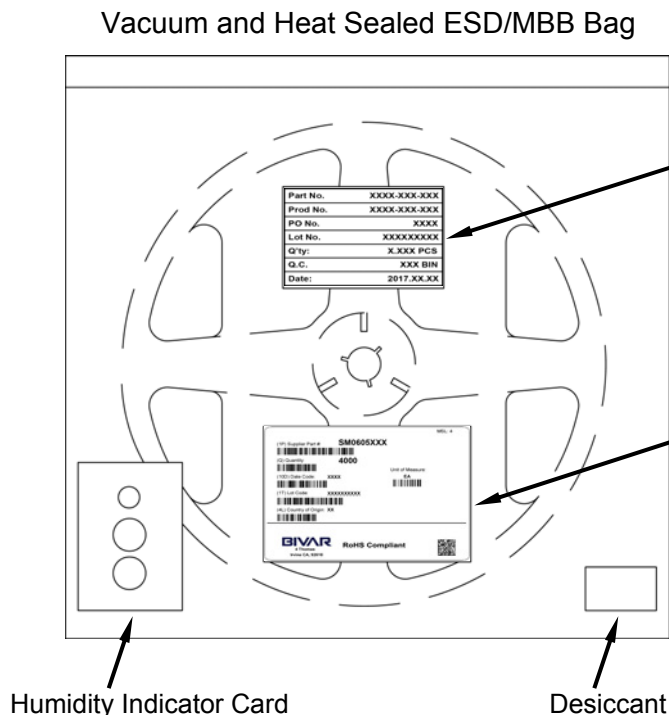
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# SURFACE MOUNT LED RED/GREEN, 0605 PACKAGE



## 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:    | 2017.XX.XX   |

Internal Quality Control Label

MSL: 4

(1P) Supplier Part #: **SM0605XXX**

(Q) Quantity: **4000**

(10D) Date Code: **XXXX**

(1T) Lot Code: **XXXXXXXXXX**

(4L) Country of Origin: **XX**

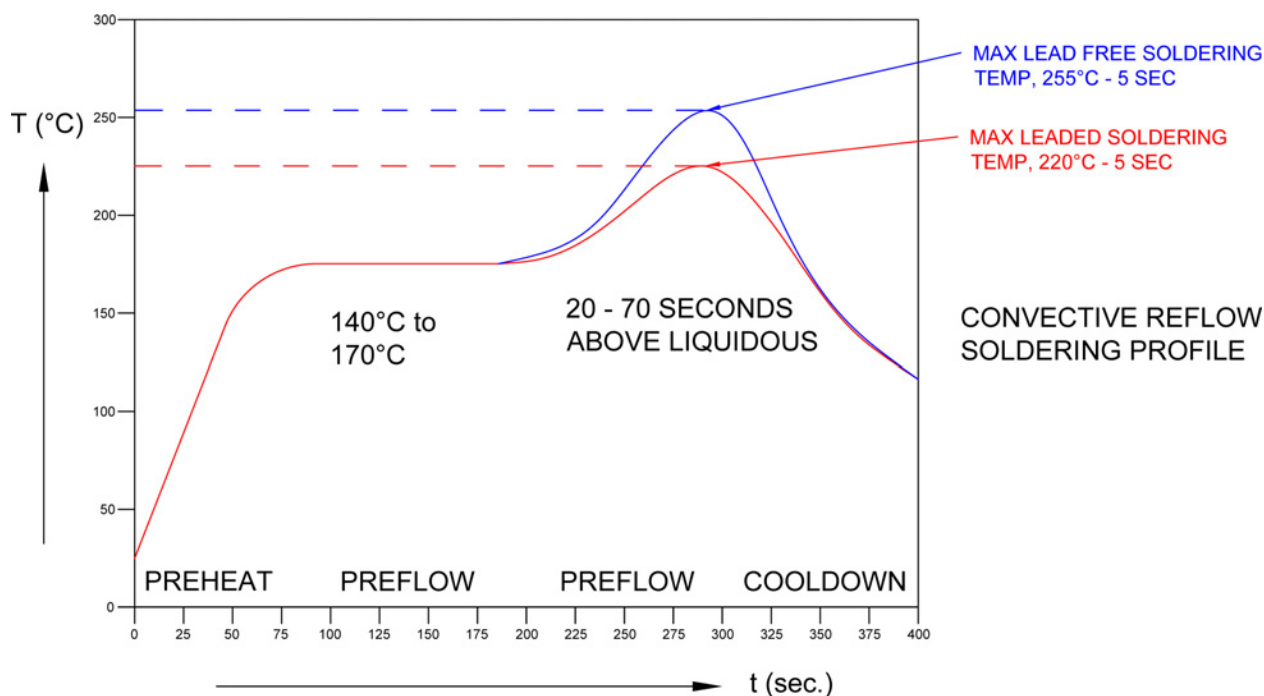
Unit of Measure: **EA**

**BIVAR** RoHS Compliant

4 Thomas  
Irvine CA, 92618

Bivar Standard Packaging Label

## Recommended Soldering Conditions



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