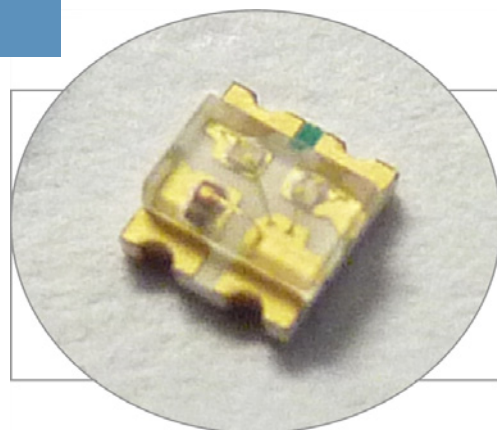


SURFACE MOUNT LED RED/GREEN/BLUE, 0605 PACKAGE

BIVAR

SM0605RGB

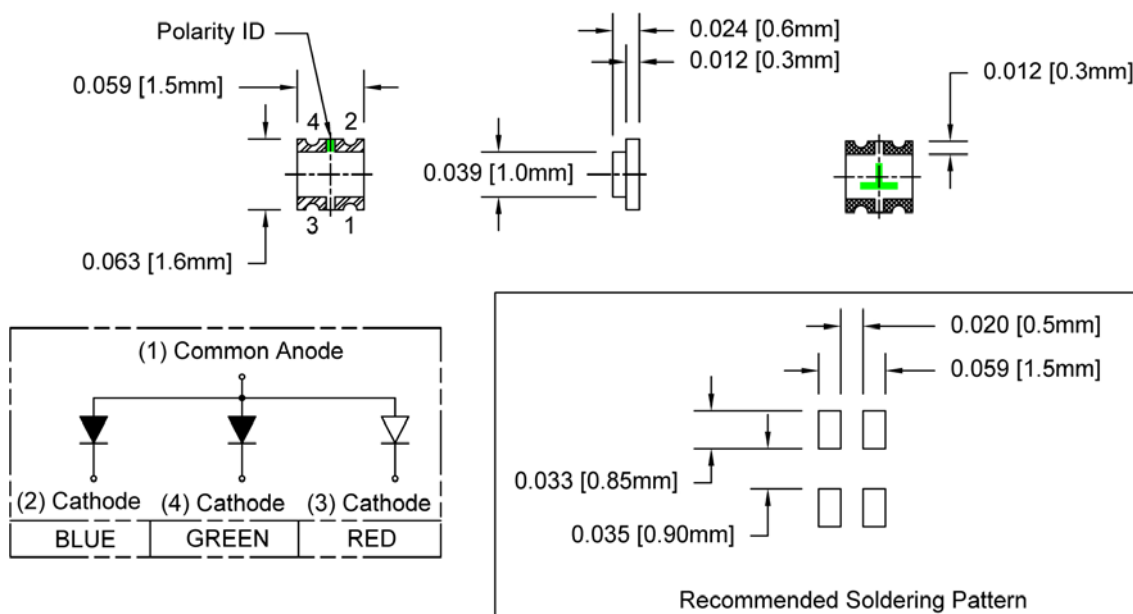
- ◆ Industry Standard 0605 Package
- ◆ RoHS Compliant
- ◆ 3 Chips in One Small Package and Footprint
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication, Display, and Backlighting



Bivar now offers its smallest Tri-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 λ_p (nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM0605RGB	AlGaInP	RED	630	Water Clear	145	120°
	InGaN	GREEN	523		950	
	InGaN	BLUE	468		225	

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.

SURFACE MOUNT LED RED/GREEN/BLUE, 0605 PACKAGE



Absolute Maximum Ratings

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

Power Dissipation	Red - 78 mW Green - 100 mW Blue - 100 mW
Continuous Forward Current	Red - 30 mA Green - 25 mA Blue - 25 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/°C
Electrostatic Discharge (HBM)	2000 V
Operating Temperature Range	-40 ~ +85°C
Storage Temperature Range	-40 ~ +85°C
Lead Soldering Temperature ²	260°C

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

Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$ & $I_F = 20$ 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	TYP
SM0605RGB	Red	1.8	2.0	2.6	/	20	/	617	625	632	115	145	225	120
	Green	2.25	3.0	4.0	/	20	/	523	526	529	750	950	1150	
	Blue	2.5	3.0	4.0	/	20	/	463	466	470	115	180	285	

Typical Electrical / Optical Characteristics

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

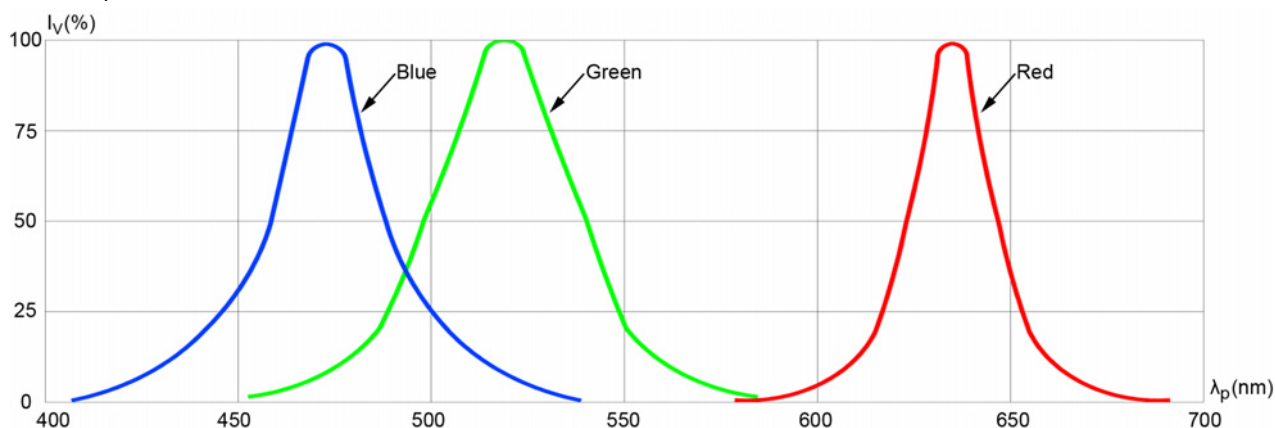


Fig. 1 Relative Luminous Intensity vs. Peak Wavelength

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

SURFACE MOUNT LED RED/GREEN/BLUE, 0605 PACKAGE



Typical Electrical / Optical Characteristics (Continued)

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

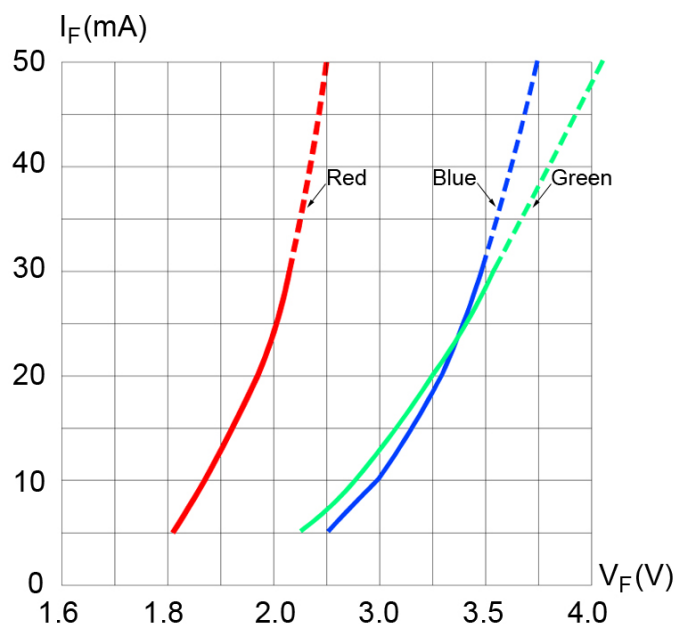


Fig. 2 Forward Current vs. Forward Voltage

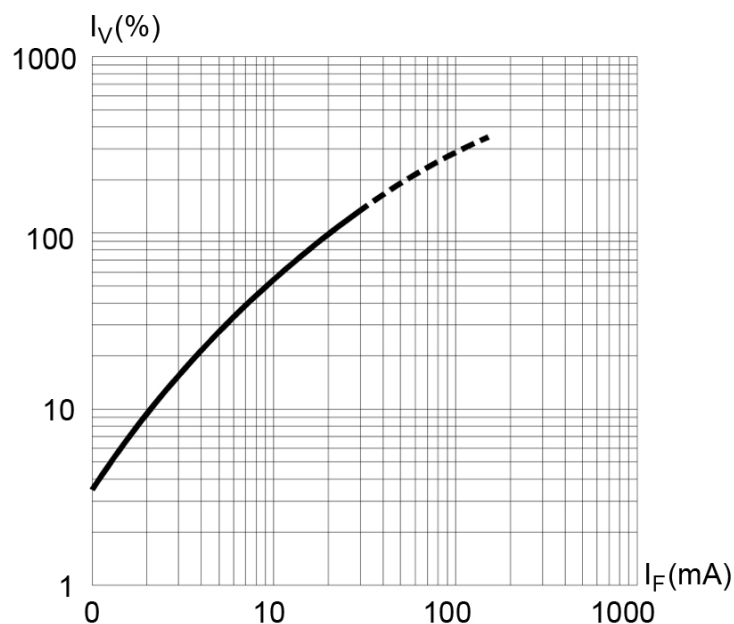


Fig. 3 Relative Luminous Intensity vs. Forward Current

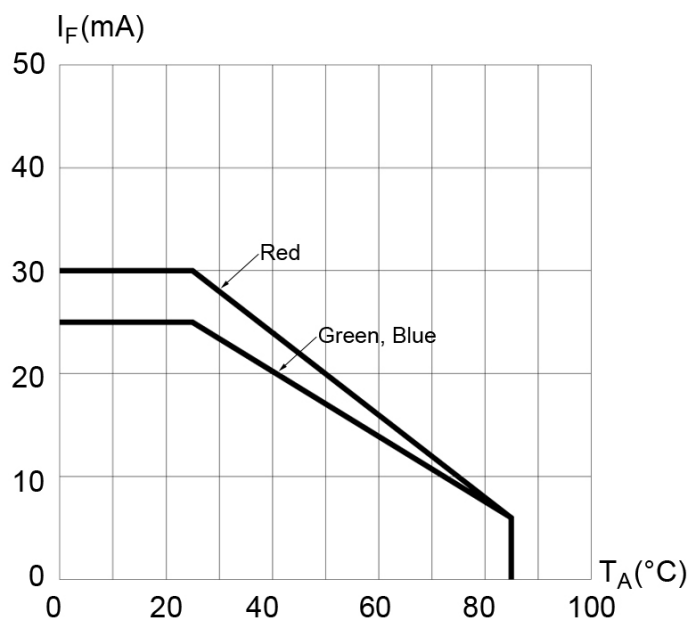


Fig. 4 Forward Current vs. Ambient Temperature

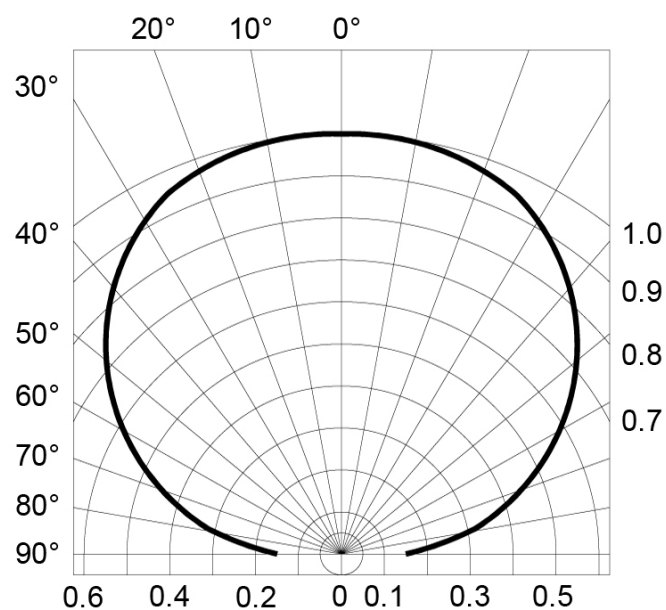


Fig. 5 Directivity Radiation Diagram

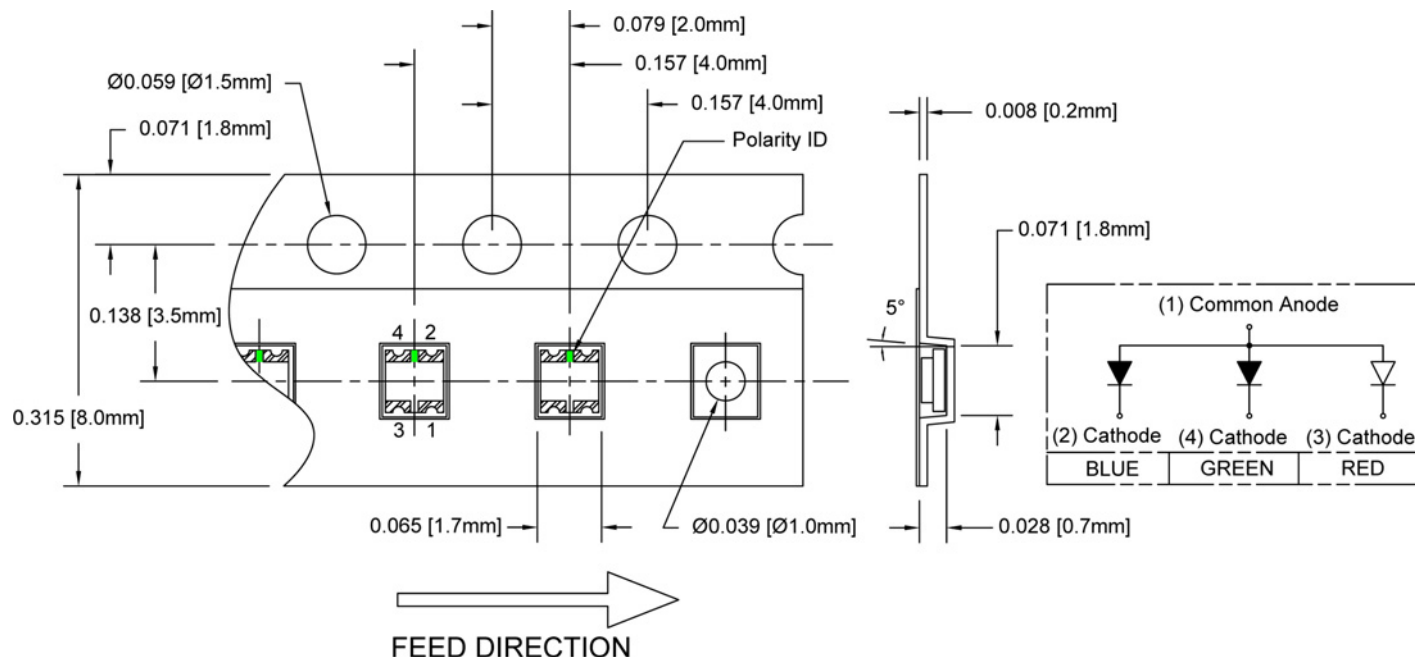
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SURFACE MOUNT LED RED/GREEN/BLUE, 0605 PACKAGE



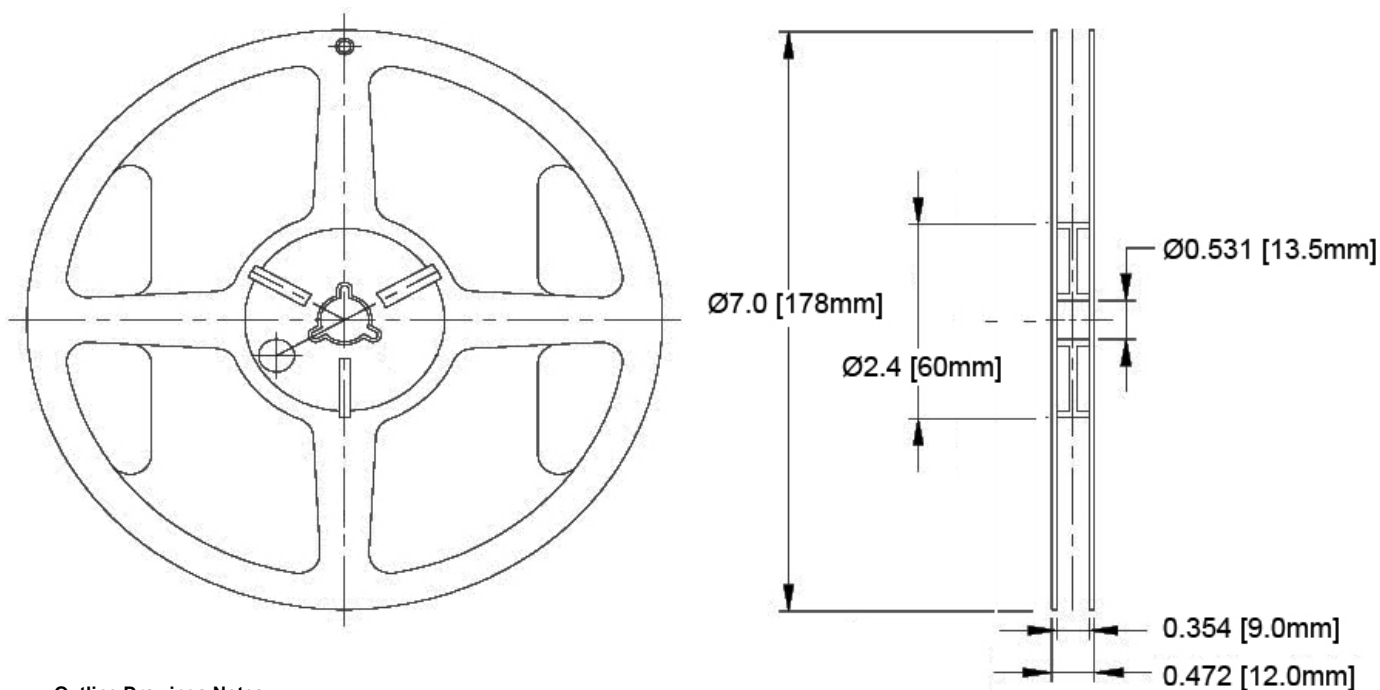
Tape and Reel Dimensions

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.

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

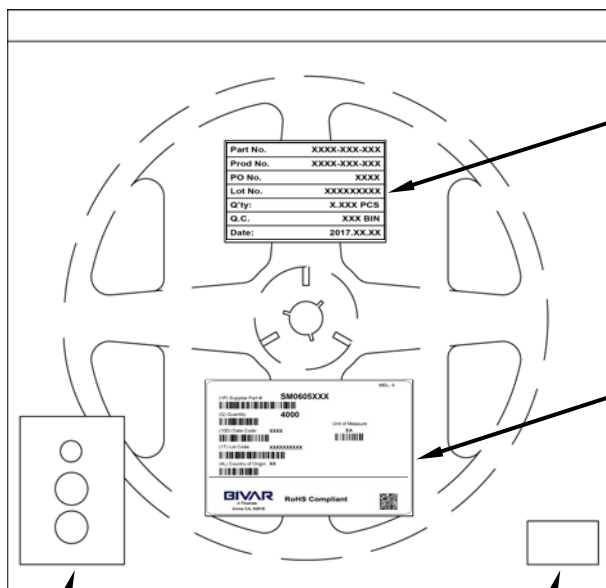
SURFACE MOUNT LED RED/GREEN/BLUE, 0605 PACKAGE



Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed ESD/MBB Bag



Humidity Indicator Card

Desiccant

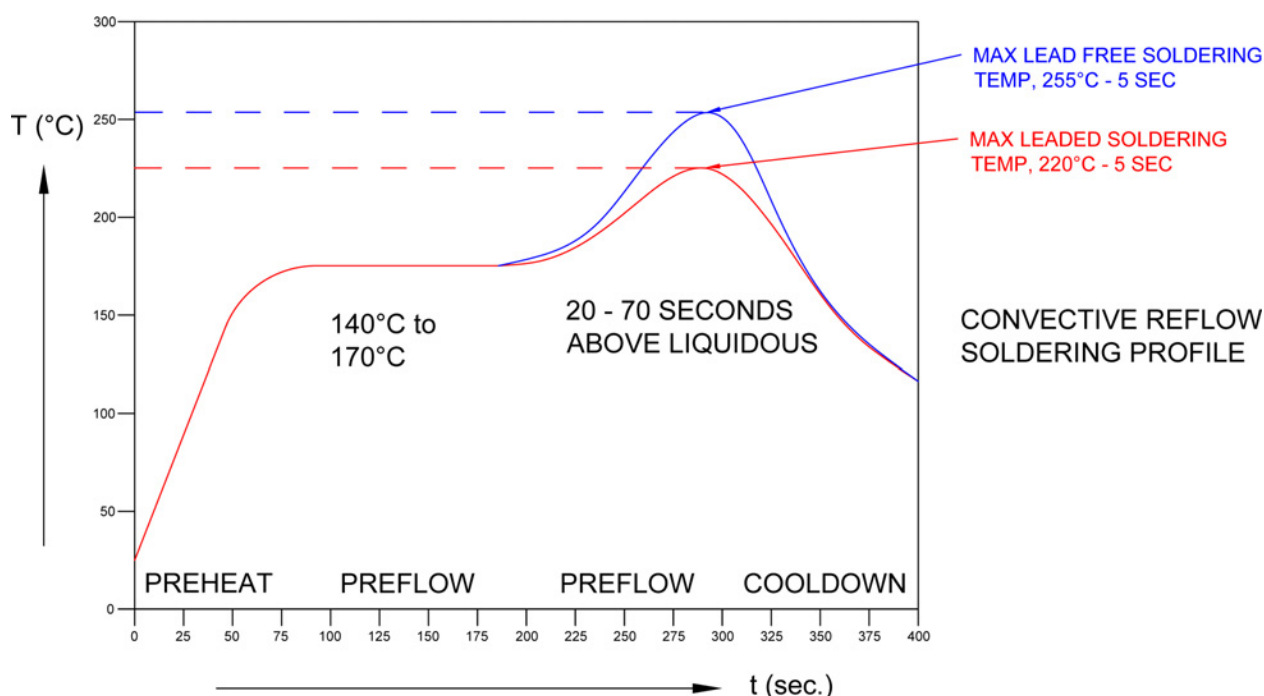
Part No.	XXXX-XXX-XXX
Prod No.	XXXX-XXX-XXX
PO No.	XXXX
Lot No.	XXXXXXXXXX
Q'ty:	X.XXX PCS
Q.C.	XXX BIN
Date:	2017.XX.XX

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	
RoHS Compliant	
4 Thomas Irvine CA, 92618	

Bivar Standard Packaging Label

Recommended Soldering Conditions



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