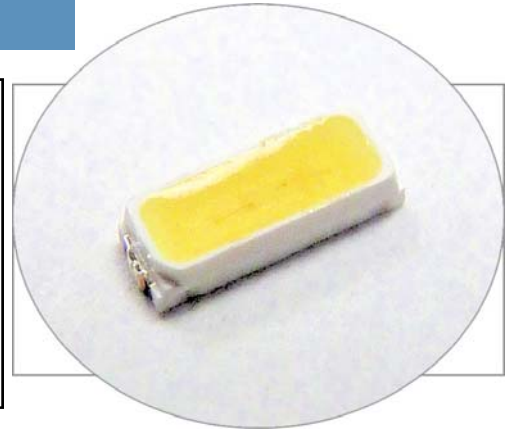


# SURFACE MOUNT LED WHITE, 4014 PACKAGE, 0.2W



## SM4014UWD~~X~~02

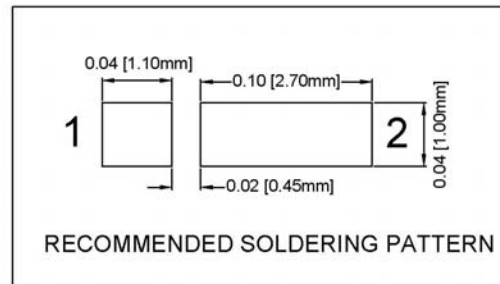
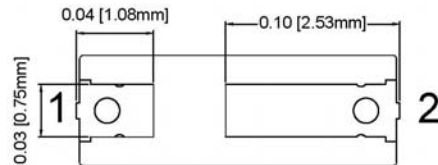
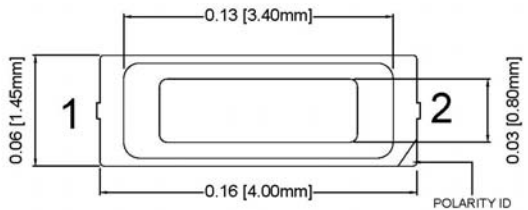
- ◆ Industry Standard 4014 Package
- ◆ RoHS Compliant
- ◆ Small Package and Footprint
- ◆ ~~X~~ - (C) Cool White, (N) Neutral White, (W) Warm White
- ◆ Wide Viewing Angle
- ◆ Ideal for Lighting and Backlighting Application



Bivar Surface Mount 4014 package LED may be used in nearly any lighting or backlighting application. These 0.2 Watt SMD LED's have a minimum CRI Value of 80 and are available in 3 color temperatures to meet any illumination needs: Cool, Neutral and Warm White. The SM4014 Series is conveniently packaged in standard tape and reels for pick and place assemblies.

| Part Number  | Material | Emitted Color | Lens Color | Luminous Flux (lm) TYP. | Viewing Angle |
|--------------|----------|---------------|------------|-------------------------|---------------|
| SM4014UWDC02 | InGaN    | Cool White    | Diffused   | 22                      | 120°          |
| SM4014UWDN02 | InGaN    | Neutral White | Diffused   | 22                      | 120°          |
| SM4014UWDW02 | InGaN    | Warm White    | Diffused   | 20                      | 120°          |

## 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.

## Absolute Maximum Ratings

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

|   |              |
|---|--------------|
| Power Dissipation                       | 0.21 W       |
| Forward Current ( DC )                  | 60 mA        |
| Peak Forward Current <sup>1</sup>       | 120 mA       |
| Reverse Voltage                         | 5 V          |
| Electrostatic Discharge (HBM)           | 2000 V       |
| Operating Temperature Range             | -40 ~ +85°C  |
| Storage Temperature Range               | -40 ~ +100°C |
| Junction Temperature                    | 115°C        |
| Lead Soldering Temperature <sup>2</sup> | 260°C        |

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

## Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$  &  $I_F = 60$  mA unless otherwise noted

| Part Number  | Forward Voltage (V) |     |     | Recommend Forward Current (mA) | Reverse Current ( $\mu\text{A}$ )<br>$V_R=5\text{V}$ | CCT (Kelvin) |      |      | Luminous Flux (lm) |     |     | Viewing Angle<br>$2\theta_{1/2}$<br>(deg) |
|--------------|---------------------|-----|-----|--------------------------------|--|--------------|------|------|--------------------|-----|-----|---|
|              | MIN                 | TYP | MAX | TYP                            | MAX  | MIN          | TYP  | MAX  | MIN                | TYP | MAX | TYP                                       |
| SM4014UWDC02 | 2.9                 | /   | 3.5 | 60                             | 10   | 5800         | 6500 | 7300 | 18                 | 22  | 26  | 120                                       |
| SM4014UWDN02 | 2.9                 | /   | 3.5 | 60                             | 10   | 3700         | 4000 | 4400 | 18                 | 22  | 26  | 120                                       |
| SM4014UWDW02 | 2.9                 | /   | 3.5 | 60                             | 10   | 2750         | 3000 | 3150 | 18                 | 20  | 26  | 120                                       |

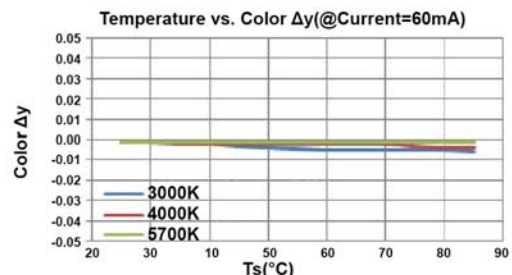
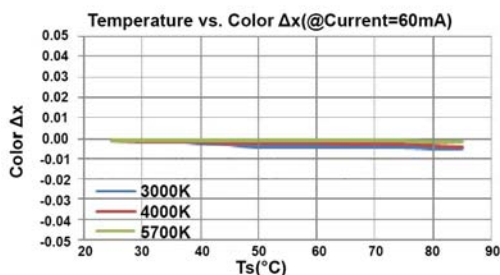
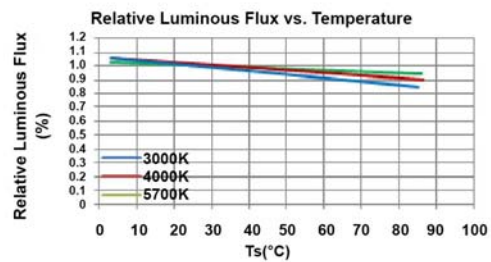
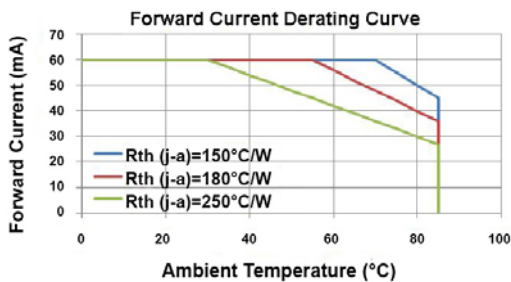
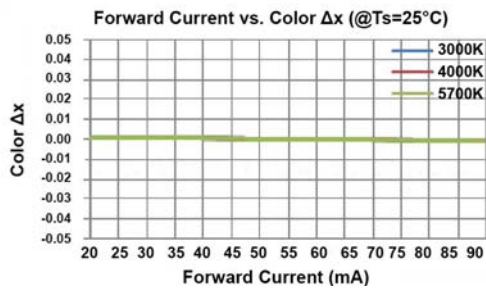
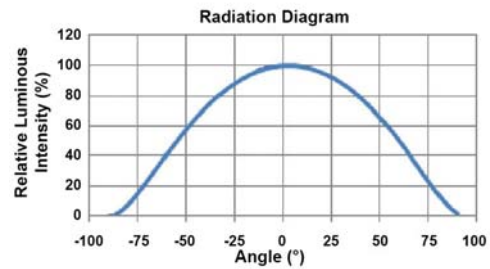
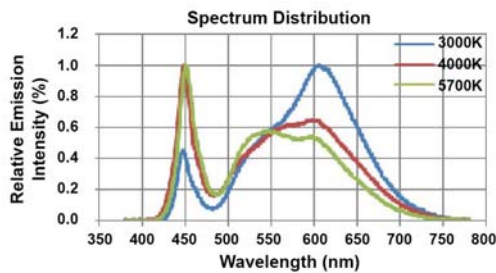
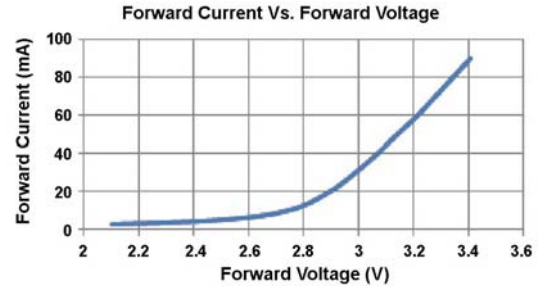
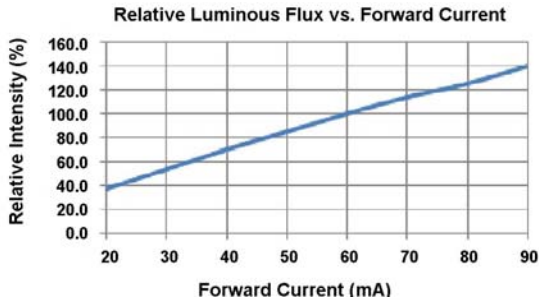
Notes: 1. The above forward voltage measurement allowance tolerance is  $\pm 0.1\text{V}$ .  
2. The above luminous flux measurement allowance tolerance  $\pm 10\%$ .

# SURFACE MOUNT LED WHITE, 4014 PACKAGE, 0.2W



## Typical Electrical / Optical Characteristics

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

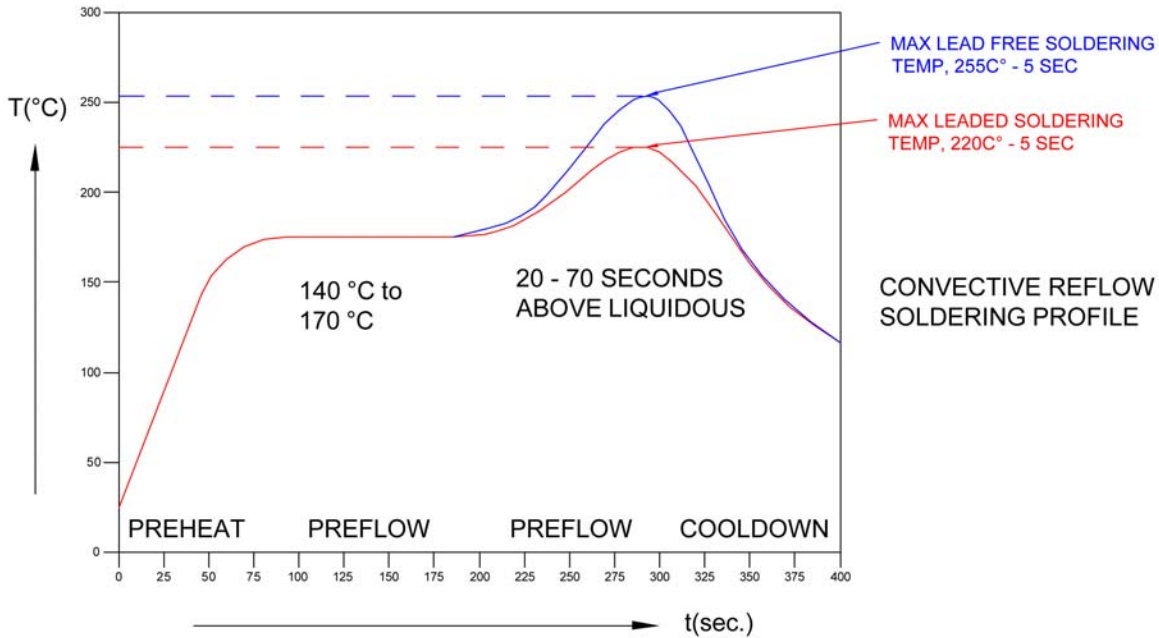


Bivar reserves the right to make changes at any time without notice.

# SURFACE MOUNT LED WHITE, 4014 PACKAGE, 0.2W



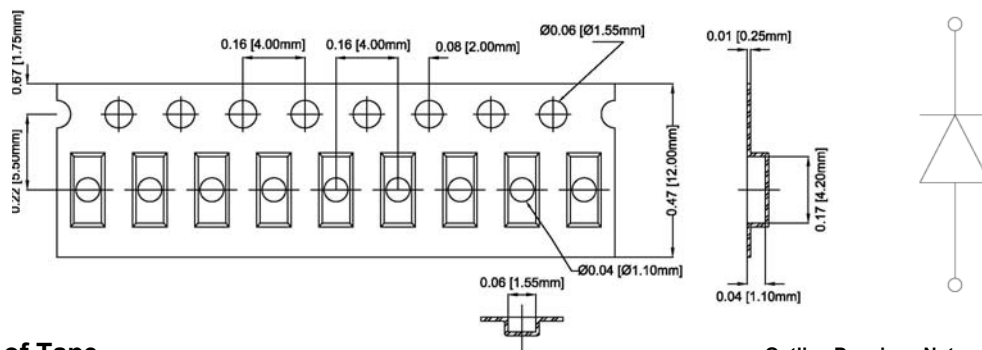
## Recommended Soldering Conditions



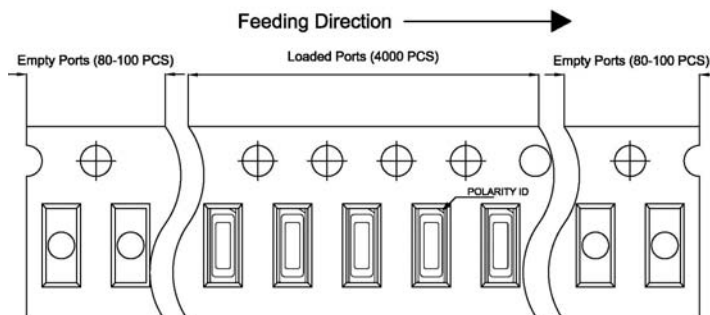
## Tape and Reel Dimensions

Note: 4000 pcs/Reel

### • Dimensions of Tape



### • Arrangement of Tape

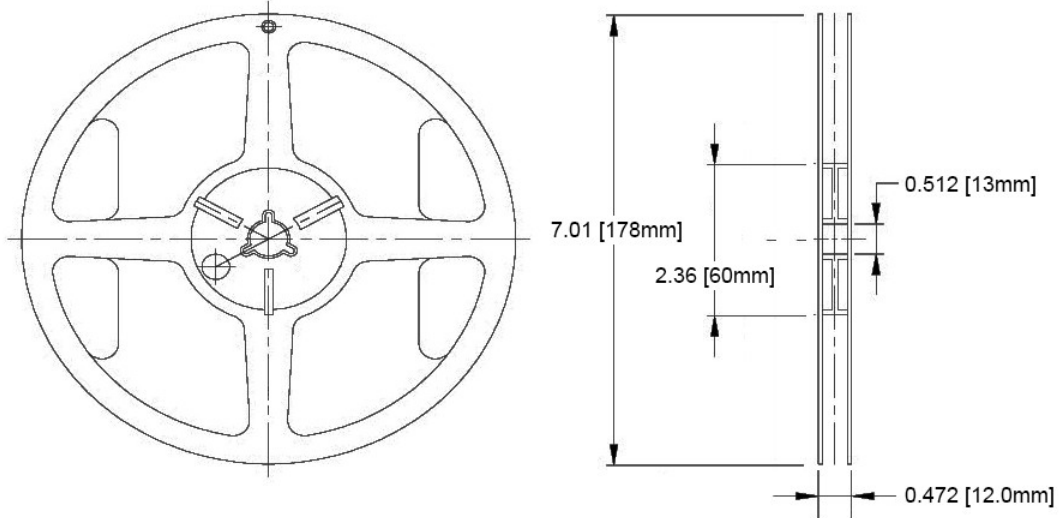


### Outline Drawings Notes:

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

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# SURFACE MOUNT LED WHITE, 4014 PACKAGE, 0.2W

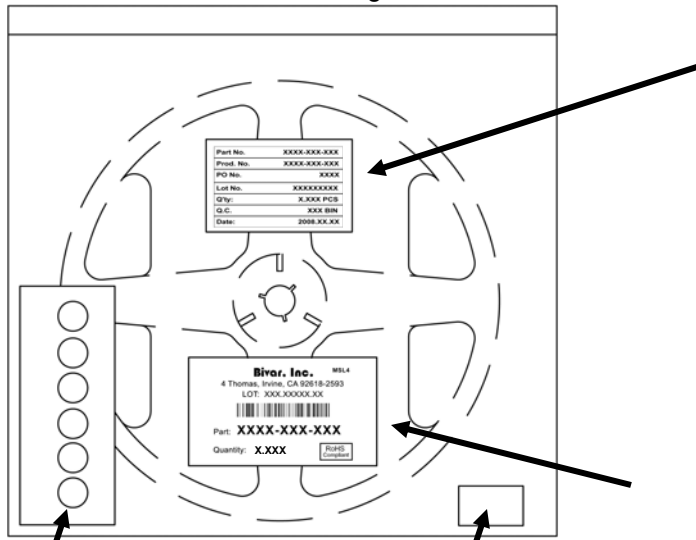


- Outline Drawings Notes:**
1. All dimensions are in inches [millimeters].
  2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"  
X.X ± 0.1"

## Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed  
ESD/MBB Bag



Humidity Indicator Card

Desiccants

|           |              |
|-----------|--------------|
| 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

**Bivar, Inc.** MSL4

4 Thomas, Irvine, CA 92618-2593  
LOT: XXX.XXXXX.XX



Part: **XXXX-XXX-XXX**

Quantity: **X.XXX**

RoHS  
Compliant

Bivar Standard Packaging Label

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

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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