

SMD LED

Product Data Sheet

BRS-1005SURC/F04-Y3

PRELIMINARY SPEC

1.1x0.55X0.48mm SMD CHIP LED

PART NO: BRS-1005SURC/F04-Y3 RED



ATTENTION

OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC DISCHARGE
SENSITIVE DEVICES

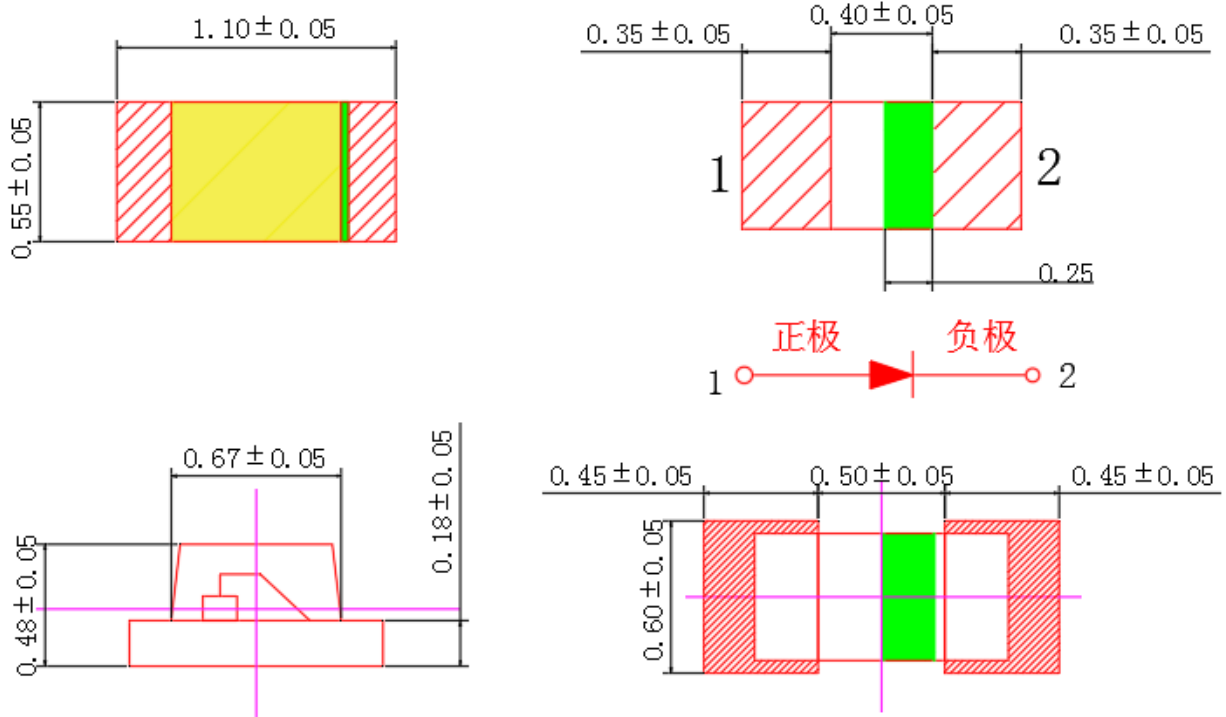
Features

- 1.1mmx0.55mm SMT LED, 0.48mm THICKNESS.
- SIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 3000PCS / REEL.
- RoHS COMPLIANT.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and back-lighting in telephone and fax.
- Flat backlight for LCD switch and symbol.

◆ Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.1 mm unless otherwise noted.
3. Specifications are subject to change without notice.

◆ Device Selection Guide

Part No.	Chip		Lens color
	Material	Emitted color	
BRS-1005SURC/F04-Y3	AlGaInP	RED	Water Clear

◆ Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	PD	60	mW
Forward Current	IF	20	mA
Peak Forward Current*1	IFP	60	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-40°C To +85°C	
Storage Temperature	Tstg	-40°C To +85°C	
Reflow Soldering temperature	Tsol	250±5(for10sec) °C	
Manual welding Temperature	Tsol	300±5(for4sec) °C	

Notes:

*1: Pulse width≤0.1ms, Duty cycle≤1/10

2: (Product is highest resistant to 265°C reflow but suggested the highest temperature of 250°C within) 产品最高可耐 265°C回流焊, 但建议最高温度设为 250°C)

◆ Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min	typ	Max	Unit	Test Conditions
Forward Voltage	VF	1.7	2.0	2.5	V	IF=20mA
Reverse Current	IR	—	—	10	μA	VR=5V
Peak Wavelength	λp	—	625	—	nm	IF=20mA
Dominant Wavelength	λd	615	—	625	nm	
Luminous Intensity	IV	72	—	200	mcd	IF=20mA
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=20mA

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or Dominant Wave Length), the typical accuracy of the sorting process is as follows:

1. Dominant Wave Length: ±1nm
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

◆ Typical Electrical/Optical Characteristics Curves

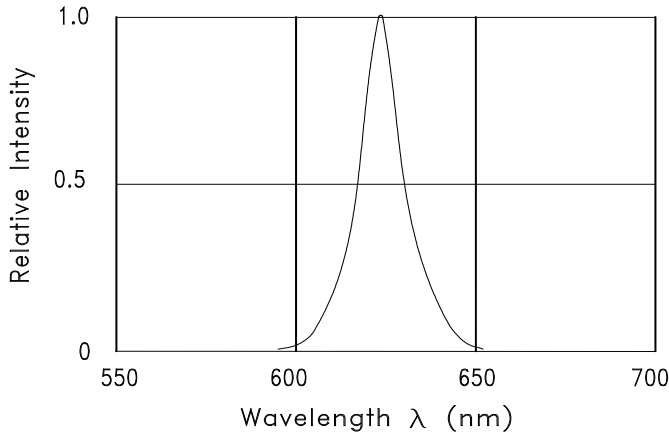


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

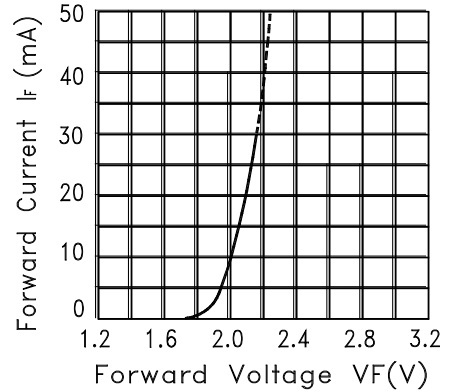


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

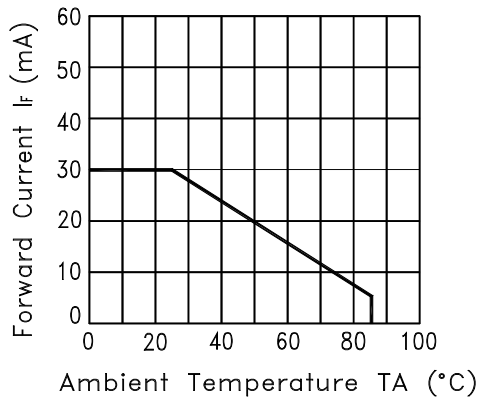


Fig.3 FORWARD CURRENT DERATING CURVE

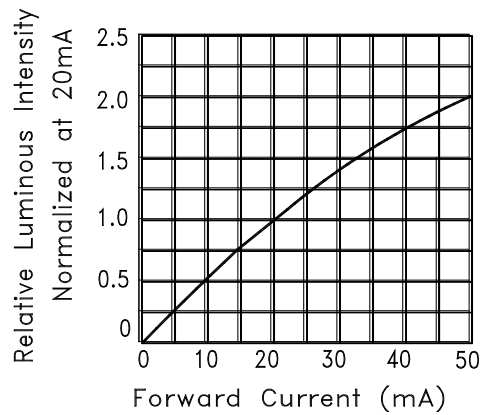


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

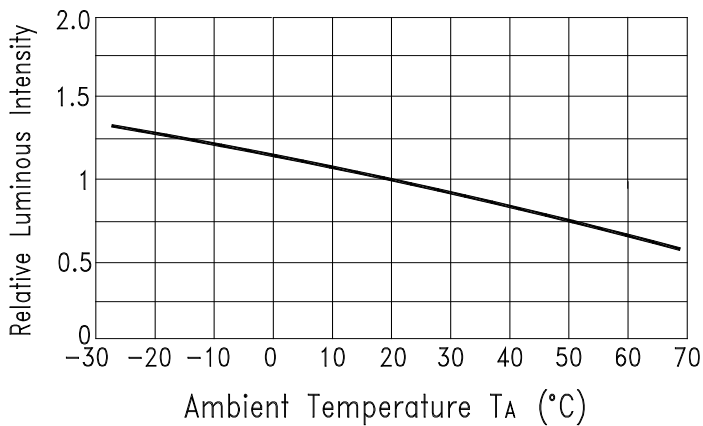


Fig.5 Luminous Intensity vs. Ambient Temperature

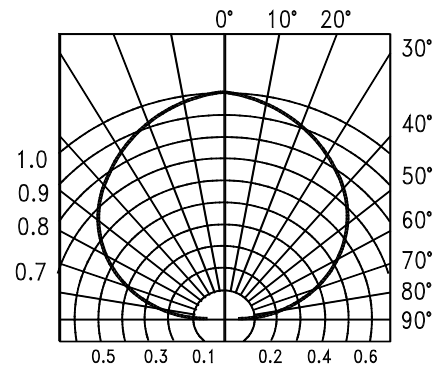
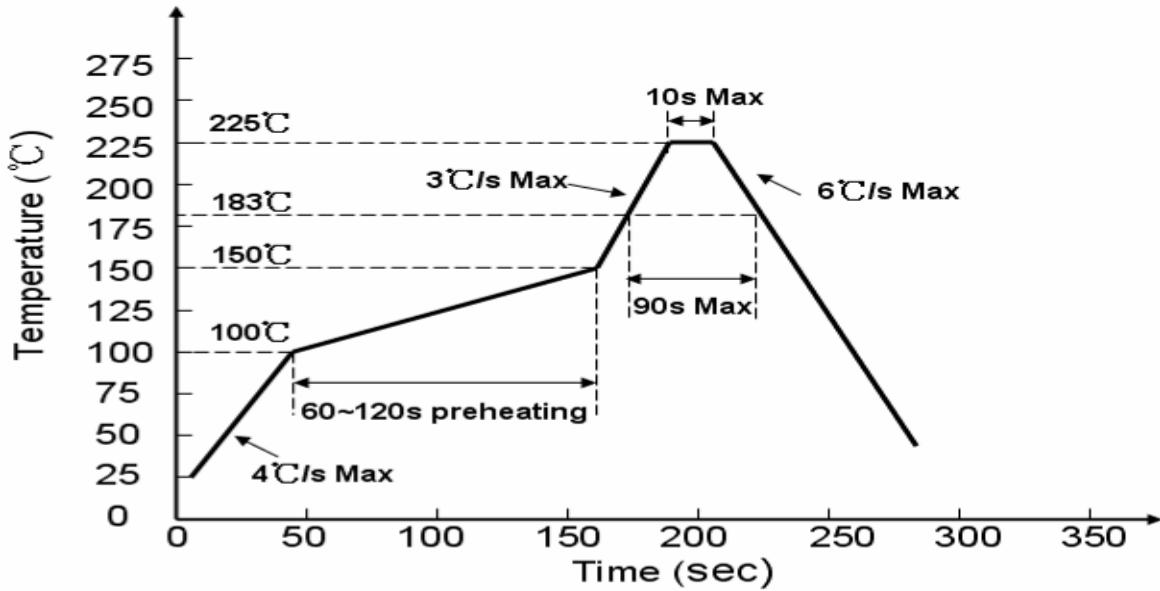


Fig.6 SPATIAL DISTRIBUTION

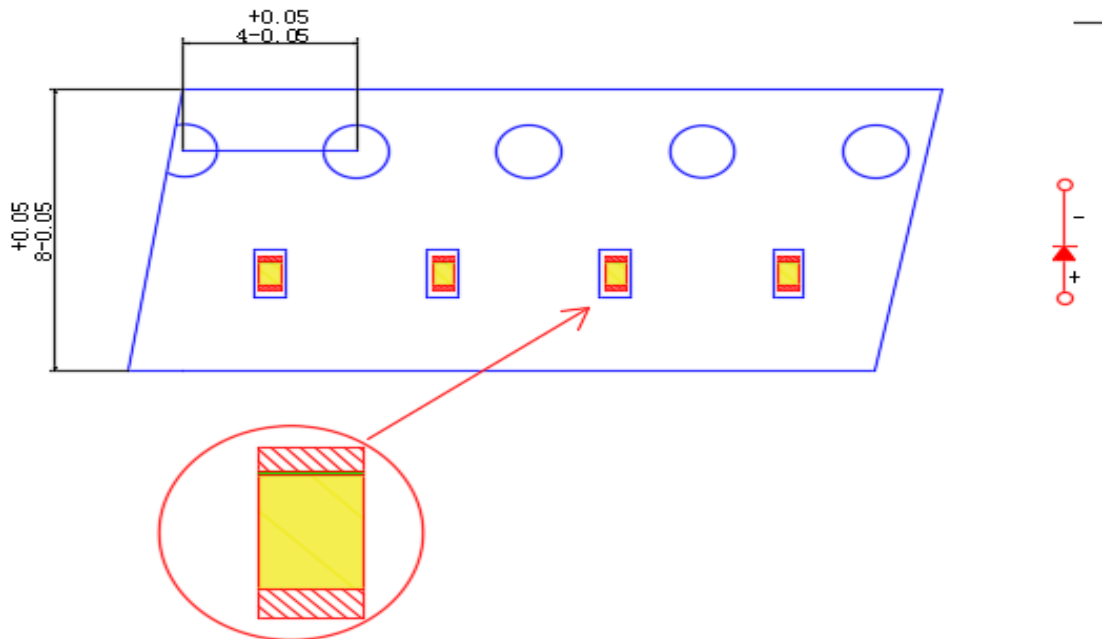
◆ Soldering Profile



process

◆ Tape specifications

(Units:mm)



◆ VF Rank

Rank	VF		Condition
	MIN	MAX	
1.7-1.9	1.7	1.9	IF=20mA
1.9-2.1	1.9	2.1	
2.1-2.3	2.1	2.3	
2.3-2.5	2.3	2.5	

Tolerance:±0.05V

◆ IV Rank

Rank	IV		Condition
	MIN	MAX	
50-100	50	100	IF=20mA
100-150	100	150	
150-200	150	200	

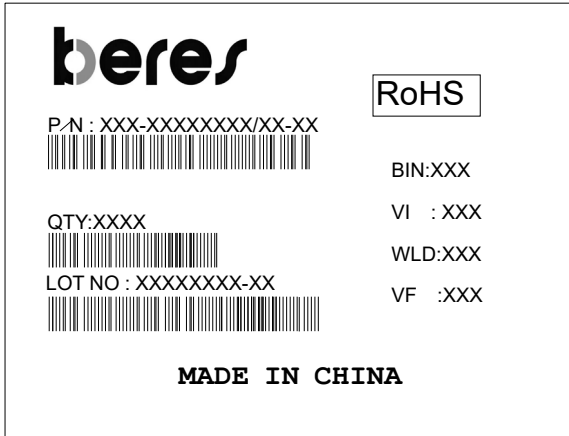
Tolerance:±15%

◆ WLD Rank

Rank	λ_d		Condition
	MIN	MAX	
617-625	617	625	IF=20mA
625-630	625	630	

Tolerance:±1nm

◆ Label Explanation :



- P/N: Product Number
- QTY: Packing Quantity
- IV:Luminous intensity
- WLD:Dom.Wavelength
- VF:Forward Voltage
- LOT No: Lot Number

◆ CAUTIONS:

1.Storage

• In order to avoid the absorption of moisture, it is recommended to store in the dry box (or desiccators) with a desiccant. Otherwise, to store them in the following environment is recommended. Temperature: 5°C~30°C Humidity: 60%HR max.

• Attention after opened

However LED is corresponded SMD, when LED be soldered dip, interfacial separation may affect The light transmission efficiency, causing the light intensity to drop. Attention in followed. a. After opened and mounted, the soldering shall be quickly. b. Keeping of a fraction Temperature: 5°C~40°C Humidity: less than 30%

• In case or more than 1 week passed after opening or change color of indicator on desiccant components shall be dried 10-12hours at 60°C±3°C.

2.ESD (Electrostatic Discharge)

Static Electricity or power surge will damage the LED.

The following procedures may decrease the possibility of ESD damage.

- All production machinery and test instruments must be electrically grounded.
- Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- Maintain a humidity level of 50% or higher in production areas.
- Use anti-static packaging for transport and storage.

3.Please be careful when using in an environment with high concentrations of sulphur or sulphuric gases,as sulphuration can lead to disconnection from the chip resistor or a poor contact connection.

◆ **Application Restrictions**

Beres before using this product in your application. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.