

SMD LED

Product Data Sheet

BRS-1005UWC/F05-Y3

PRELIMINARY SPEC

1.1x0.55X0.48mm SMD CHIP LED

PART NO: BRS-1005UWC/F05-Y3 WHITE



ATTENTION

OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC DISCHARGE
SENSITIVE DEVICES

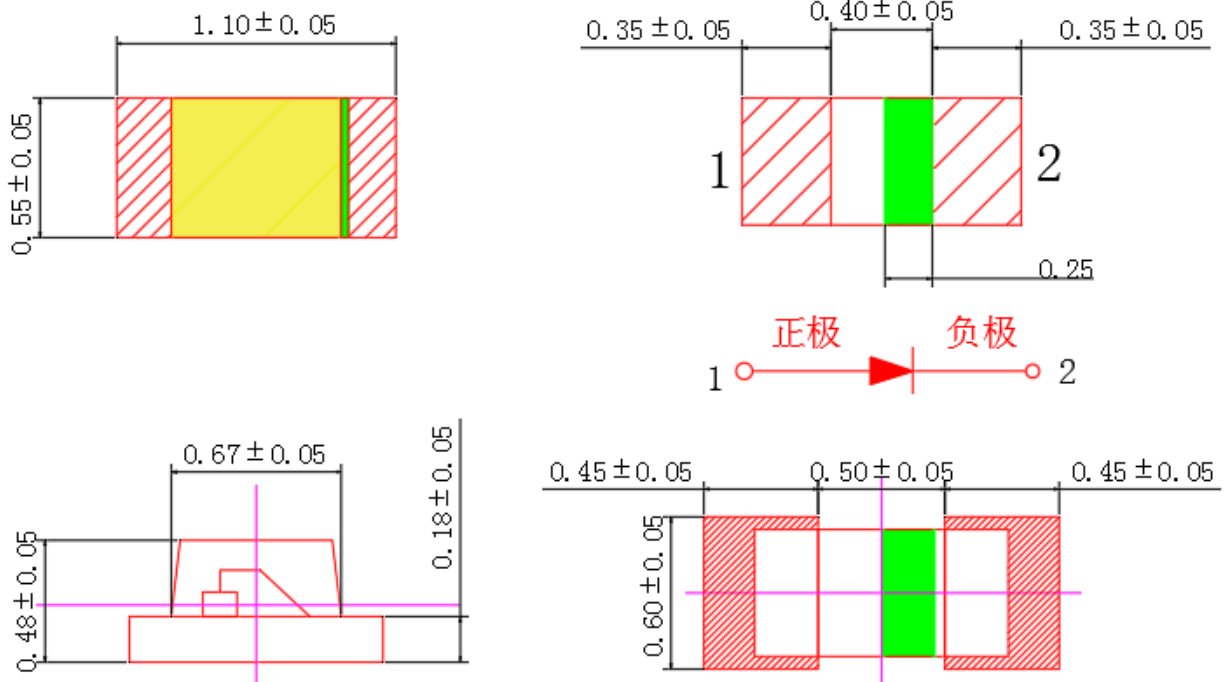
Features

- 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-1005UWC/F05-Y3	(InGaN)	WHITE	Yellow Fluorescent

◆ Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	PD	100	mW
Forward Current	IF	20	mA
Peak Forward Current*1	IFP	100	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 (for 10sec) °C	
Manual welding Temperature	Tsol	300±5 (for 4sec) °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	2.6	—	3.2	V	IF=5mA
Reverse Current	IR	—	—	10	μA	VR=5V
Chromaticity Coordinates	X	—	0.27	—		IF=5mA
	Y	—	0.28	—		
Luminous Intensity	IV	120	—	320	mcd	IF=5mA
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=5mA

Remarks:

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

1. Chromaticity Coordinates: ±0.01
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

◆ Typical Electrical/Optical Characteristics Curves

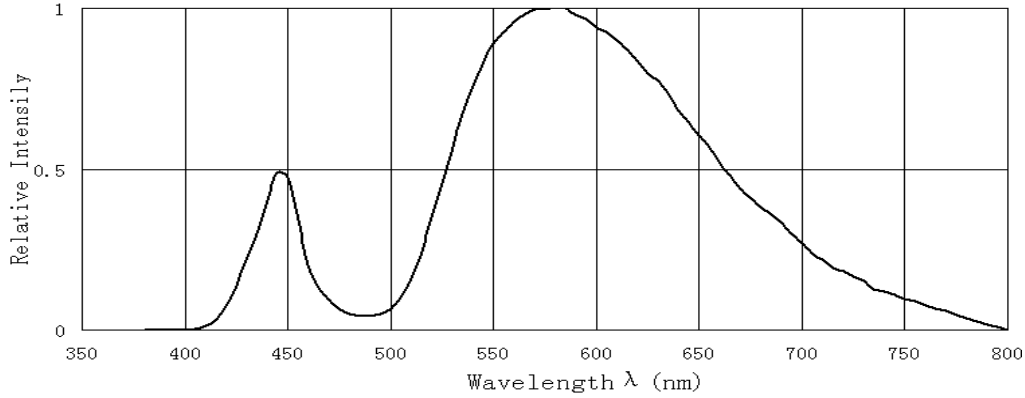


Fig. 1 Relative Intensity vs. Wavelength

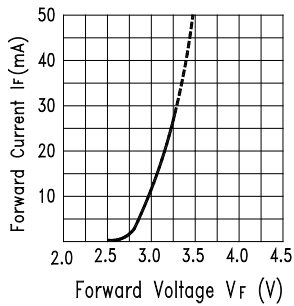


Fig. 2 Forward Current vs. Forward Voltage

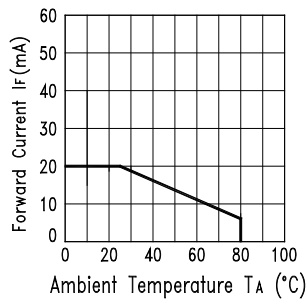


Fig. 3 Forward Current Derating Curve

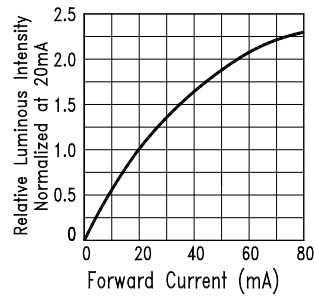


Fig. 4 Relative Luminous Intensity vs. Forward Current

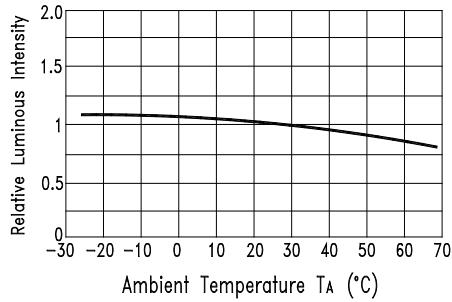


Fig. 5 Luminous Intensity vs. Ambient Temperature

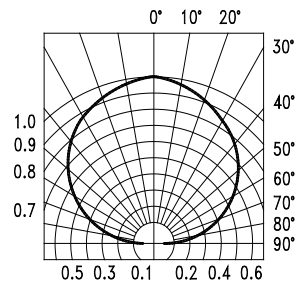
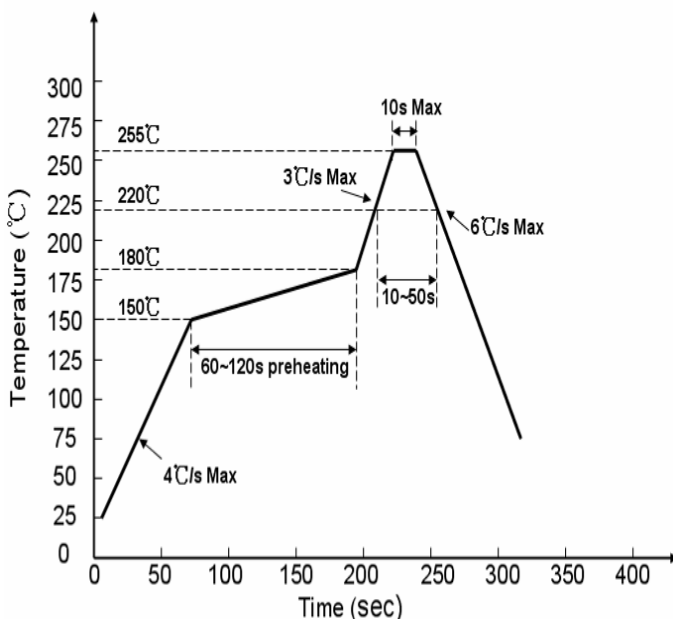
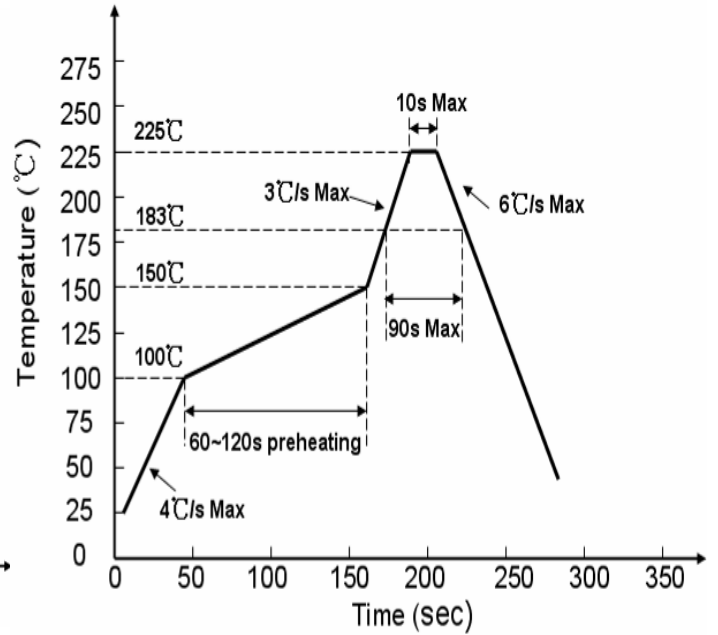


Fig. 6 Spatial Distribution

◆ Soldering Profile



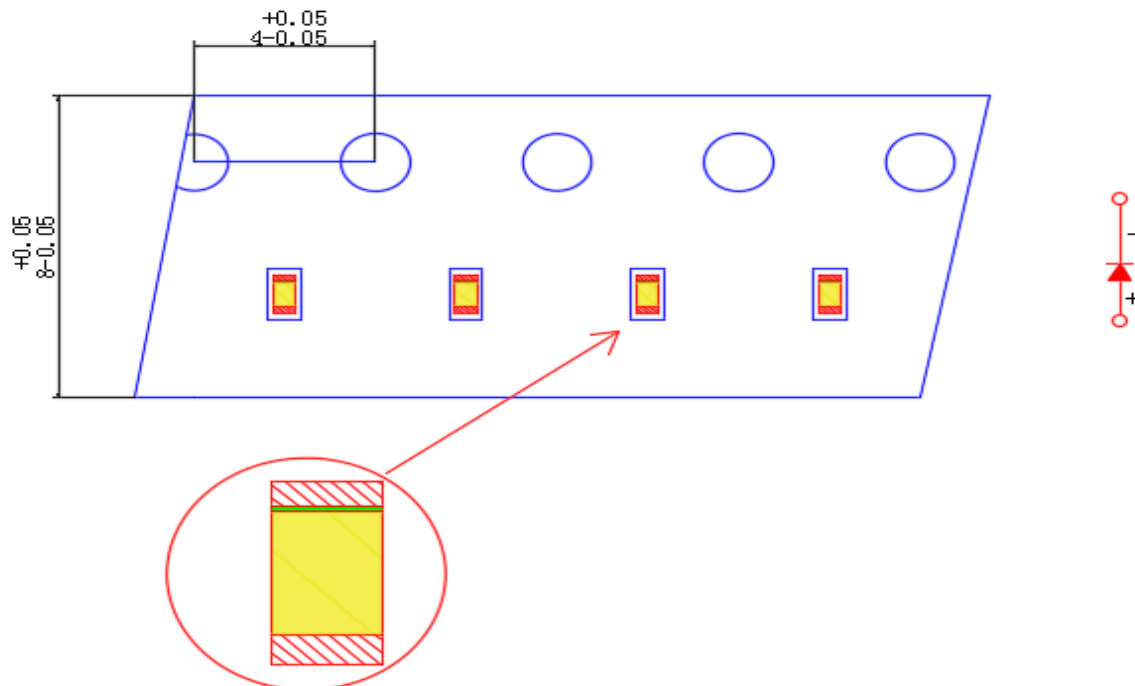
Free Lead process



Lead process

◆ Tape specifications

(Units:mm)



◆ VF Rank

Rank	VF		Condition
	MIN	MAX	
2.7-2.8	2.7	2.8	IF=5mA
2.8-2.9	2.8	2.9	
2.9-3.0	2.9	3.0	
3.0-3.1	3.0	3.1	

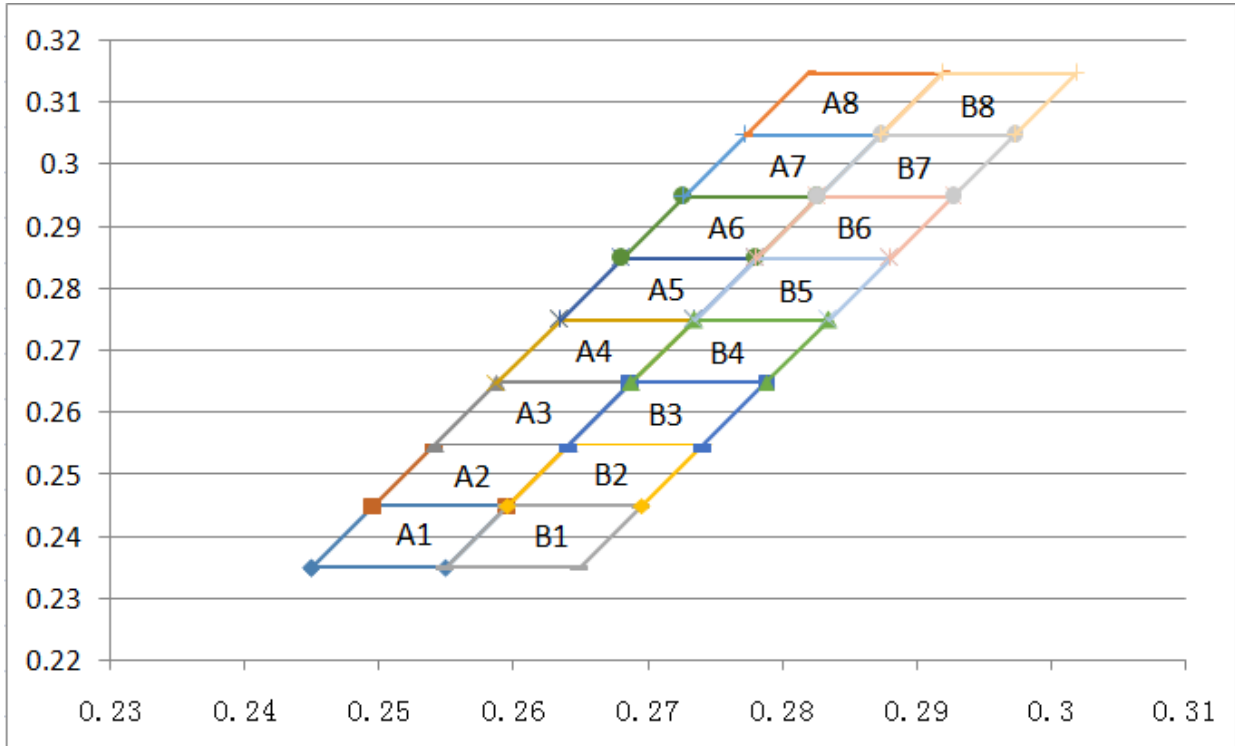
Tolerance:±0.05V

◆ IV Rank

Rank	IV		Condition
	MIN	MAX	
120-170	120	170	IF=5mA
170-220	170	220	
220-270	220	270	
270-320	270	320	

Tolerance:±15%

◆ X Y Rank



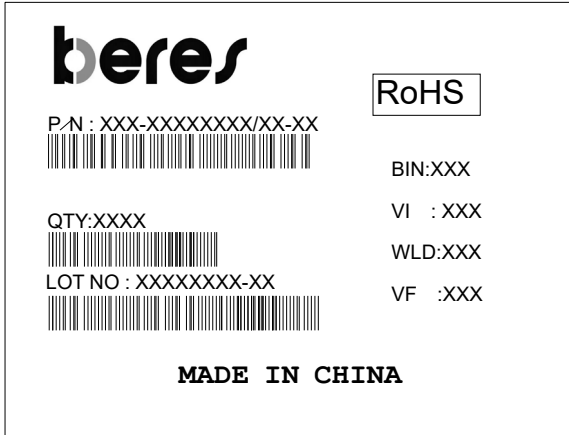
	X1	Y1	X2	Y2	X3	Y3	X4	Y4
A1	0.245	0.235	0.2496	0.245	0.2596	0.245	0.255	0.235
A2	0.2496	0.245	0.2542	0.2549	0.2642	0.2549	0.2596	0.245
A3	0.2542	0.2549	0.2588	0.2649	0.2688	0.2649	0.2642	0.2549
A4	0.2588	0.2649	0.2635	0.2749	0.2735	0.2749	0.2688	0.2649
A5	0.2635	0.2749	0.2681	0.2848	0.2781	0.2848	0.2735	0.2749
A6	0.2681	0.2848	0.2727	0.2948	0.2827	0.2948	0.2781	0.2848
A7	0.2727	0.2948	0.2773	0.3047	0.2873	0.3047	0.2827	0.2948
A8	0.2773	0.3047	0.2819	0.3147	0.2919	0.3147	0.2873	0.3047
B1	0.255	0.235	0.2596	0.245	0.2696	0.245	0.265	0.235
B2	0.2596	0.245	0.2642	0.2549	0.2742	0.2549	0.2696	0.245
B3	0.2642	0.2549	0.2688	0.2649	0.2788	0.2649	0.2742	0.2549
B4	0.2688	0.2649	0.2735	0.2749	0.2835	0.2749	0.2788	0.2649
B5	0.2735	0.2749	0.2781	0.2848	0.2881	0.2848	0.2835	0.2749
B6	0.2781	0.2848	0.2827	0.2948	0.2927	0.2948	0.2881	0.2848
B7	0.2827	0.2948	0.2873	0.3047	0.2973	0.3047	0.2927	0.2948
B8	0.2873	0.3047	0.2919	0.3147	0.3019	0.3147	0.2973	0.3047

Tolerance:±0.005

地址：福建省宁德市福安市城阳镇秦溪洋工业区万福路2号101D

<http://www.beres.cn>

◆ 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 desicca tor) 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 compo nents shall be dried 10-12hr. 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.