



深圳市鸿之森电子有限公司

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## SAMPLE APPROVAL SHEET

### DESCRIPTIONS:

- 1.6x1.5x0.58mm SMD LED
- Emitting Color:
- Lens Color: Water Clear

CUSTOMER: \_\_\_\_\_

MASON P/N:HS-1615-RYG-同向

CUSTOMER P/N: \_\_\_\_\_

### CUSTOMER APPROVED SIGNATURES

APPROVRD BY	CHECKED BY



## PRELIMINARY SPEC

1.6x1.5X0.58mm SMD CHIP LED

PART NO: HS-1615-RYG-同向



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
LECTROSTATIC ISCHARGE  
SENSITIVE DEVICES

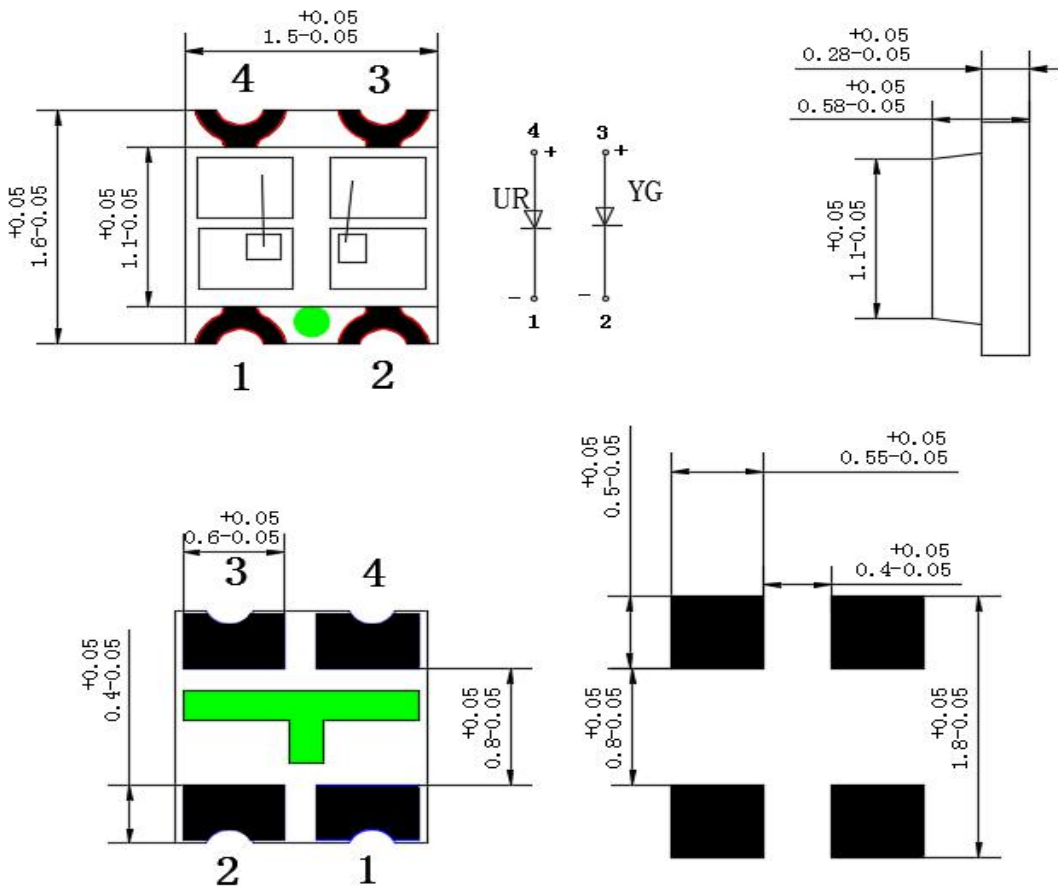
## Features

- 1.6mmx1.5mm SMT LED, 0.58m THICKNESS.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 4000PCS / 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  $\pm 0.15$  unless otherwise noted.
3. Specifications are subject to change without notice.



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## ◆ Device Selection Guide

Part No.	Chip		Lens color
C0606URYG-同向	Material	Emitted color	Water Clear
	(AlGaInP)	RED	
	(AlGaInP)	Yellow Green	

## ◆ Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value			Unit
		UR	YG		
Power Dissipation	PD	60	60		mW
Forward Current	IF	20	20		mA
Peak Forward Current*1	IFP	100	100		mA
Reverse Voltage	VR	5			V
Operating Temperature	Topr	-40°C To +85°C			
Storage Temperature	Tstg	-40°C To +85°C			

Notes:

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

## ◆ Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min	typ	Max	Unit	Test Conditions
Forward Voltage	VF(UR)	1.7	—	2.3	V	IF=20mA
	VF(YG)	1.7	—	2.5	V	IF=20mA
Reverse Current	IR	—	—	10	μA	VR=5V
Dominant Wave Length	λd(UR)	617		630	nm	IF=20mA
	λd(YG)	566		576	nm	
Luminous Intensity	IV(UR)	70	—	200	mcd	IF=20mA
	IV(YG)	25	—	74	mcd	
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=20mA

### 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:

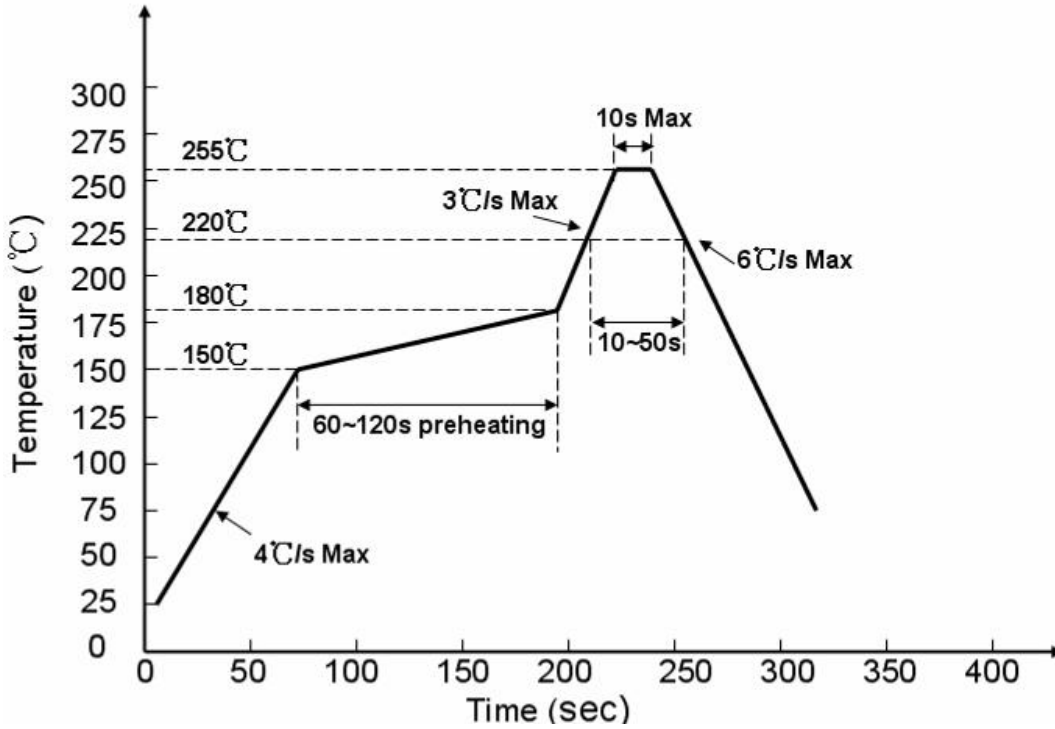
1. Chromaticity Coordinates: ±0.01



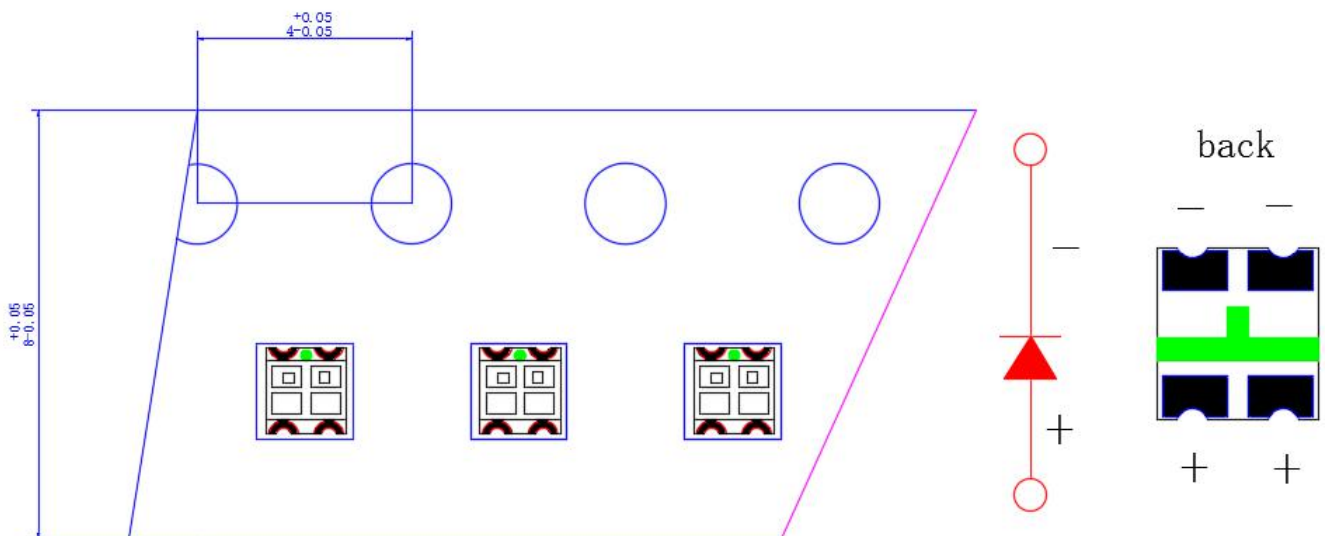
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- 2. Luminous Intensity:  $\pm 15\%$
- 3. Forward Voltage:  $\pm 0.1V$

## ◆ Soldering Profile



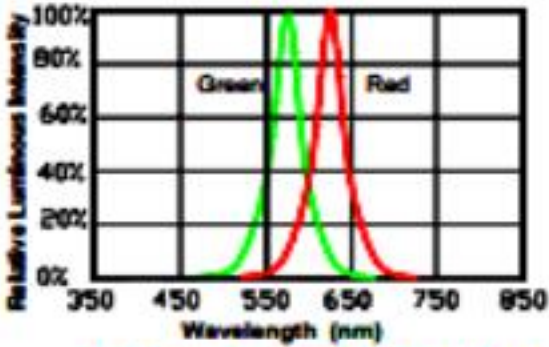
## ◆ Carrier Tape Dimensions: Loaded Quantity 4000pcs Per Reel



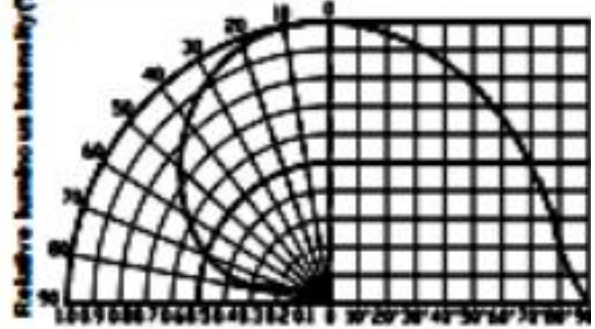


◆ Typical Electrical/Optical Characteristics Curves

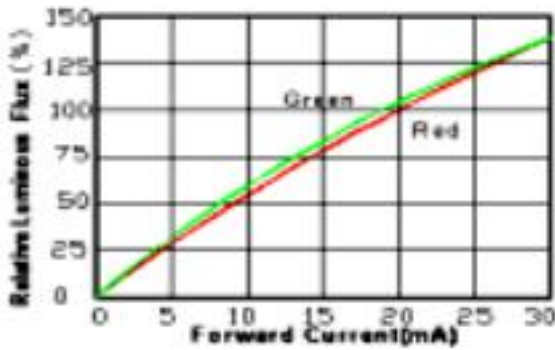
1). Relative Spectral Distribution



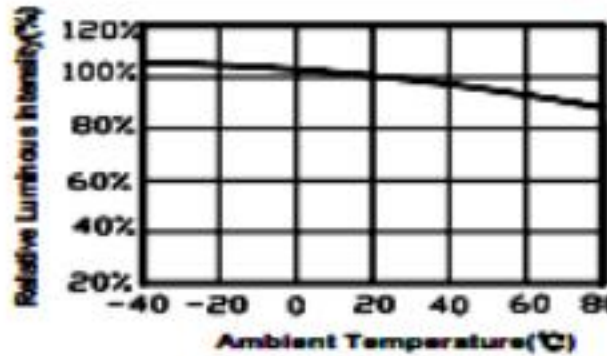
2). Typical Spatial Distribution



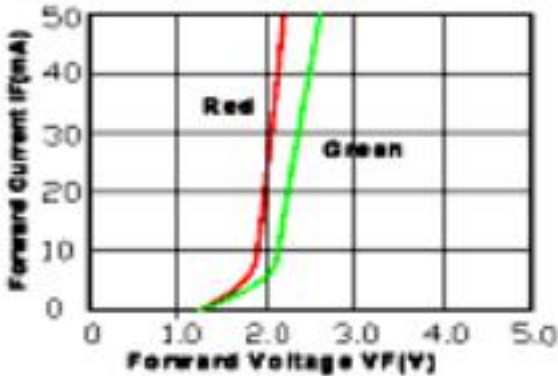
3). Relative Luminous Flux .Current



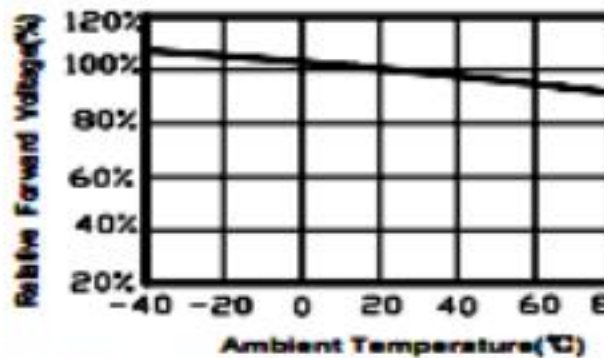
4). Relative Luminous Flux .Ambient Temperature



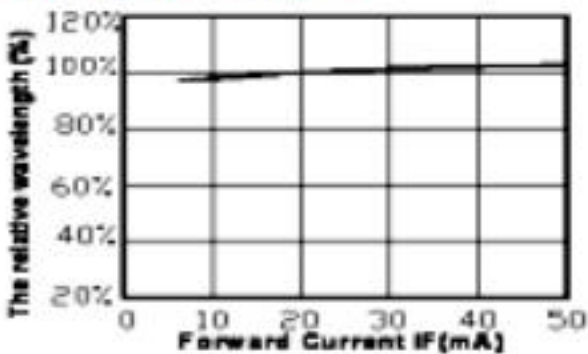
5). Electrical Characteristics



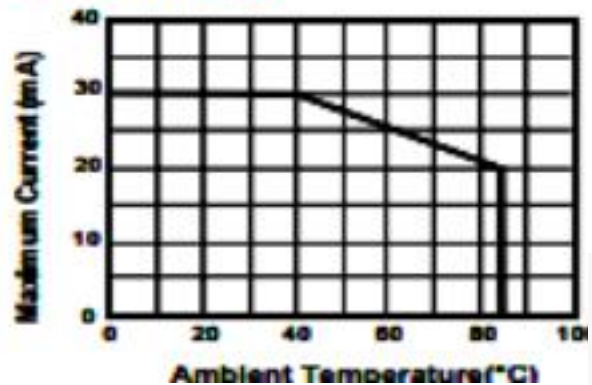
6). Forward Voltage Temperature



7). Wavelength and current



8). Thermal Design





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## ◆ VF Rank

Rank		VF		Condition
		MIN	MAX	
UR	R1	1.7	1.9	IF=20mA
	R2	1.9	2.1	
	R3	2.1	2.3	
YG	G1	1.9	2.1	
	G2	2.1	2.3	
	G3	2.3	2.5	

Tolerance:±0.05V

## ◆ IV Rank

Rank		IV		Condition
		MIN	MAX	
UR	R1	70	100	IF=20mA
	R2	100	130	
	R3	130	160	
	R4	160	200	
YG	G1	25	36	
	G2	36	51	
	G3	51	74	

olerance:±15%

## ◆ WLD Rank

Rank		IV		Condition
		MIN	MAX	
UR	R1	617	625	IF=20mA
	R2	625	630	
YG	G1	566	568	
	G2	568	570	
	G3	570	572	
	G4	572	574	
	G5	574	576	

olerance:±1nm



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## ◆ Judgment criteria of failure for the reliability

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	$V_F(V)$	$I_F=5mA$	Initial Level*1.1
Reverse current	$I_R(UA)$	$V_R=5V$	Over U*2
Luminous intensity	IV(mcd)	$I_F=5mA$	Initial Level*0.7

Note: 1.U means the upper limit of specified characteristics.

2.Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.

## ◆ 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:  $5^{\circ}C\sim 30^{\circ}C$

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:  $5^{\circ}C\sim 40^{\circ}C$

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  $60^{\circ}C\pm 3^{\circ}C$ .

• In case of supposed the components is humid, shall not be dried dip-solder just before. 100Hr at  $80^{\circ}C\pm 3^{\circ}C$  or 12Hr at  $100^{\circ}C\pm 3^{\circ}C$

### 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.