

SAMPLE APPROVAL SHEET

DESCRIPTIONS:

- 1.6x0.8x0.43mm SMD LED
- Emitting Color:White
- Lens Color:Yellow Fluorescent

CUSTOMER: _____

XINYI P/N:CT0603UW

CUSTOMER P/N: _____

CUSTOMER APPROVED SIGNATURES

APPROVRD BY	CHECKED BY

广西欣亿光电科技有限公司

PRELIMINARY SPEC

1.6x0.8X0.43mm SMD CHIP LED

PART NO: CT0603UW

WHITE



ATTENTION

OBSERVE PRECAUTIONS
FOR HANDLING

ELECTROSTATIC DISCHARGE
SENSITIVE DEVICES

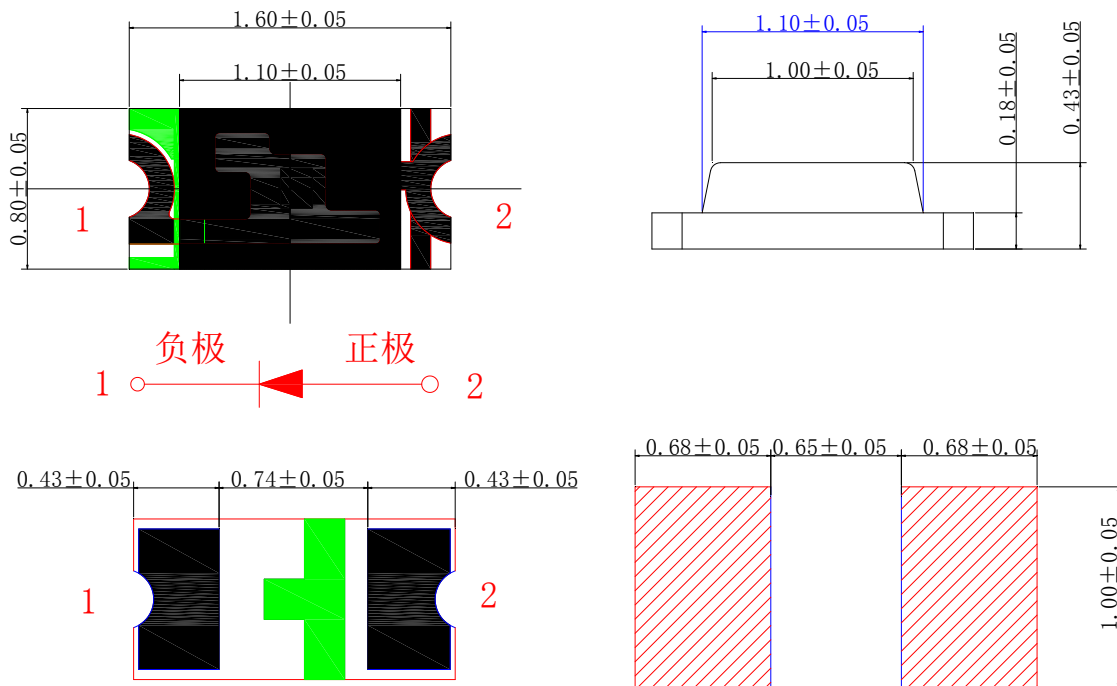
Features

- 1.6mmx0.8mm SMT LED, 0.43mm 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 ± 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
CT0603UW	Material	Emitted color	Yellow Fluorescent
	(InGaN)	WHITE	

◆ 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(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	2.6	—	3.0	V	IF=2mA
Reverse Current	IR	—	—	10	μA	VR=5V
Chromaticity Coordinates	X	0.25	—	0.32		IF=2mA
	Y	0.24	—	0.32		
Luminous Intensity	IV	70	—	180	mcd	IF=2mA
Viewing Angle	2θ1/2	—	120	—	Deg.	IF=2mA

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

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◆ Typical Electrical/Optical Characteristics Curves

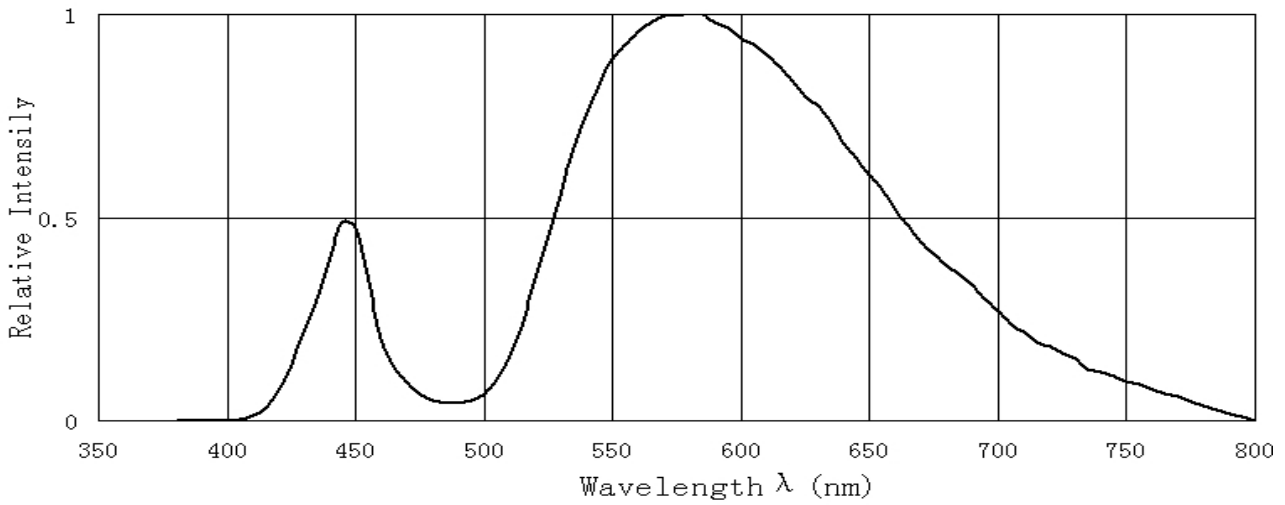


Fig. 1 Relative Intensity vs. Wavelength

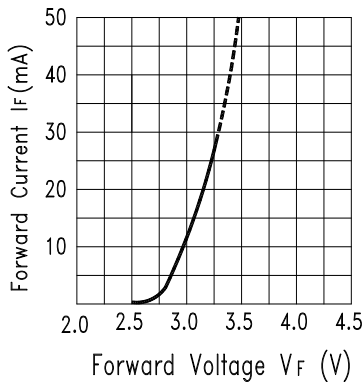


Fig. 2 Forward Current vs. Forward Voltage

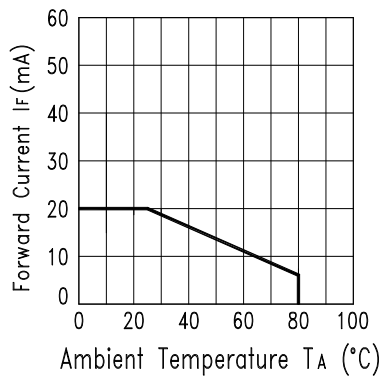


Fig. 3 Forward Current Derating Curve

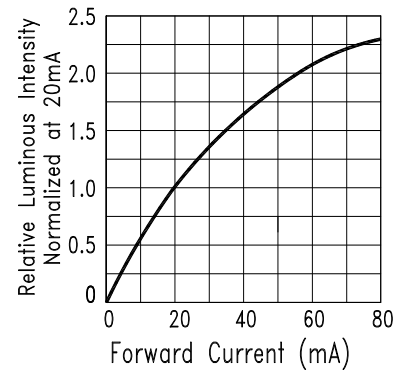


Fig. 4 Relative Luminous Intensity vs. Forward Current

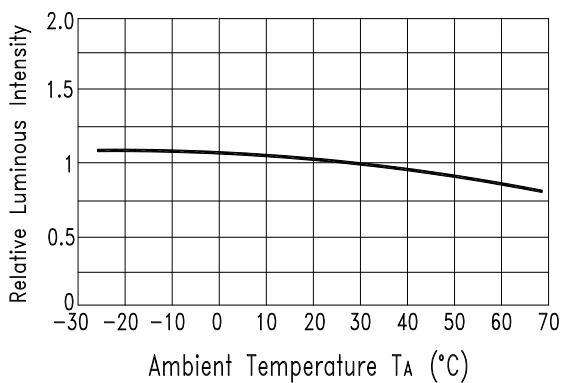


Fig. 5 Luminous Intensity vs. Ambient Temperature

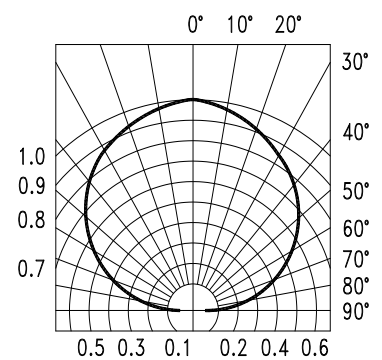
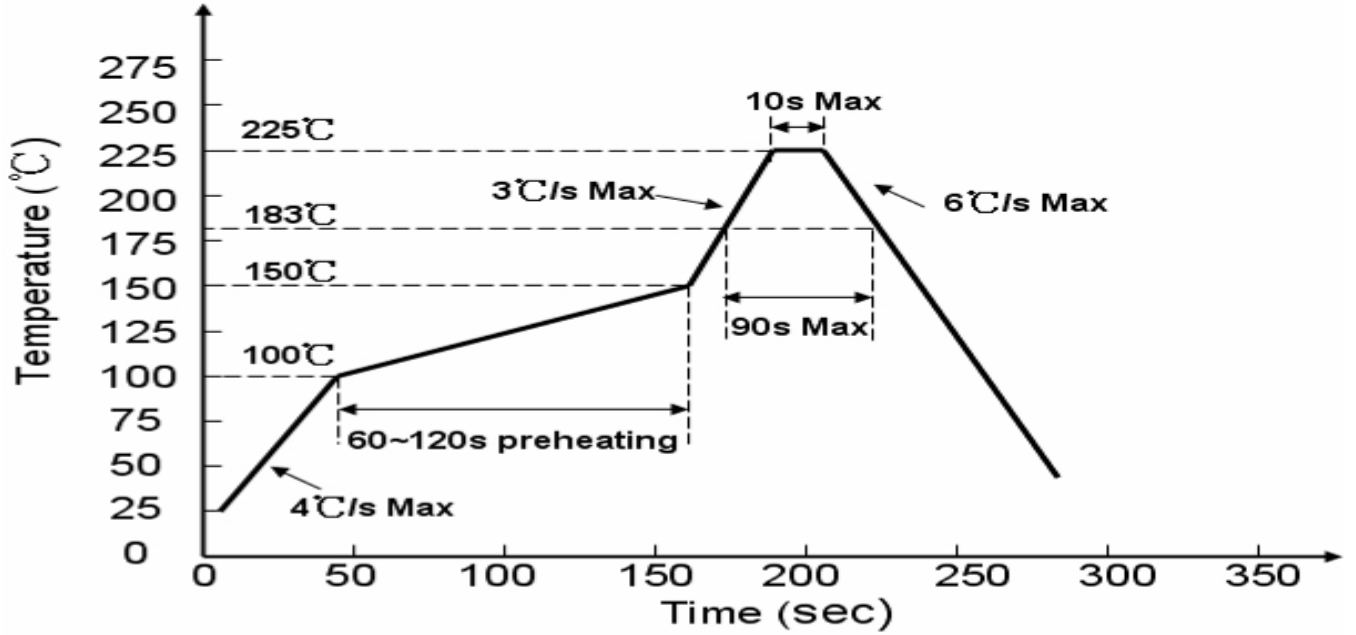


Fig. 6 Spatial Distribution

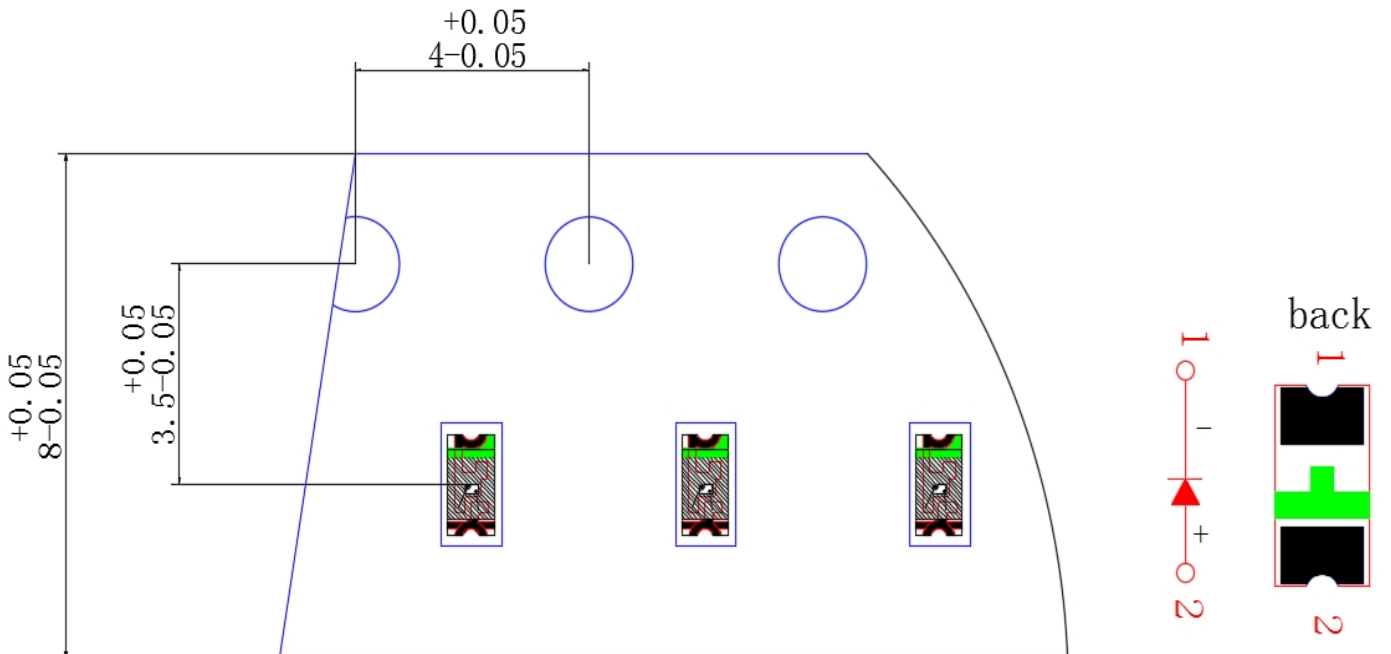
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◆ Soldering Profile



◆ Tape specifications

(Units:mm)



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◆ VF Rank

Rank	VF		Condition
	MIN	MAX	
2.6-2.7	2.6	2.7	IF=2mA
2.7-2.8	2.7	2.8	
2.8-2.9	2.8	2.9	
2.9-3.0	2.9	3.0	

Tolerance:±0.05V

◆ IV Rank

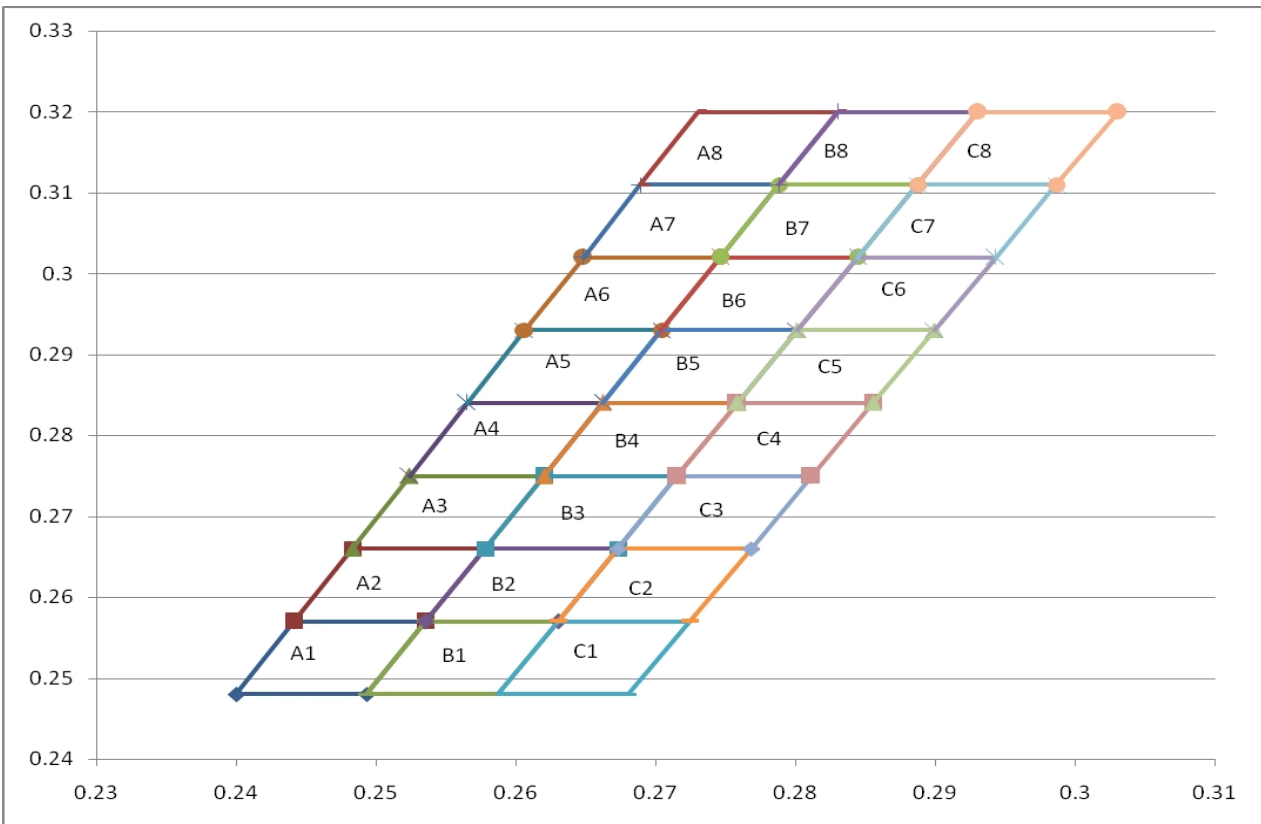
Rank	IV		Condition
	MIN	MAX	
70-90	70	90	IF=2mA
90-120	90	120	
120-150	120	150	
150-180	150	180	

Tolerance:±15%

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◆ X Y Rank

	C1:X1	C1:Y1	C1:X2	C1:Y2	C1:X3	C1:Y3	C1:X4	C1:Y4
A1	0.24	0.248	0.2441	0.257	0.2535	0.257	0.2493	0.248
A2	0.2441	0.257	0.2483	0.266	0.2578	0.266	0.2535	0.257
A3	0.2483	0.266	0.2524	0.275	0.262	0.275	0.2578	0.266
A4	0.2524	0.275	0.2565	0.284	0.2662	0.284	0.262	0.275
A5	0.2565	0.284	0.2606	0.293	0.2704	0.293	0.2662	0.284
A6	0.2606	0.293	0.2648	0.302	0.2746	0.302	0.2704	0.293
A7	0.2648	0.302	0.2689	0.311	0.2788	0.311	0.2746	0.302
A8	0.2689	0.311	0.273	0.32	0.283	0.32	0.2788	0.311
B1	0.2493	0.248	0.2535	0.257	0.263	0.257	0.2587	0.248
B2	0.2535	0.257	0.2578	0.266	0.2673	0.266	0.263	0.257
B3	0.2578	0.266	0.262	0.275	0.2715	0.275	0.2673	0.266
B4	0.262	0.275	0.2662	0.284	0.2758	0.284	0.2715	0.275
B5	0.2662	0.284	0.2704	0.293	0.2801	0.293	0.2758	0.284
B6	0.2704	0.293	0.2746	0.302	0.2844	0.302	0.2801	0.293
B7	0.2746	0.302	0.2788	0.311	0.2887	0.311	0.2844	0.302
B8	0.2788	0.311	0.283	0.32	0.293	0.32	0.2887	0.311
C1	0.2587	0.248	0.263	0.257	0.2724	0.257	0.268	0.248
C2	0.263	0.257	0.2673	0.266	0.2768	0.266	0.2724	0.257
C3	0.2673	0.266	0.2715	0.275	0.2811	0.275	0.2768	0.266
C4	0.2715	0.275	0.2758	0.284	0.2855	0.284	0.2811	0.275
C5	0.2758	0.284	0.2801	0.293	0.2899	0.293	0.2855	0.284
C6	0.2801	0.293	0.2844	0.302	0.2943	0.302	0.2899	0.293
C7	0.2844	0.302	0.2887	0.311	0.2986	0.311	0.2943	0.302
C8	0.2887	0.311	0.293	0.32	0.303	0.32	0.2986	0.311



Tolerance:±0.01

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◆ Label Explanation :



XD-:Customer Name↵
VF:Forward Voltage ↵
IV:Luminous intensity↵
WLD:Dom. Wavelength↵
LOT NO:Lot Number↵
QTY:Quantity↵
DATE: Production Date↵

◆ 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.