

深圳市天成照明有限公司

SPECIFICATIONS

产品规格书

客户名称		产品名称	5050「乾照」系列
客户代码		产品规格	TC5050WXD22-3CQZR3



客户确认			
制定	审核	核准	
黄奕源		金国奇	
版本号 (Version No) : 1.0			



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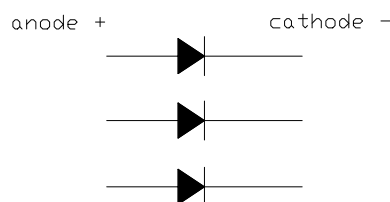
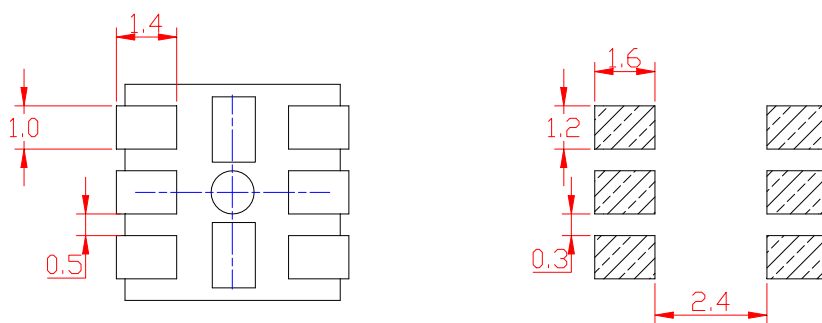
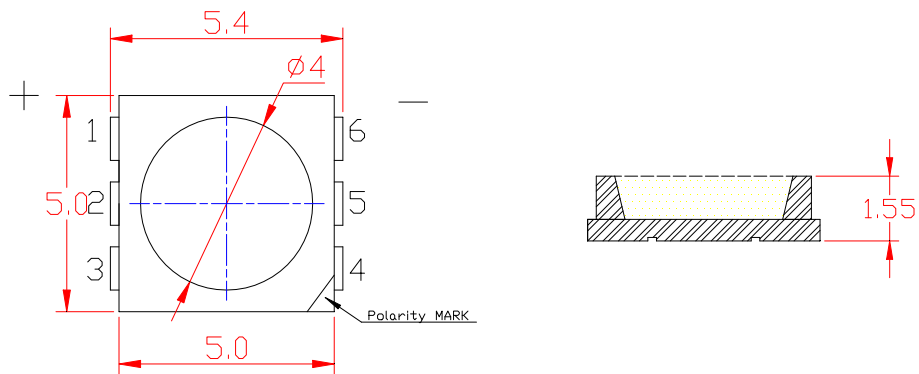


Mechanical Specification

- **5.00mm*5.00mm*1.6mm SMD LED**
(5.00mm*5.00mm* 1.6mm)
- **The materials of the LED dice is InGaN**
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- **Suitable for all SMT assembly and welding process**
(SMT)
- **moisture resistant grade Level 2a**
(Level 2a)



Package Outline)



NOTES:

1. All dimensions are in millimeters
2. Tolerances are $\pm 0.2\text{mm}$ unless otherwise noted

$\pm 0.2\text{mm}$)

Absolute maximum ratings at Ta=25

Parameters	Symbol	Value	Unit
Power Dissipation	Pd	200	mW
Forward Current	IF	60	mA
Pulse Forward Current	IFP	100	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge	ESD	2000(HBM)	V
Operating Temperature	Topr	-40 +85	
Storage Temperature	Tstg	-40 +100	

Electro-optical characteristics at Ta=25

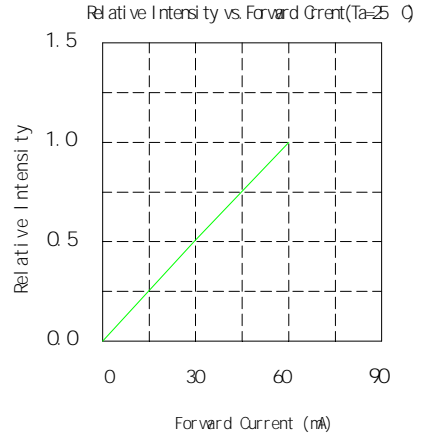
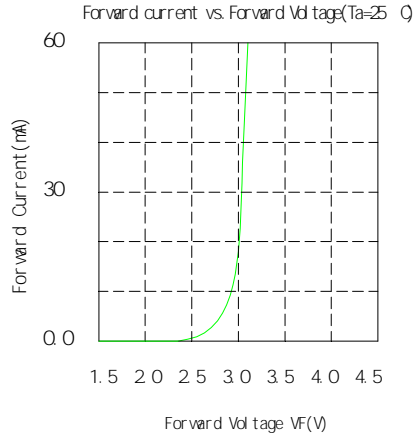
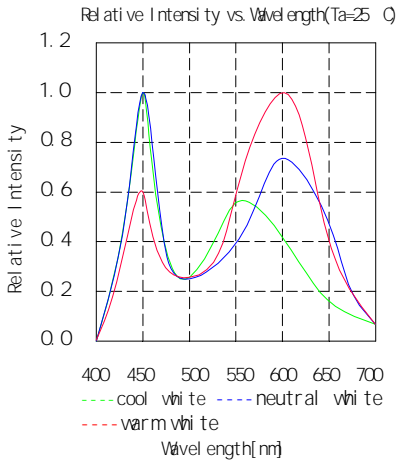
Item	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	Vf	2.8		3.2	V	IF=60mA
Reverse current	IR	--	--	5	μ A	VR = 5V
Chromaticity	TC	2600	--	2800	K	IF=60mA
		2800	--	3200		
		3800	--	4200		
		4800	--	5200		
		6000	--	6500		
Color Rendering	Ra	80	--	85	/	IF=60mA
Viewing angle ()	2 1/2		120		Deg	IF=60mA
Luminous intensity		22	--	24	Lm	IF=60mA
Color tolerance	SDCM	--		4		IF=60mA

NOTE: (Tolerance: $I_v \pm 10\%$, $\lambda_d \pm 2nm$, $V_f \pm 0.05V$)

$I_v \pm 10\%$, $\lambda_d \pm 2nm$, $V_f \pm 0.05V$

Typical optical characteristics curves

Spectral Distribution



Derating

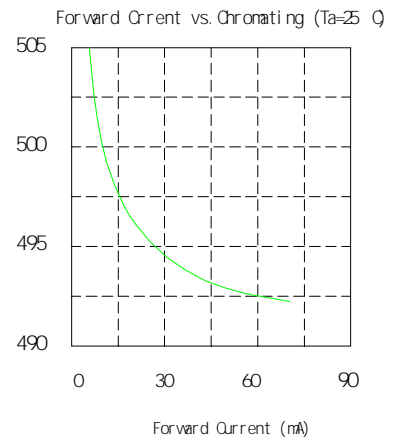
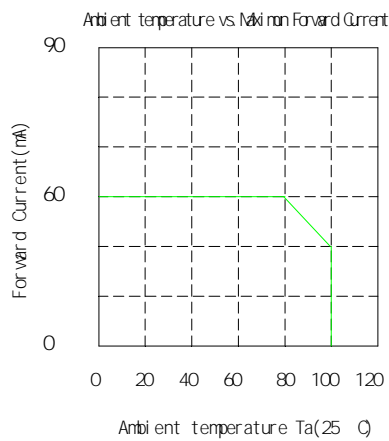
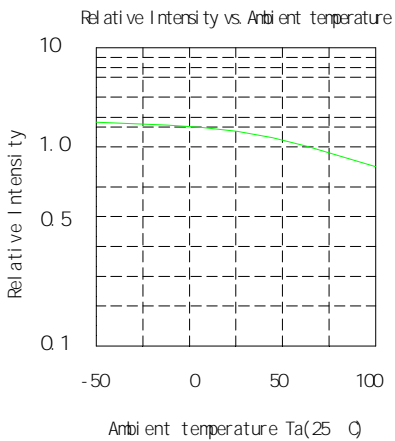
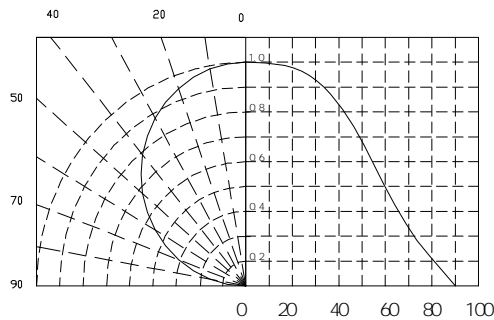
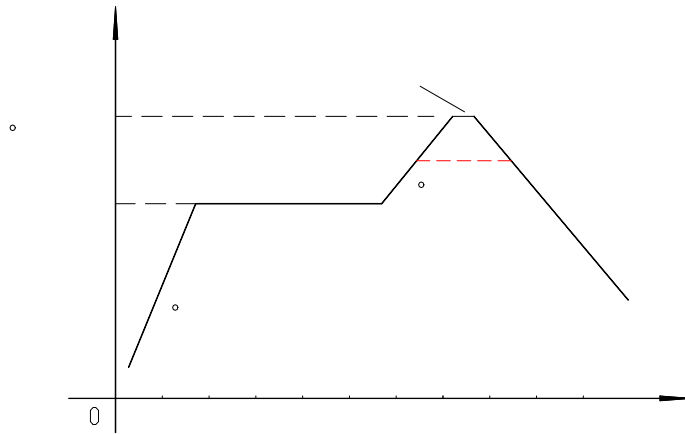


Diagram characteristics of radiation



Reflow profile

■ SMD Reflow Soldering Instructions



1. Reflow soldering should not be done more than two times
2
2. When soldering ,do not put stress on the LEDs during heating
LED

■ Soldering iron

1. When hand soldering, keep the temperature of the iron under 300 , and at that temperature keep the time under 3 sec.
300 3
2. The hand soldering should be done only a time

■ Rework

1. Customer must finish rework within 5 sec under 260
260 5
2. The head of iron can not touch the LEDs
LED
3. Twin-head type is preferred.

■ CAUTIONS

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when using the picking up nozzle, the pressure on the silicone resin should be proper.

LED

LED

LED

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Product comparison table

Product model	Lot number	Chromaticity	Luminous intensity	Color Rendering	Color tolerance
TC5050W6D22-3CQZR3	AW601	6000-6500K	22-24LM	80	
TC5050W5D22-3CQZR3	AW501	4800-5200K	22-24LM	80	4
TC5050W4D22-3CQZR3	AW401	3800-4200K	22-24LM	80	4
TC5050W3D22-3CQZR3	AW301	2800-3200K	22-24LM	80	4
TC5050W2D22-3CQZR3	AW201	2600-2800K	22-24LM	80	4

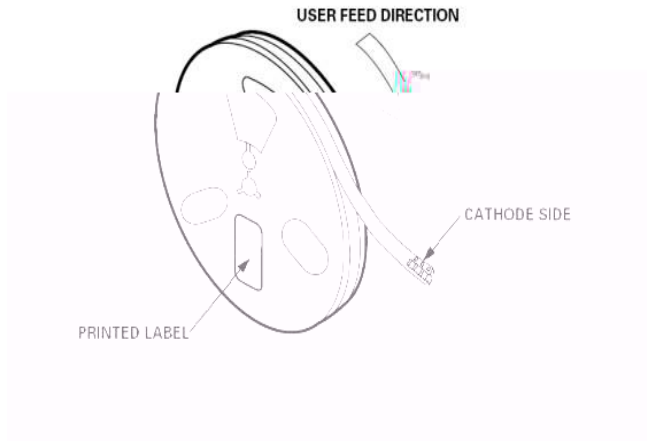
Reliability

TEST ITEMS AND RESULTS

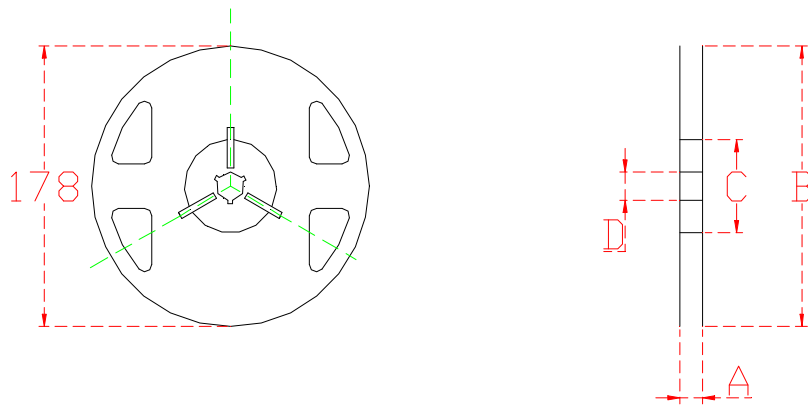
Test Items	Ref.Standard	Test Condition	Time	Quantity	Ac/Re /
Reflow	JESD22-B106	Temp=260 max T=10sec	3 times	0/22	0/1
Temperature Cycle	JESD22-A104	-20 ± 5 30min 5min 120 ± 5 30min	200 cycle	0/22	0/1
Thermal Shock	JESD22-A106	-40 ± 5 15min 5sec 100			

Packaging Specifications

- Feeding Direction

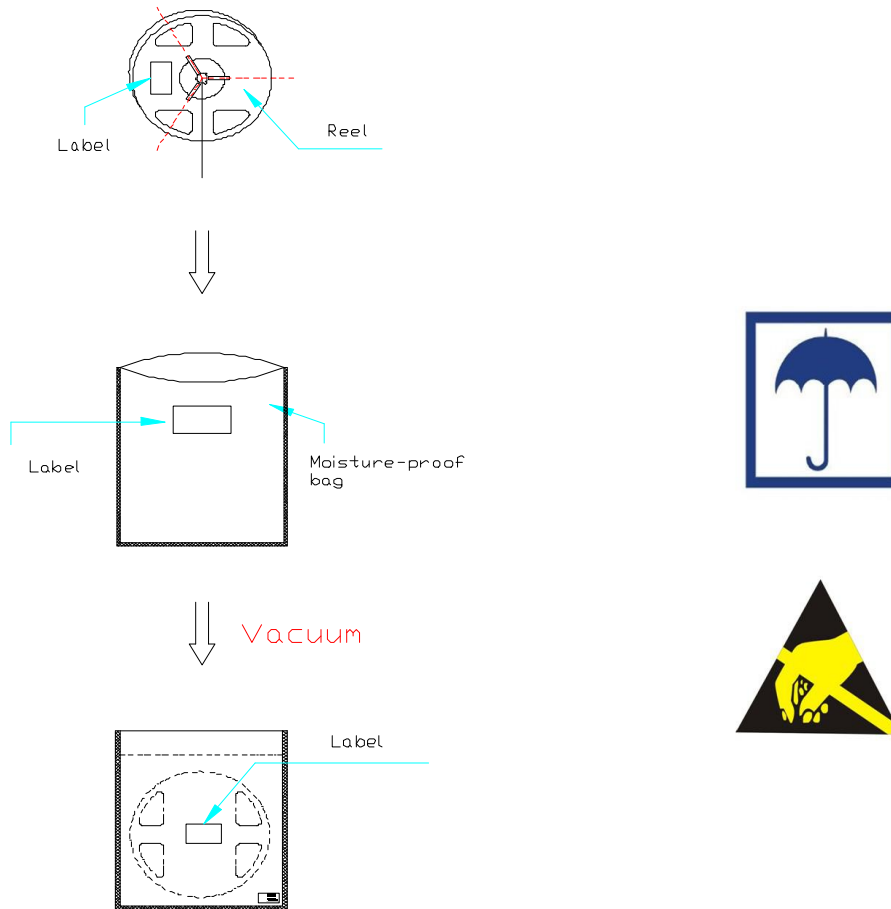


- Dimensions of Reel (Unit: mm)



	±
	±
	±
	±

1 Packing Icon



2 Label Icon

