

---

# 规格书

## SPECIFICATION

产品名称: 贴片式LED  
Description: SMD

产品型号: KT-5050RGB-X  
Product Part No: KT-5050RGB-X

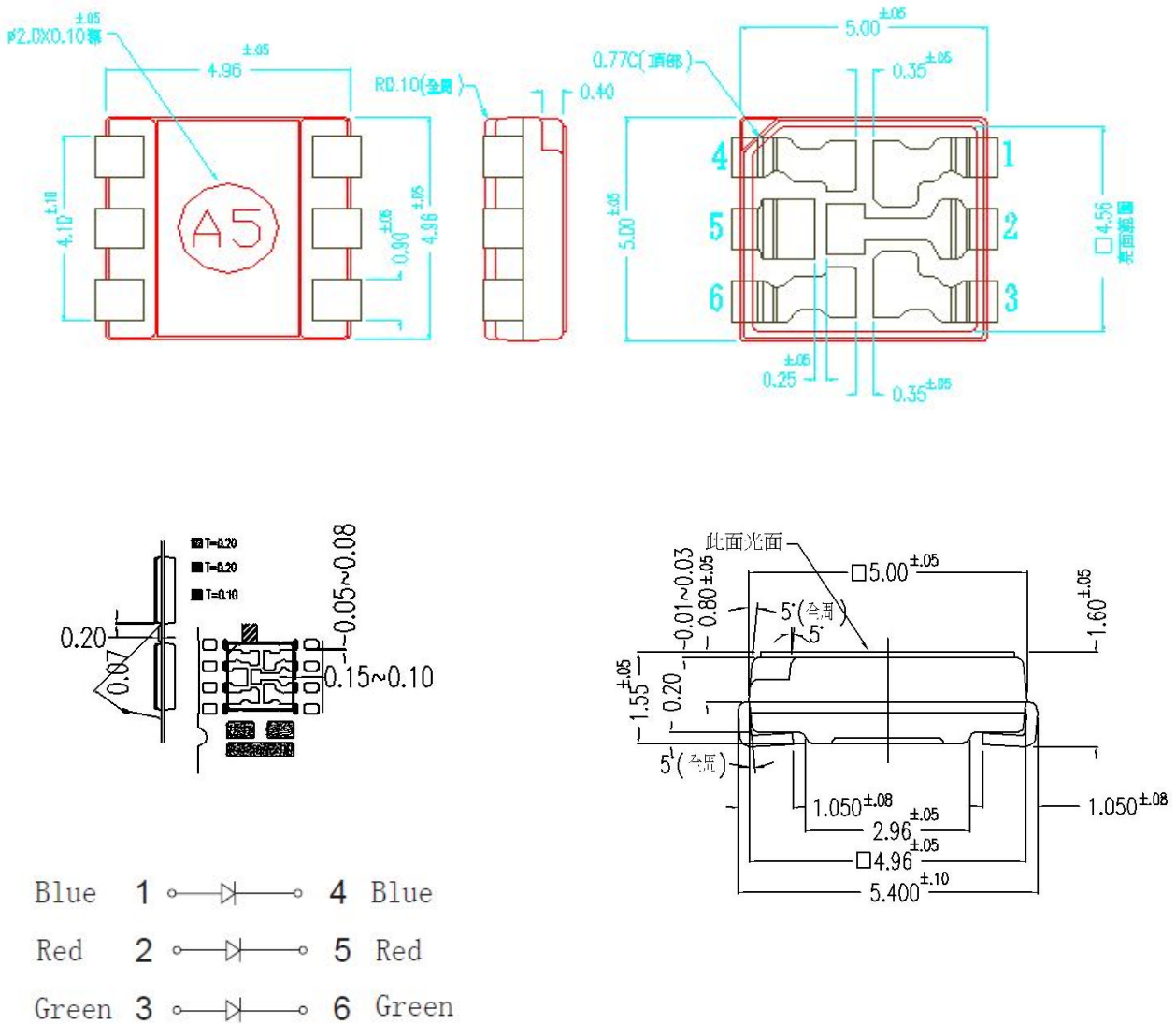
主检: \_\_\_\_\_  
Test By: \_\_\_\_\_

审核: \_\_\_\_\_  
Check By: \_\_\_\_\_

批准: \_\_\_\_\_  
Approval: \_\_\_\_\_

时间: \_\_\_\_\_  
Date: \_\_\_\_\_

1、 Outline Dimensions/产品外形尺寸 (units:mm) :



NOTES

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.05$ mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

**2、 Absolute maximum ratings/极限参数 (Ta = 25°C):**

Parameter 参数	Color 颜色	Symb ol 符号	Test Condition 测试条件	Values 数值		Unit 单位
				Min.	Max.	
Power Dissipation 损耗功率	Red	Pd	—	—	43	mW
	Green			—	45	
	Blue			—	32	
Reverse Voltage 反向电压	Red	VR	IR = 30μA	5	—	V
	Green					
	Blue					
Pulse Current 正向峰值电流	Red	IFp	Duty=0.1 1kHz	—	100	mA
	Green					
	Blue					
Forward Current 正向工作电流	Red	IFm	—	—	25	mA
	Green					
	Blue					
Operating Temperature 工作温度范围	Red	Topr	—	-40	+85	°C
	Green					
	Blue					
Storage Temperature 储存温度范围	Red	Tstr	—	-40	+85	°C
	Green					
	Blue					

### 3、Electrical and optical characteristics/光电参数 (Ta = 25°C):

Parameter 参数	Color 颜色	Symbol 符号	Test Condition 测试条件	Values数值			Unit 单位
				Min	Typ	Max	
Forward Voltage 正向电压	Red	VF	IF=20Ma	—	2.2	2.5	
	Green			—	3.0	3.4	
	Blue			—	3.2	3.6	
Reverse Voltage 反向电压	Red	IR	VR=5V	—	—	30	
	Green			—	—	30	
	Blue			—	—	30	
Dominate Wavelength 主波长	Red	$\lambda_d$	IF=20mA	—	624	—	
	Green			—	525	—	
	Blue			—	465	—	
Peak Wavelength 峰值波长	Red	$\lambda_p$	IF=20mA	—	—	—	
	Green			—	—	—	
	Blue			—	—	—	
Spectral Line half-width 半波长宽度	Red	$\Delta\lambda$	IF=20mA	—	20	—	
	Green			—	30	—	
	Blue			—	30	—	
Luminous	Red	IV	IF=20mA	150	250	—	

Intensity 发光强度	Green			330	420	—	
	Blue			65	100	—	
Forward Voltage 发光指向角	Red	201/2	IF=20mA	—	150	—	
	Green						
	Blue						

Note

1. Luminous intensity is measured with a light sensor and filter combination that approximates CIE(Commission International Dd L Eclairage)eyerresponse curve.
2. 201/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength,  $\lambda_d$  is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4. The Iv guarantee should be added  $\pm 15\%$ .

4、Typical electrical/optical characteristic curves/光电特性曲线:

Fig.1 正向电流 Vs. 正向电压

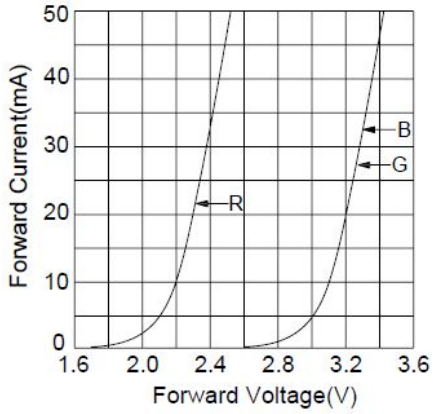


Fig.2 相对亮度 Vs. 正向电流

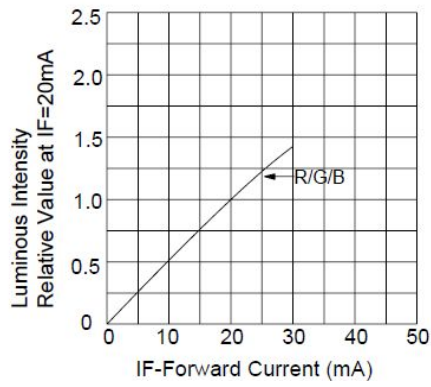


Fig.3 正向电流 Vs. 环境温度

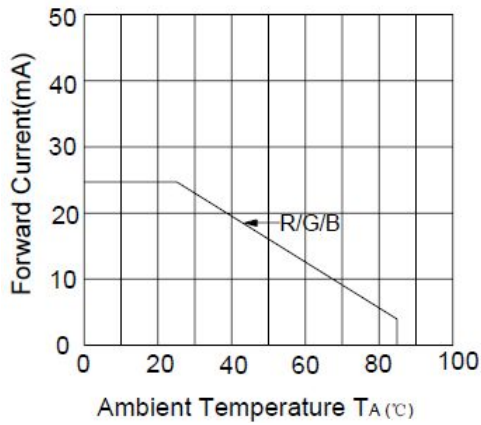


Fig.4 相对亮度 Vs. 环境温度

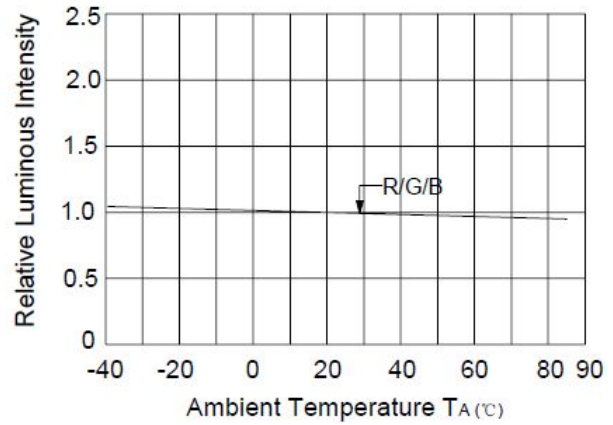
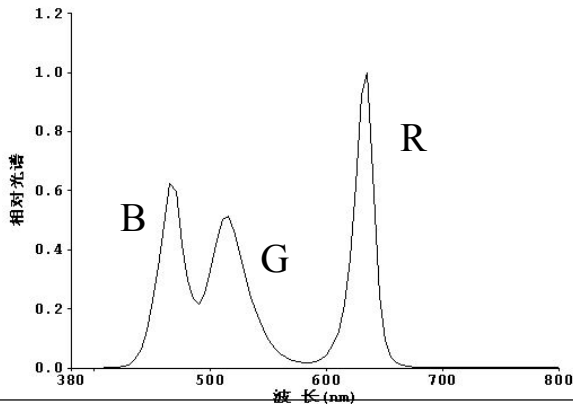
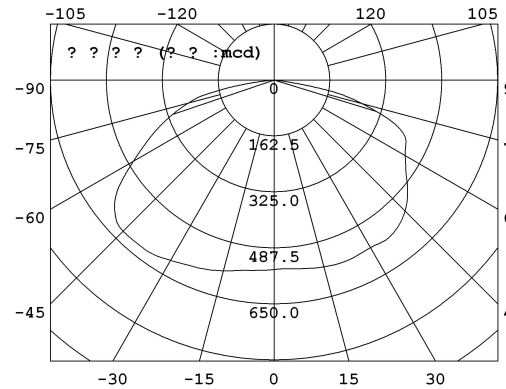


Fig.5 相对亮度 Vs. 波长



角度-光强 极坐标分布图



## 5、Reliability Analysis/可靠性试验

## 5.1 Test Items And Results/测试项目和依据

No.	Item/项目	Test Condition/测试条件	Spec. / 引用标准	Q'ty/ 数量	Time/ 时间	Standard/判定
1	IR Reflow (Reflow Soldering) /回流焊接	Tsld=260°C, 10sec	GB/T 4937, II, 2.2	20	2times	ALL PASS
2	Solder ability/可焊性	Tsld=235±5°C, 3sec		20	1times Over 95%	ALL PASS
3	Temperature Cycle/ 高低温循环	-40°C—— 100°C 30min ~ 30min The cut is not more than 1 min	GB/T 4937, III, 1	20	50cycles	ALL PASS
4	Moisture Resistance Cyclic /湿热循环	25°C/12hr~ 55°C/12hr 95%RH	GB/T 4937, III, 4	20	6cycles	ALL PASS
5	High Temperature Storage /高温储存	Ta=100°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
6	Low Temperature Storage /低温储存	Ta=-40°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
7	Steady State perating Life /电耐久性	IF=20mA Ta=25°C	GB/T 18904.3 Part A	20	1000hrs	Iv decay <30%

## 5.2 Criteria For Judging Damage/判断标准

Item/项目	Symbol/符号	Test conditions /测试条件	Criteria for Judgement /判断标准	
			Min/最小值	Max最大值
Luminous Intensity/亮度	Iv	IF=20mA	Iv*0.7	——
Forward Voltage/正向电压	VF	IF=20mA	——	U.S.L*1.1
Reverse current/反向电流	IR	VR=5V	——	U.S.L*2

\*U.S.L.: Upper Standard Level / 上限

\*L.S.L.: Lower Standard Level / 下限