



深圳市芯泓宇科技有限公司

深圳市宝安区石岩街道上排永和路 10 号 2 栋 3 楼

深圳市芯泓宇科技有限公司（佛山市）分公司

佛山市顺德区容桂街道桂州大道东 40 号佳和大厦 903A

承认书

SPECIFICATION FOR APPROVAL

产品类别(product type): SMD
产品规格(product Specification): 3528RGB-共阴
产品品号(part No.): XHY-STH3528RGB-4CN
发行日期(Issue Date): 2021/08/02

签核 (Signatures)		
核准(Approved)	审核(Checked)	制定(Drawn)
陈正标	严红梅	蒋昭军

客户 (Customer)
公司名称(Corporation):
客户回签 (Customer Confirmation) :
回签日期 (Time) :

客户意见栏 (Customer's Proposal)

☐ Approve 承认 (请於认可栏中签字)

☐ Disagree 不同意

Reason 原因:_____

Feature

- *3.5mmx2.8 SMT Led, 1.9Thickness
- *Low power consumption
- *Long life-solid state reliability
- *Available on tape and reel
- *ROHS compliant
- *Wide Viewing Angle

特征

- *3.5mmx2.8mmx1.9 SMT 发光二极管
- *低功耗消耗
- *寿命长
- *易于装贴
- *符合 ROHS 要求
- *宽角度发光

Descriptions

* The White、Red、Amber、TrueGreen、Blue source color devices are made with InGaN、AlGaInP/GaAs、AlGaInP/GaAs、InGaN、InGaN Light Emitting Diode.

描述

*白色、红色、琥珀色、绿色、蓝色等颜色光源来源于 InGaN、AlGaInP/GaAs、AlGaInP/GaAs、InGaN、InGaN 化合物制成的发光二极管

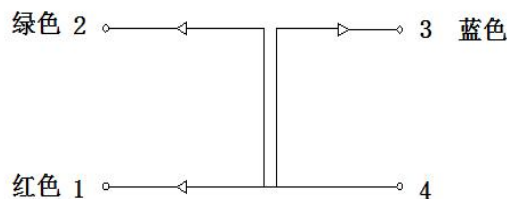
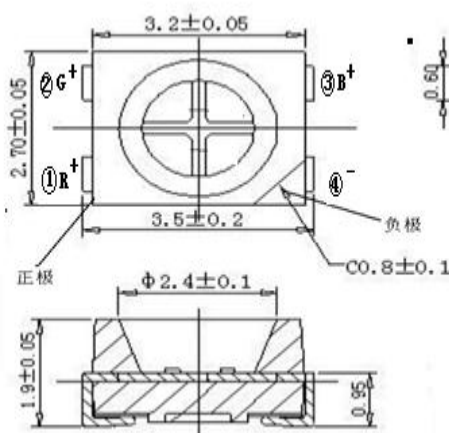
Applications

- Channel letter
- Portable lighting
- Decorative lighting
- OA equipment
- Backlighting of full color LCD
- Bulbs and fluorescent lamps

应用

- 指示灯
- 便携照明
- 装饰照明
- 工业照明
- 液晶背光
- 家居照明

Mechanical Dimensions 外观尺寸： 单位（mm）



(规格若有变动, 恕不另行通知.)



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Selection Guide

Part No. (产品型号)	Emitted Color (发光颜色)	Resin color (胶体颜色)	Viewing Angle(1) (发光角度) $2\theta_{1/2}$
3528RGB	红、绿、蓝	透明	120

Notes:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

Absolute Maximum Ratings at Ta=25℃ (极限参数)

Parameter	Symbol (符号)	Value (数值)	Unit (单位)
Power dissipation (功率消耗)	Pd	200	mW
DC Forward Current (顺向电流)	If	20	mA
Peak Forward Current (1) (峰值电流)	Ifp	40	mA
Operating Temperature (操作温度)	Topr	-25to+85	℃
Storage Temperature (储存温度)	Tstg	-40to+100	℃
Lead Solder Temperature (2) (焊接温度)	Tsol	260	℃

Notes:

1. 1/10 duty cycle, 0.1ms pulse width

2. 2mm below package base

Electrical/Optical Characteristics Ta=25℃

Parameter（参数）	Symbol （符号）	Condition （条件）		Value（数值）			Unit
				Min.	Typ.	Max.	
Forward voltage （正向电压）	Vf	If=20mA	Red	2.0	2.1	2.4	v
			Green	2.8	3.1	3.4	v
			Blue	2.8	3.1	3.4	v
Luminous intensity （发光强度）	Iv	If=20mA	Red	500	---	800	mcd
			Green	1500	---	1800	mcd
			Blue	400		600	mcd
Reverse current （反向电流）	Ir	Vr=5V		0		1	
Dominant wavelength （主波长）	λ d	If=20mA	Red	620		625	nm
			Green	520		525	nm
			Blue	470		475	nm

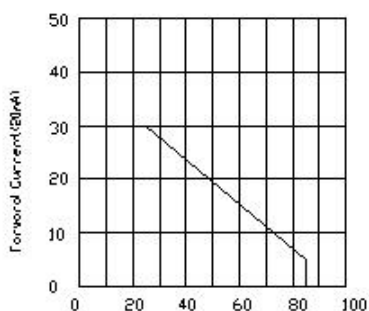
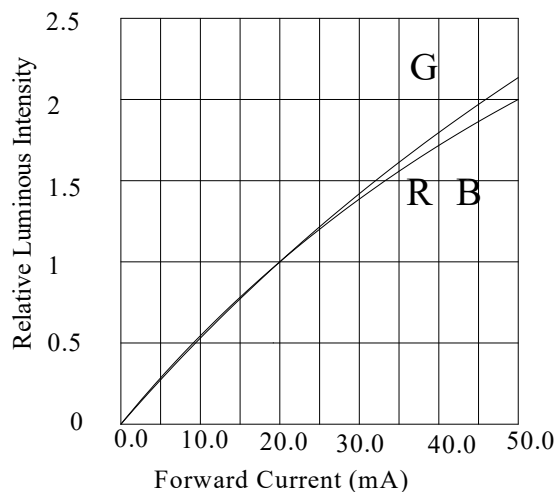
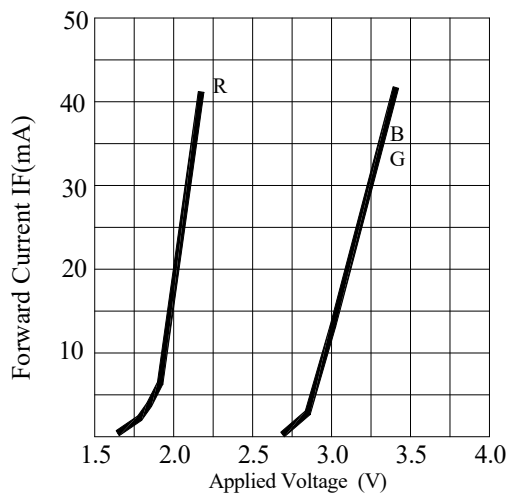
Notes:

1. forward voltage: $\pm 0.1V$

2. wavelength: $\pm 1nm$

Electrical/Optical Characteristics curve

(电/光参数特性曲线)

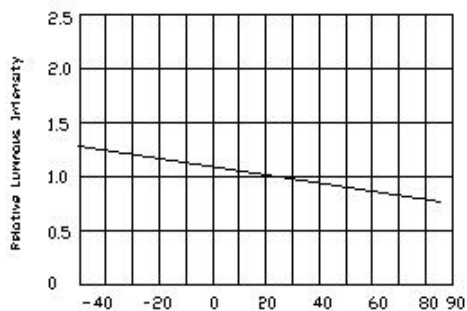


Ambient Temperature T_A ($^{\circ}\text{C}$)

FORWARD CURRENT

DERATING CURVE

正向电流递减曲线图

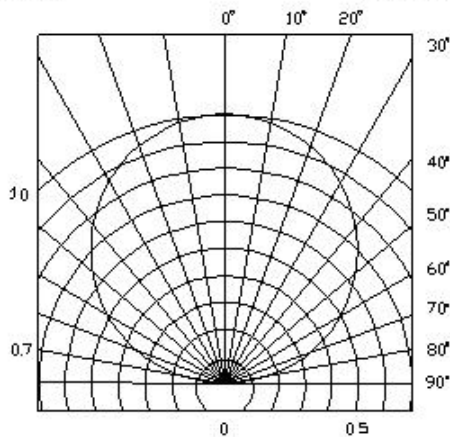


Ambient Temperature T_A ($^{\circ}\text{C}$)

LUMINOUS INTENSITY VS

AMBIENT TEMPERATURE

亮度与环境温度关系曲线图



SPATIAL DISTRIBUTION

发光角度图解



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Reliability 信赖性

(1) TEST ITEMS AND RESULTS 测试条件和测试结果

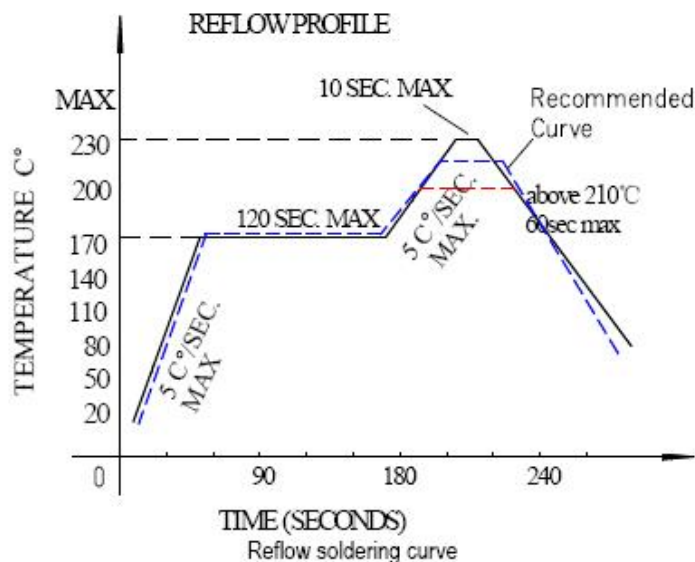
Type 类型	Test Item 测试项目	Ref. Standard 参考标准	Test Condition 测试条件	Note 记录	Number of Damaged 受损数量
Environmental sequence 环境变化	Resistance to Soldering Heat (Ref low Soldering) 热阻	JESD22-B106	Tsld=255℃, 10sec	2 times	0/22
	Temperature Cycle 冷热循环	JESD22-A104	-40℃ 30min ↓ ↑ 5min 100℃ 30min	40 cycle	0/100
	Thermal Shock 冷热冲击	JESD22-A106	-40℃ 15min ↑ ↓ 100℃ 15min	40 cycle	0/100
	High temperature 高温测试	JESD22-A103	T _a =100℃	1000 hrs	0/100
	Low temperature 低温测试	JESD22-A119	T _a =-40℃	1000 hrs	0/100
	Power temperature Cycling 高温点亮循环测试	JESD22-A105	On 5min -40℃>15min ↑ ↓ ↑ ↓<15min Off 5min 100℃>15min	40 cycle	0/100
Operation Sequence 操作环境	Lift Test 寿命测试	JESD22-A108	T _a =25℃ I _F =20mA	1000 hrs	0/100
	High Humidity Heat Lift Test 高温高湿老化	JESD22-A101	60℃ RH=90% I _F =20mA	1000 hrs	0/100

(2) CRITERIA FOR JUDGING THE DAMAGE 判断受损的标准

Item 项目	Symbol 符号	Test Conditions 测试条件	Criteria for Judgment 判断标准	
			Min 最小	Max 最大
Forward voltage 正向电压	VF	I _F =20mA	--	U. S. L*) × 1. 1
Reverse current 反向电流	IR	V _R =5V	--	U. S. L*) × 2. 0
Luminous intensity 光照强度	IV	I _F =20mA	L. S. L**) × 0. 7	--

Specifications 规格

一, Requirements for application and reflow soldering 应用及回流焊要求:



■Notes for reflow soldering: 回流焊注意事项

1. No more than twice for reflow soldering.
注意回流焊不可超过两次
2. To ensure the quality of our LEDs, we encapsulate them with silica gels. So please do not put pressure on the LEDs.
为保证产 LED 质量及可靠性,焊接加热过程中,不可施加压力在 LED 表面。
3. Please choose the right nozzle to avoid the damage to products due to the pressure.
在吸嘴的选取上要选择吸嘴的大小和压力合适的吸嘴,以避免造成压力过大伤害产品。
4. Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground
LED 为静电敏感产品,使用时请佩带防静电手环,工作台做好防静电处理,机台设备等保证接地。

■Handwork soldering 手工焊接:

1. During the soldering, the electronic soldering iron must be kept under the temperature of 300°C and the soldering time must not be beyond 3 seconds. No touch between the electronic soldering iron and colloid.
手工焊接时,要保持电烙铁温度在300 摄氏度以下,并且焊接时间小于3 秒,电烙铁不可接触胶体。
2. Handwork soldering is only allowed once. We won't take responsibility for more than that.
手工焊接只可进行一次,重复焊接不保证产品是否完好。
3. Avoid using sharp objects to compress products Colloidal Part directly.
避免使用尖锐的物体直接接触产品胶体部分。
4. Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground.
LED 为静电敏感产品,使用时请佩带防静电手环,工作台做好防静电处理,机台设备等保证接地。