

承 認 書

SPECIFICATION FOR APPROVAL

● 客戶名称

● Customer

● 客戶品號

● Customer Part No.

● 产品品號

HC-S3210IHMRGTP-F1

● Brightek Part No.

● 产品規格描述

1204 侧面红翠绿

● Specification

● 製錶人

王清

● Prepared By

● 審 核

李东平

● Checkedy

● 客 戶 回 簽

● Customer

● 送样日期:

● Deliver date:

說明：一、謹致執事者：茲提供敝公司產品之有關詳細規格及圖面資料，敬請給予辦理測試認定手續。同時敬請 送返一份附有貴公司簽認之測試認定後之樣品認定書。

We are sending you our specification and drawings for your approval. Please return to us one copy "For Approval" with your approved signatures.

二、客戶意見欄 Customer' S Proposal

☐ Approve 承認 (請於認可欄中簽名)

☐ Disagree 不同意

Reason 原因:

光宇集團

中高端光电元件定制企业，20 多年封装经验，品质稳定，值得信赖，体现光的价值。

光宇集团国际（香港）有限公司

GTU Group International (HK) Co., Limited

广东光宇半导体科技有限公司

工厂地址：东莞市寮步镇松湖智谷 A2 栋 3 楼

东莞市弘呈光电有限公司

DongGuan Hong cheng Optoelectronics Co., Ltd.

工厂地址：广东省东莞市樟木头镇莞樟路樟木头段 15 号 15 栋 2108 号

ADD: Room 2108, No.1 building, Wanhui Garden, East Guanzhang Road, Zhangmutou, Dongguan, Guangdong, China

TEL: 0769-87797616 87182291 Fax: 0769-82337396 www.hc-led168.com

业务联系人：李顺阳 13925714318 (微信同号) 销售总监

企业邮箱: sales@led-hc.com



ISO 14001
环境管理
体系认证



ISO 9001
环境管理
体系认证



版本/版次	修改日期	修改内容

Features

3.2mm × 1.0mm SMT LED, 1.5mm thickness

Low power consumption

Wide view angle

Package: 3000pcs/reel

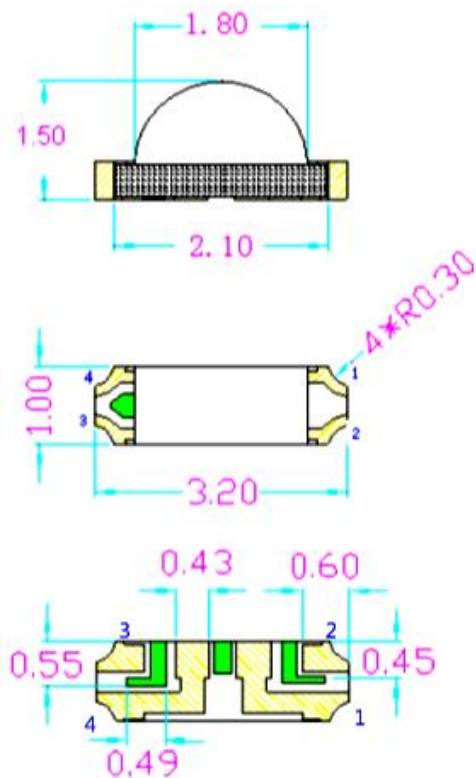
RoHS Compliant

Applications

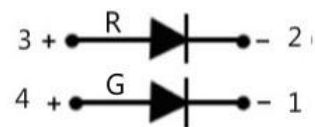
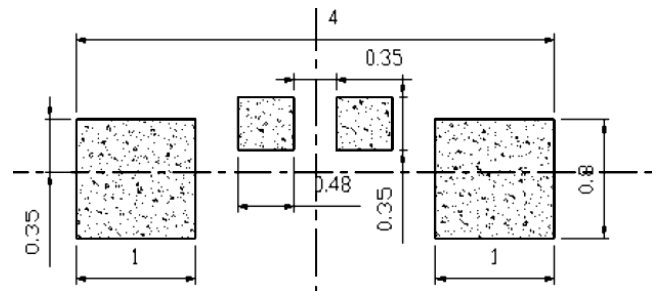
Ideal for back light and indicator

Various colors and lens types available

Package outlines



Recommended



Part No.	Emitted color	Dice	Lens color
HC-S3210IHMRGTP-F1	Red	AlGaInP	Water transparent
	Green	InGaIn/GaN	

Notes:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

Absolute Maximum Ratings (TA=25℃)

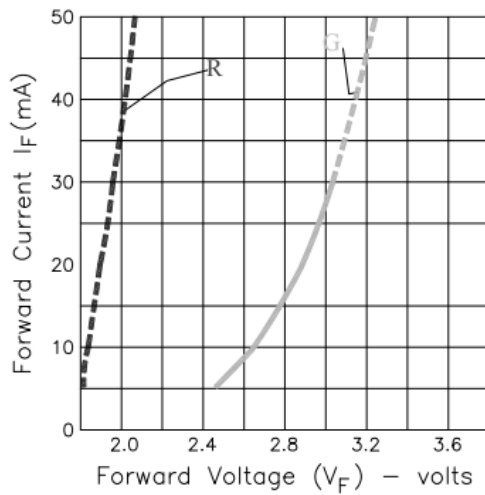
Parameter	Symbol	Value		Unit
		R	G	
Power dissipation	Pd	62	72	mW
Forward current	If	20		mA
Reverse voltage	Vr	5		V
Operating temperature	Top	-40 ~+80		℃
Storage temperature	Tstg	-40 ~+85		℃
Peak pulsing current	Ifp	80		mA

Electro-Optical Characteristics (TA=25℃)

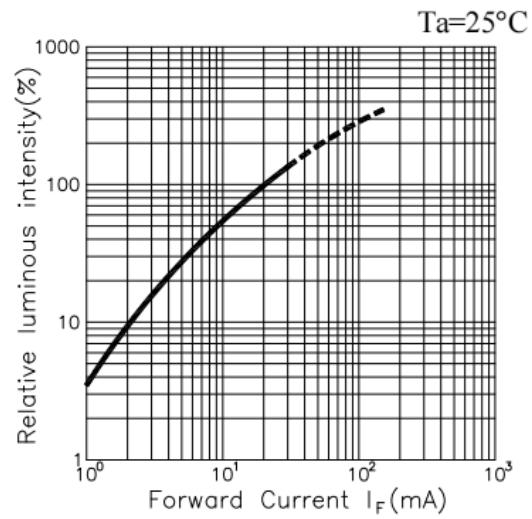
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Dominant wavelength	If=5mA	λ_d R G	617 515	-- --	627 535	nm
Forward voltage	If=5mA	Vf R G	1.8 2.6	-- --	2.4 3.4	V
Luminous intensity	If=5mA	Iv R G	50 150	100 250	150 400	mcd
Viewing angle at 50% Iv	If=10mA	2θ 1/2	--	100	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

Optical Characteristic Curves

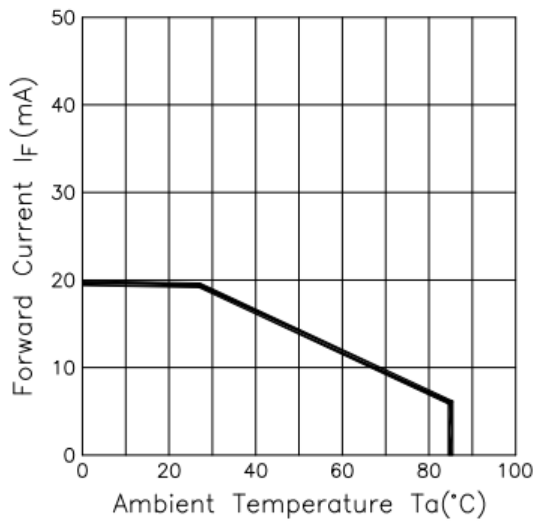
Forward Current Vs. Forward Voltage



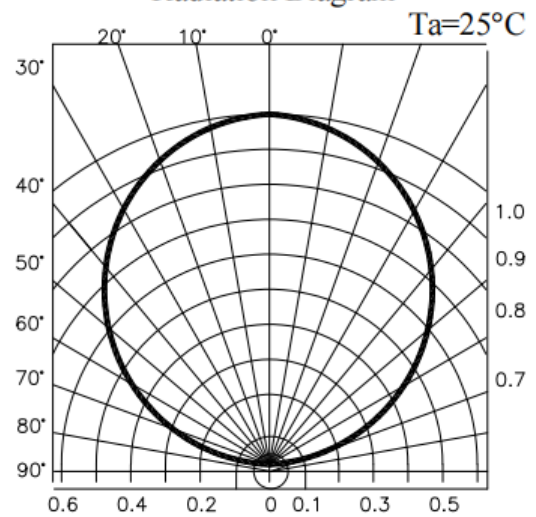
Luminous Intensity Vs. Forward Current



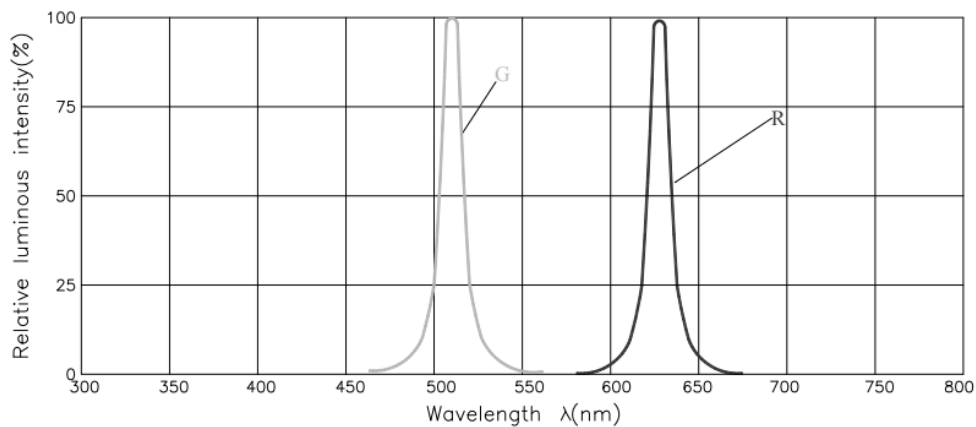
Forward Current Derating Curve



Radiation Diagram

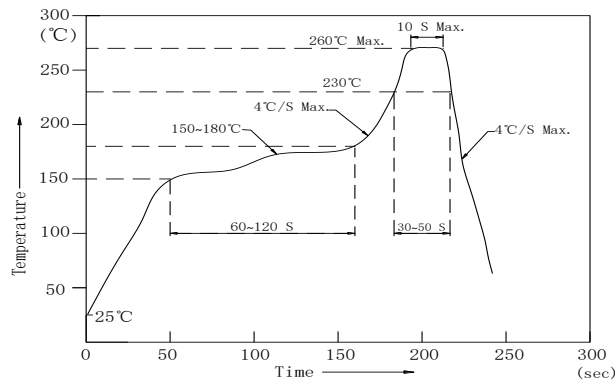


Spectrum Distribution



Reflow Profile

■ Reflow Temp/Time



Notes:

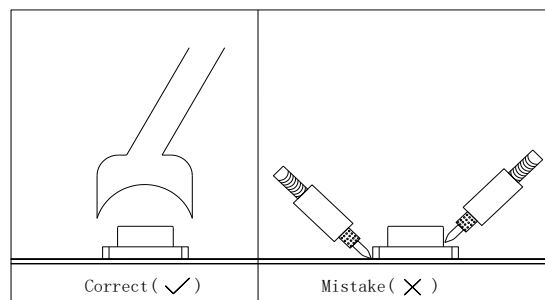
1. We recommend the reflow temperature 245°C(±5°C). the maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering iron

Basic spec is $\leq 5\text{sec}$ when 320°C(±20°C). If temperature is higher, time should be shorter(+10°C → -1sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 350°C.

■ Rework

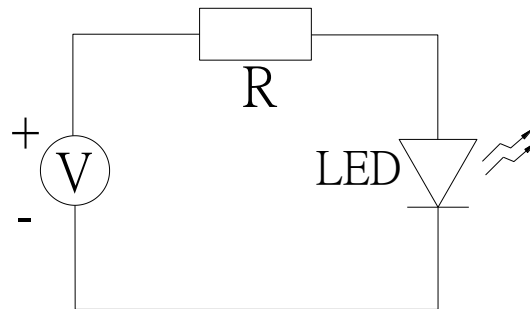
1. Customer must finish rework within 5 sec under 340°C.
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.

Test Circuit and Handling Precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature : $5^{\circ}\text{C}\sim 30^{\circ}\text{C}$ ($41^{\circ}\text{F}\sim 86^{\circ}\text{F}$)

2.2 Shelf life in sealed bag: 12 month at $<5^{\circ}\text{C}\sim 30^{\circ}\text{C}$ and $<30\%$ R.H. after

the package is Opened, the products should be used within a week or they should be keeping to stored at ≤ 20 R.H. with zip-lock sealed.

3. Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:

3.1 $60\pm 3^{\circ}\text{C}$ x(12~24hrs) and $<5\%$ RH, taped reel type

3.2 $100\pm 3^{\circ}\text{C}$ x(45min~1hr), bulk type

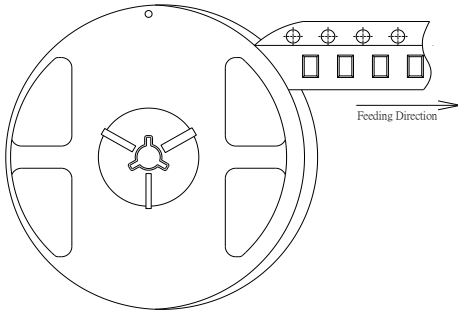
3.3 $130\pm 3^{\circ}\text{C}$ x(15~30min), bulk type

Test Items and Results of Reliability

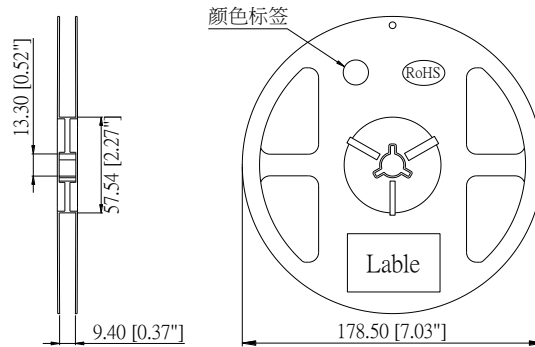
Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-40℃ 30min ↑ → (25℃/5min) ↓ 100℃ 30min	100 cycle	0/22
	Thermal Shock	-40℃ 15min ↑ ↓ 100℃ 15min	100 cycle	0/22
	High Humidity Heat Cycle	30℃ ⇔ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	Ta=100℃	1000 hrs	0/22
	Humidity Heat Storage	Ta=60℃ RH=95%	1000 hrs	0/22
	Low Temperature Storage	Ta=-40℃	1000 hrs	0/22
Operation Sequence	Life Test	Ta=25℃ IF=20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60℃ RH=95% IF=10mA	500 hrs	0/22
	Low Temperature Life Test	Ta=-20℃ IF=20mA	1000 hrs	0/22

3210 Series SMD Chip LED Lamps Packaging Specifications

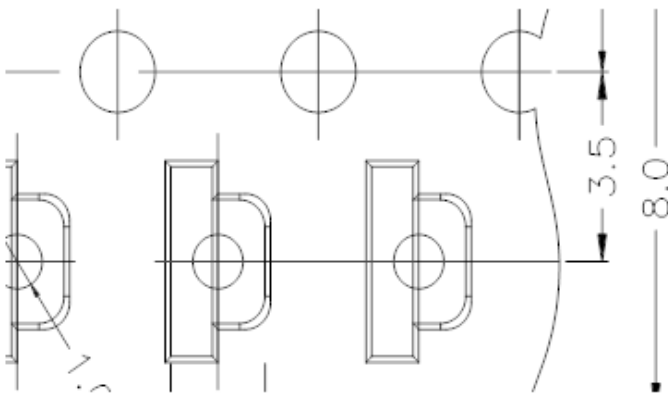
● Feeding Direction



● Dimensions of Reel (Unit: mm)



● Dimensions of Tape (Unit: mm)



Notes:

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.

- Packaging specifications



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