

承認書

SPECIFICATION FOR APPROVAL

● 客戶名称

● Customer

● 客戶品號

● Customer Part No.

● 產品品號

HC-S3210IHMRGTH-F1

● Brightek Part No.

● 產品規格描述

1204 側發光紅綠共陰 LED

● Specification

● 製錶人

王清

● Prepared By

● 審核

李東平

● Checkedy

● 客戶回簽

● Customer

● 送樣日期:

● 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:

广东光宇集团

广东光宇实业有限公司

工厂地址: 东莞市寮步镇松湖智谷 A2 栋 3 楼

弘呈光电(香港)有限公司

Hong Cheng Photoelectric (HK) Limited

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

版本/版次	修改日期	修改内容
A01		

Features

3.0mm × 1.0mm SMT LED, 1.5mm thickness

Low power consumption

Wide view angle

Package: 3000pcs/reel

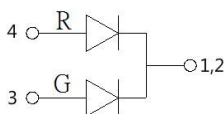
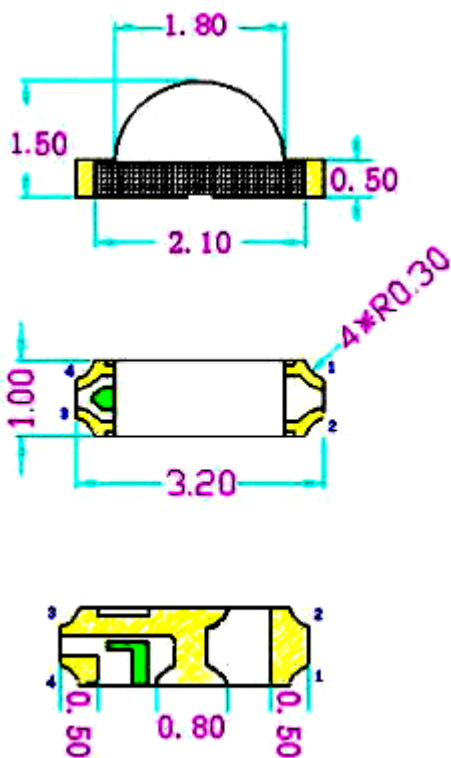
RoHS Compliant

Applications

Ideal for back light and indicator

Various colors and lens types available

Package outlines



Part No.	Emitted color	Dice	Lens color
HC-S3210IHMRGTH-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℃)

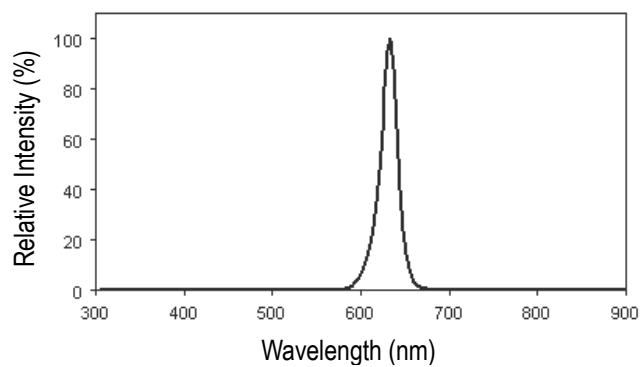
Parameter	Symbol	Value		Unit
		R	G	
Power dissipation	Pd	72	102	mW
Forward current	If	30		mA
Reverse voltage	Vr	5		V
Operating temperature	Top	-40 ~+80		℃
Storage temperature	Tstg	-40 ~+85		℃
Peak pulsing current (1/8 duty f=1kHz)	Ifp	125		mA

Electro-Optical Characteristics (TA=25℃)

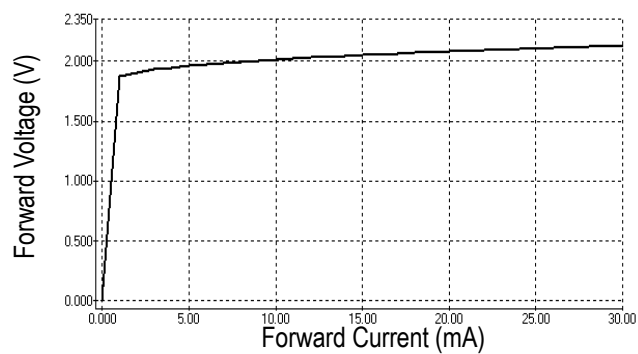
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=5mA	λ_p R G	-- --	630 515	-- --	nm
Spectral half bandwidth	If=5mA	$\Delta \lambda$ R G	-- --	18 38	-- --	nm
Dominant wavelength	If=5mA	λ_d R G	624 515	-- --	640 525	nm
Forward voltage	If=5mA	Vf R G	1.6 2.5	-- --	2.3 3.3	V
Luminous intensity	If=5mA	Iv R G	20 200	40 340	90 400	mcd
Viewing angle at 50% Iv	If=10mA	2 θ 1/2	--	100	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

Optical Characteristic Curves (Red)

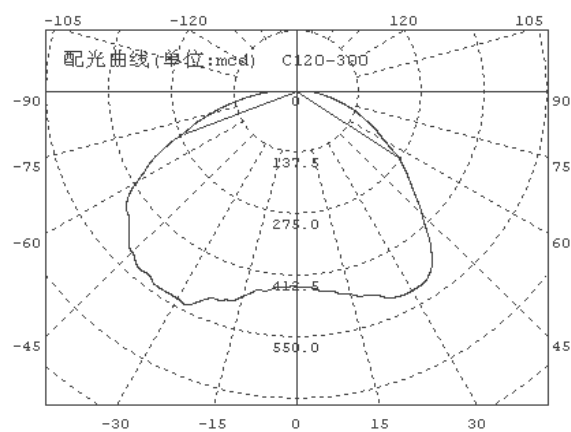
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

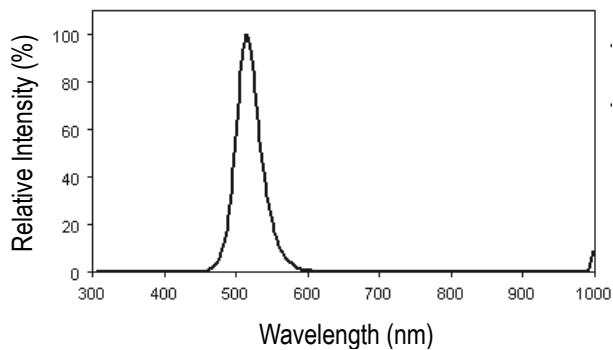


Directive Characteristics

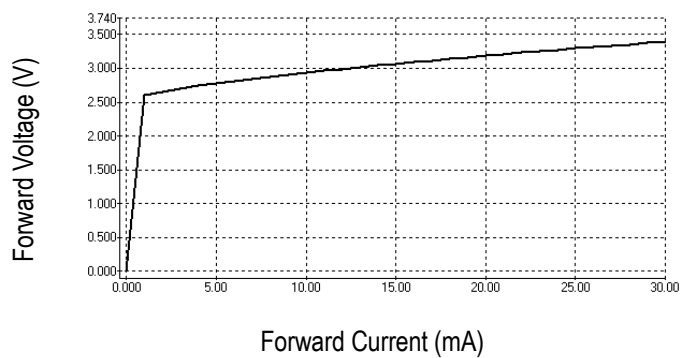


Optical Characteristic Curves(Green)

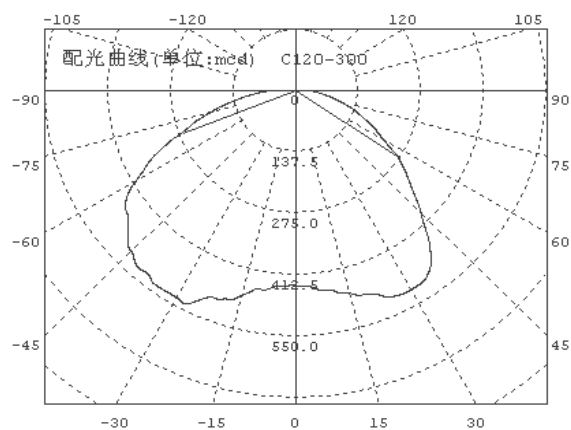
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

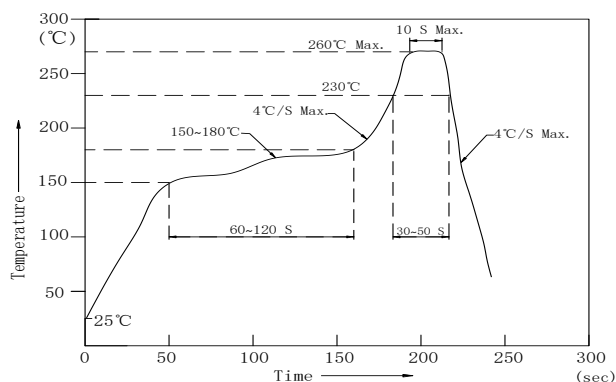


Directive Characteristics



Reflow Profile

■ Reflow Temp/Time



Notes:

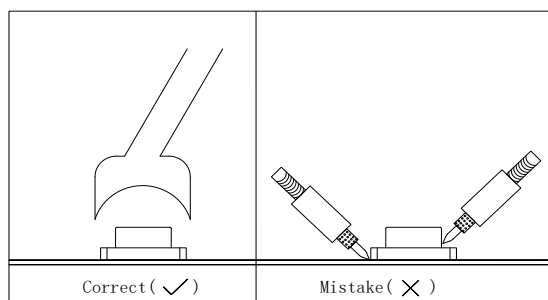
1. We recommend the reflow temperature 245°C (±5°C). the maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 1 times or less.

■ 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

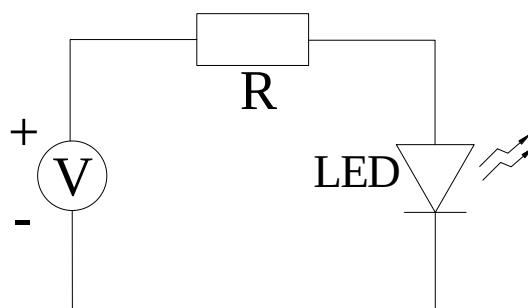
1. Customer must finish rework within 5 sec under 340°C.
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



- 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

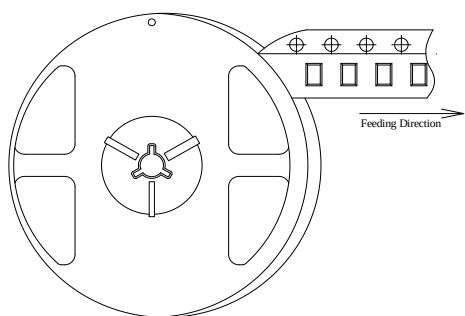
3.3 $130\pm 3^{\circ}\text{C}$ x(15~30min), bulk type

Test Items and Results of Reliability

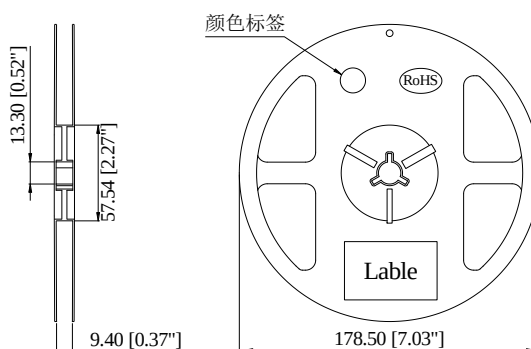
Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-40℃ 30min ↑ → (25℃/5min) ↓ 100℃ 30min	100 cycle	0/22
	Thermal Shock	-40℃ 15min ↑ ↓ 100℃ 15min	100 cycle	0/22
	High Humidity Heat Cycle	30℃ ⇔ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	Ta=100℃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

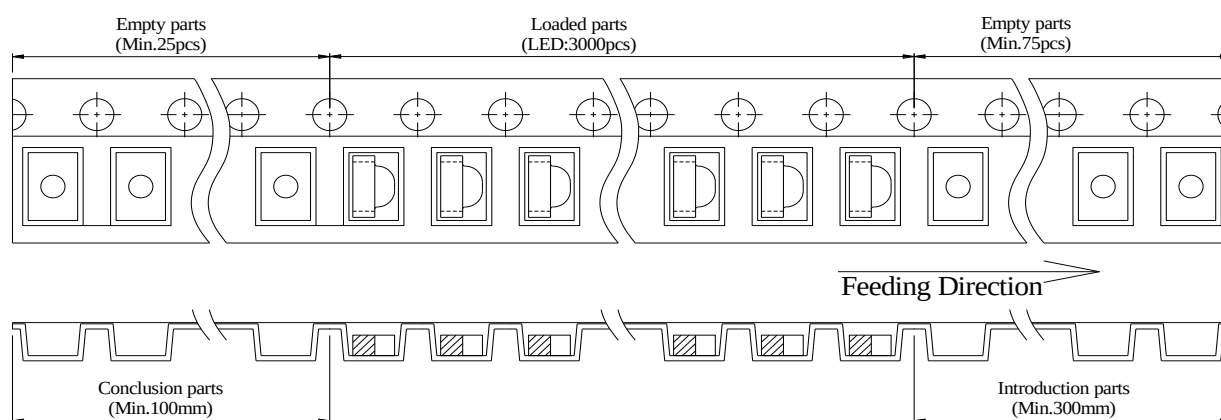
● Feeding Direction



● Dimensions of Reel (Unit: mm)



● Arrangement of Tape



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.
4. 3,000 pcs/Reel.

- Packaging specifications



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