

承 認 書

SPECIFICATION FOR APPROVAL

● 客戶名称	
● Customer	
● 客戶品號	
● Customer Part No.	
● 产品品號	HC-S1005IAR20TP-T4
● Brightek Part No.	
● 产品規格描述	0402 侧面红光
● 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:

光宇集团 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
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



版本/版次	修改日期	修改内容

Features

1.05mm×0.5mm SMD LED, 0.33mm thickness

Low power consumption

Wide view angle

Package: 4000pcs/reel

RoHS Compliant

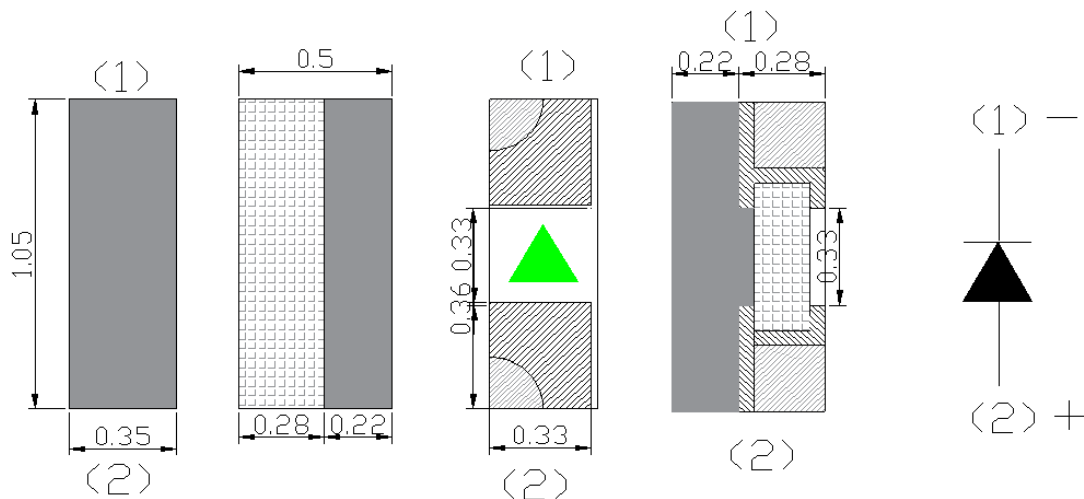
Applications

Automotive backlighting or indicator

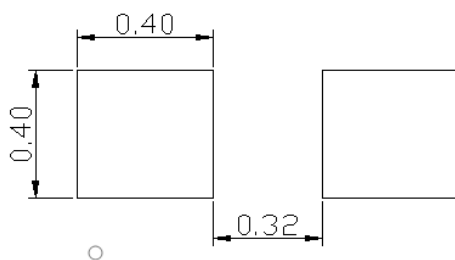
Ideal for back light and indicator

Various colors and lens types available

Package outlines



Recommend Pad Layout



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°C)

Parameter	Symbol	Value	Unit
Forward current	If	20	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	60	mW
Operating temperature	Top	-30 ~+80	°C
Storage temperature	Tstg	-40 ~+80	°C
Peak pulsing current	Ifp	60	mA

Electro-Optical Characteristics (Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Dominant wavelength	If=5mA	λ_d	618	--	628	nm
Forward voltage	If=5mA	Vf	1.8	--	2.4	V
Luminous intensity	If=5mA	Iv	25	40	--	mcd
Viewing angle at 50% Iv	If=10mA	2 θ 1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μ A

Optical characteristic curves

RED

(25°C Ambient Temperature Unless Otherwise Noted)

Fig1 Forward Current vs Forward Voltage

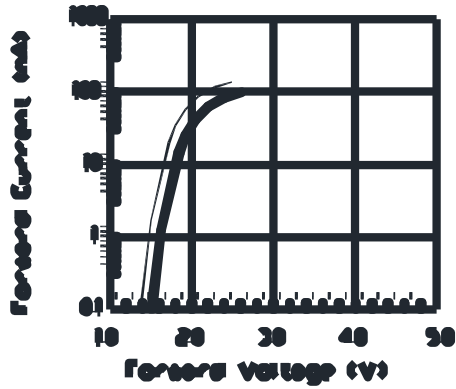


Fig2 Relative Luminous Intensity vs Forward Current

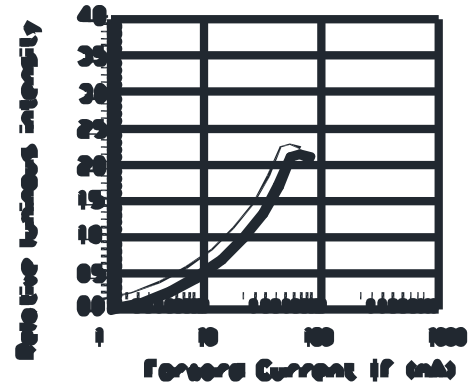


Fig3 Forward Current Derating Curve

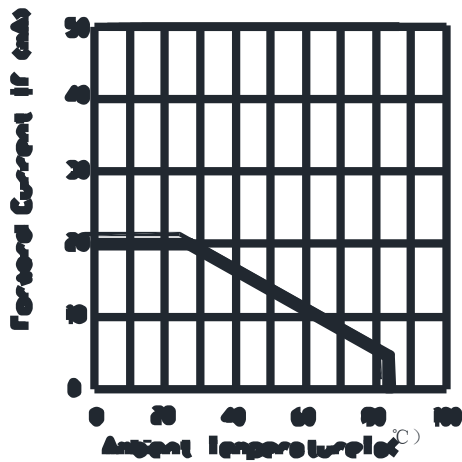


Fig4 Relative Luminous Intensity vs Ambient Temperature

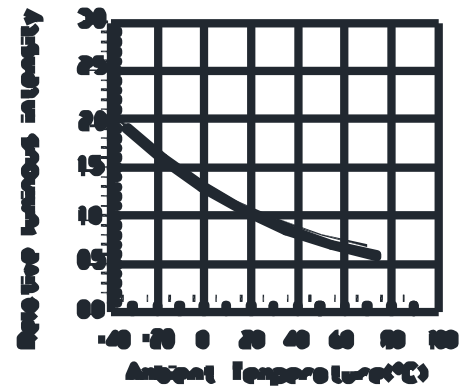


Fig5 Relative Intensity vs Wavelength

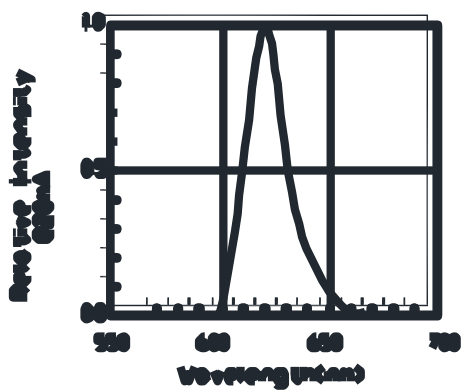
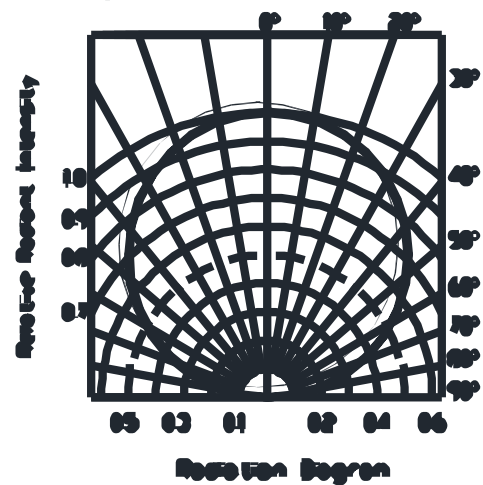
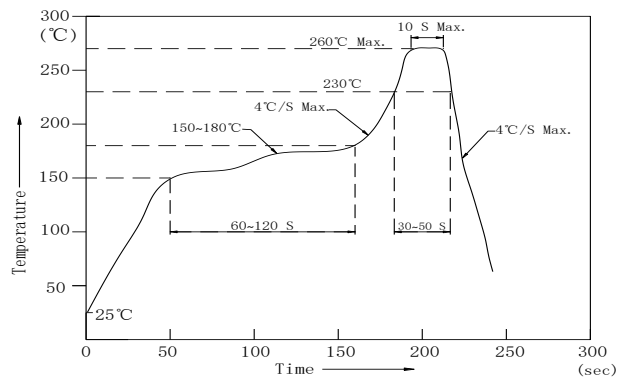


Fig6 Spot Distribution



Reflow Profile

■ Reflow Temp/Time



Notes:

1. We recommend the reflow temperature 245°C ($\pm 5^\circ\text{C}$).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.

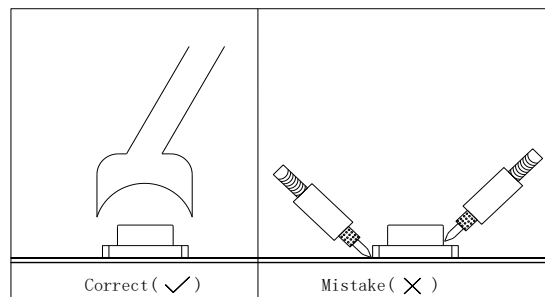
■Soldering iron

Basic spec is $\leq 5\text{sec}$ when 320°C ($\pm 20^\circ\text{C}$). If temperature is higher, time should be shorter ($+10^\circ\text{C} \rightarrow -1\text{sec}$).

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

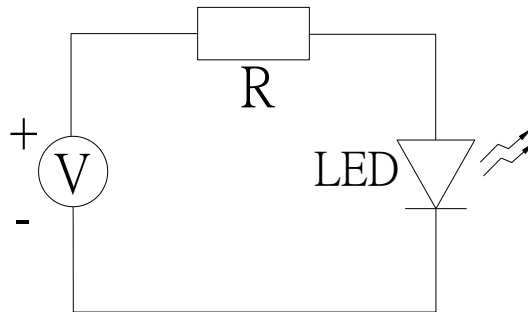
1. Customer must finish rework within 5 sec under 340°C .
2. The head of iron cannot touch copper foil
3. Twin-head type is preferred.



- 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°C~30°C

2.2 Shelf life in sealed bag: 12 month at <5°C~30°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±3°C x (12~24hrs) and <5%RH, taped reel type

3.2 100±3°C x (45min~1hr), bulk type

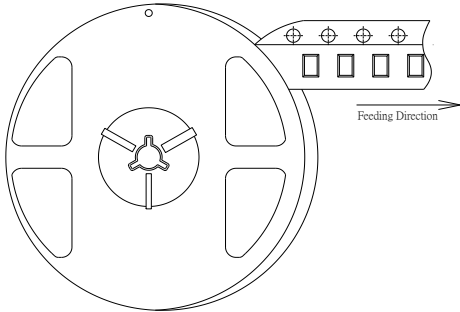
3.3 130±3°C x (15~30min), bulk type

Test Items and Results of Reliability

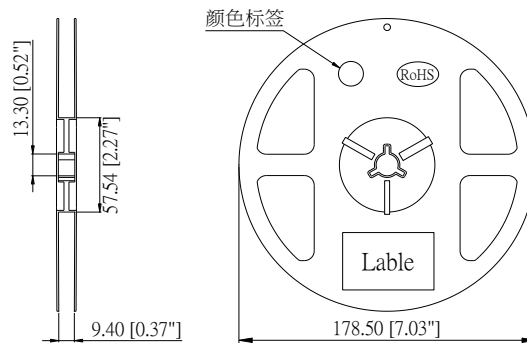
Test Item	Test Conditions	Standard Test Method	Note	Number of Test
Reflow Soldering	Ta=260±5℃,Time=10±2S	JB/T 10845-2008	3times	0/22
Salt Atmosphere	Ta=35±3℃,PH=6.5~7.2	GB/T 2423.17-2008	24hrs	0/22
Temperature Cycling	-40±5℃ 30±1min ↑→(25℃/5±1min)↓ 100±5℃ 30±1min	GB/T 2423.22-2012	100cycles	0/22
Thermal Shock	Ta=-40±5℃~100±5℃, 15±1min dwell	GB/T 2423.22-2012	100cycles	0/22
High Humidity High Temp. Cycling	Ta=30±5℃~65±5℃, 90±5%RH,24hrs/1cycle	GB/T 2423.4-2008	10cycles	0/22
High Humidity High Temp. Storage Life	Ta=85±5℃,ψ(%)=85±5%RH	GB/T 2423.3-2006	1000hrs	0/22
High Temperature Storage Life	Ta=100±5℃,non-operating	GB/T 2423.2-2008	1000hrs	0/22
Low Temperature Storage Life	Ta=-40±5℃,non-operating	GB/T 2423.1-2008	1000hrs	0/22
Life Test	Ta=26±5℃,@20mA, ψ(%)=25%RH~55%RH	--	1000hrs	0/22
High Humidity High Temp. Operating Life	Ta=85±5℃,@20mA, ψ(%)=85%RH	GB/T 2423.3-2006	500hrs	0/22
Low Temperature Operating Life	Ta=-20±5℃,@20mA	GB/T 2423.1-2008	1000hrs	0/22

1005 Series SMD Chip LED Lamps Packaging Specifications

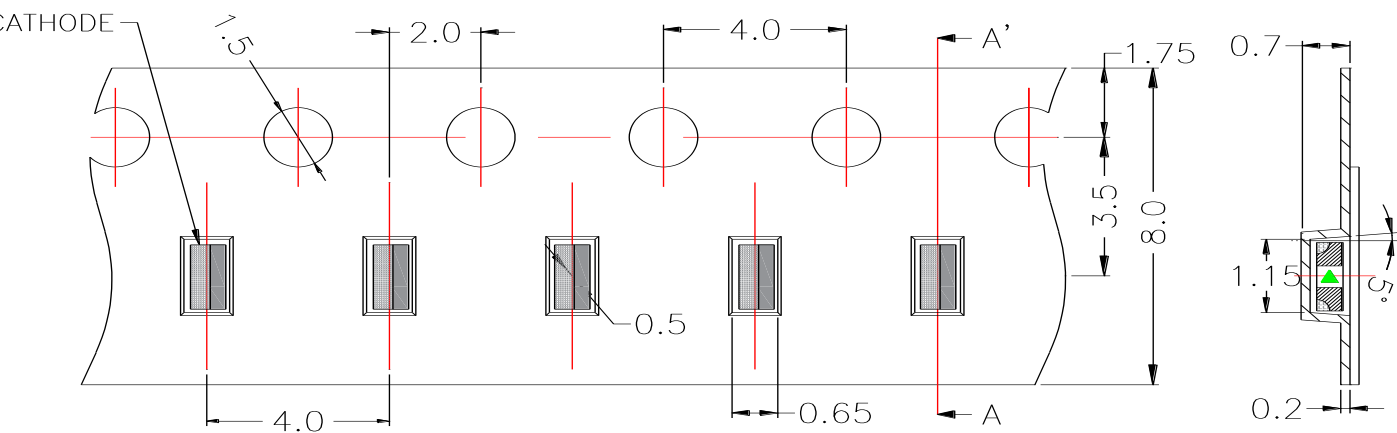
- **Feeding Direction**



- **Dimensions of Reel (Unit: mm)**



- **Arrangement of Tape**

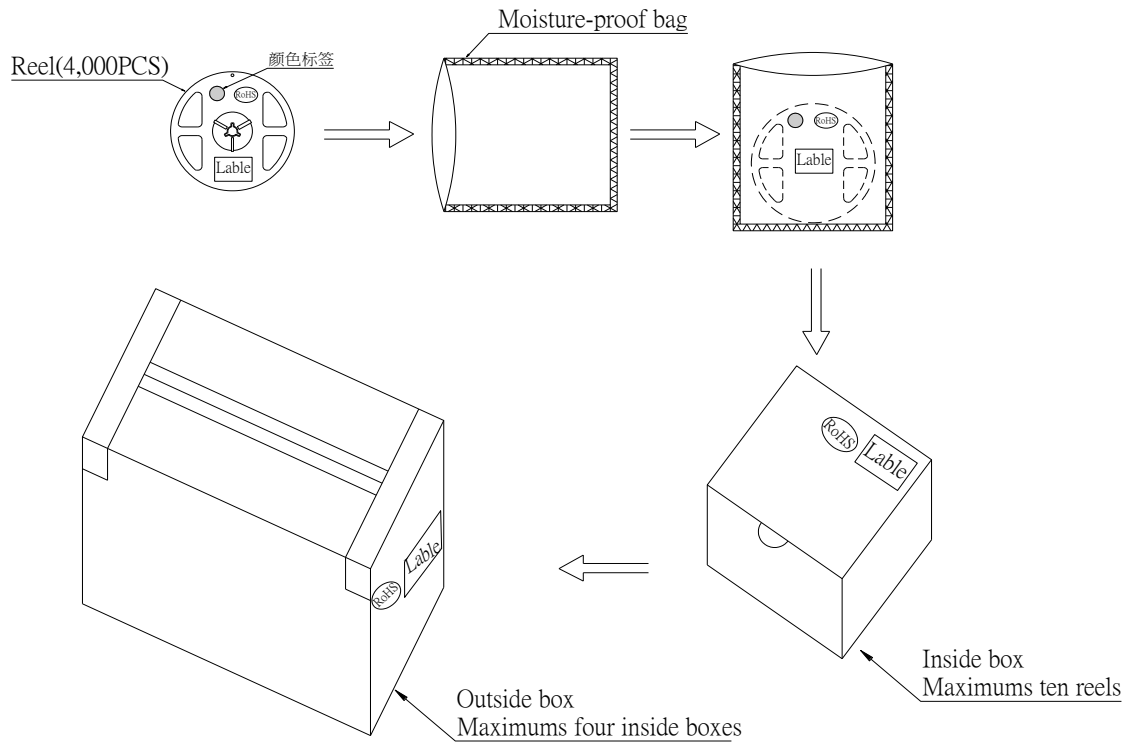


Notes:

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. 4,000pcs/Reel.

1005 Series SMD Chip LED Lamps Packaging Specifications

● Packaging specifications



Notes:

Reeled products (numbers of products are 4,000pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, ten moisture-proof bag of maximums (total maximum number of products are 40,000pcs) packed in an inside box (about size: 240x 230x 130mm) and four inside boxes of maximums are put in the outside box (about size: 545mm x 260mm x 250mm) Together with buffer material, and it is packed. (Part No., Lot No., quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.