

承認書

SPECIFICATION FOR APPROVAL

● 客戶名称

● Customer

● 客戶品號

● Customer Part No.

● 产品品號

● Brightek Part No.

HC-S1706DSO05TP-F1

● 产品規格描述

● Specification

0602 侧发光琥珀色 LED

● 製錶人

● Prepared By

王清

● 審 核

● Checkedy

李东平

● 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:

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

1.7mm × 0.6mm SMT LED, 1.1mm thickness

Low power consumption

Wide view angle

Package: 4000pcs/reel

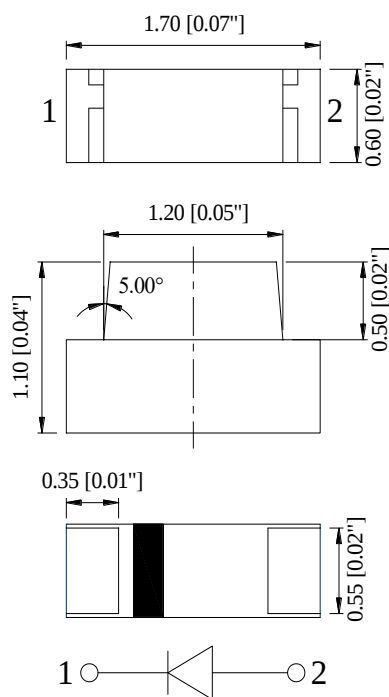
RoHS Compliant

Applications

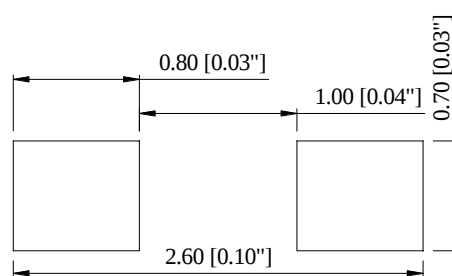
Ideal for back light and indicator

Various colors and lens types available

Package outlines



Recommend Pad Layout



Part No.	Emitted color	Dice	Lens color
HC-S1706DSO05TP-F1	Orange	AlGaInP	Water transparent

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℃)

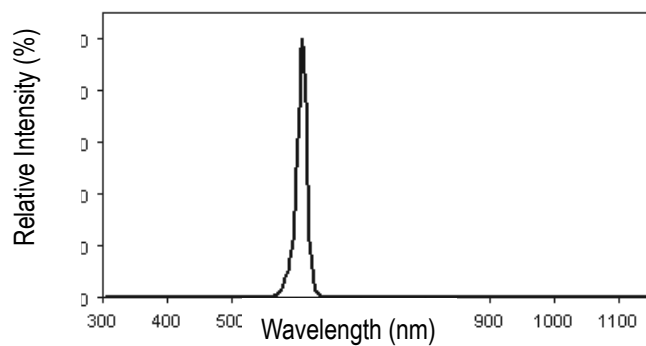
Parameter	Symbol	Value	Unit
Forward current	If	30	mA
Reverse voltage	Vr	5	V
Power dissipation	Pd	72	mW
Operating temperature	Top	-40 ~+80	℃
Storage temperature	Tstg	-40 ~+85	℃
Peak pulsing current (1/8 duty f=1kHz)	Ifp	125	mA

Electro-optical characteristics (TA=25℃)

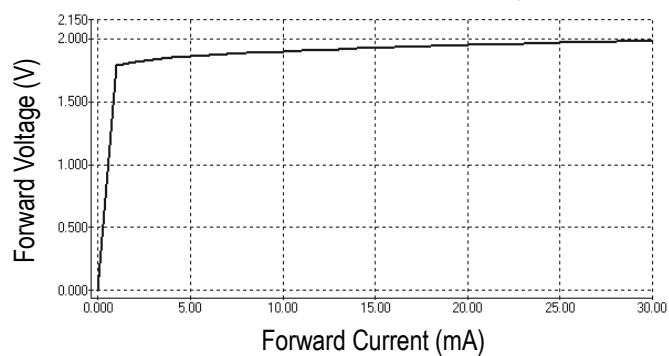
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=20mA	λ_p	--	612	--	nm
Spectral half bandwidth	If=20mA	$\Delta \lambda$	--	18	--	nm
Dominant wavelength	If=20mA	λ_d	600	--	610	nm
Forward voltage	If=20mA	Vf	1.7	--	2.5	V
Luminous intensity	If=20mA	Iv	70	150	--	mcd
Viewing angle at 50% Iv	If=10mA	$2\theta_{1/2}$	--	100	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

Optical characteristic curves

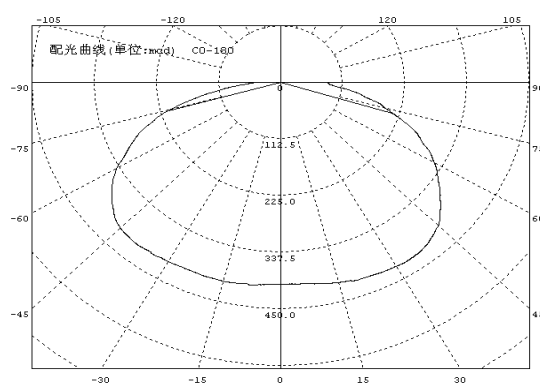
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

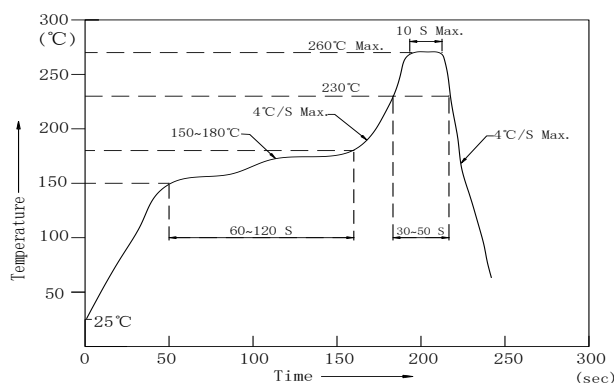


Directive Characteristics



Reflow Profile

■ Reflow Temp/Time



Notes:

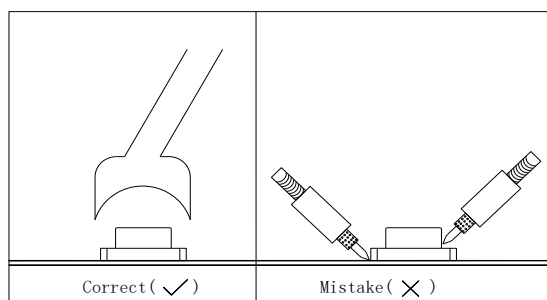
- 1.We recommend the reflow temperature 245°C(±5°C).the maximum soldering temperature should be limited to 260°C.
- 2.Don't cause stress to the epoxy resin while it is exposed to high temperature.
- 3.Number of reflow process shall be 2 times or less.

■Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°C. If temperature is higher, time should be shorter (+10°C $\rightarrow$ -1sec).Power dissipation of iron should be smaller than 20W, and temperatures should be controllable .Surface temperature of the device should be under 230°C .

■Rework

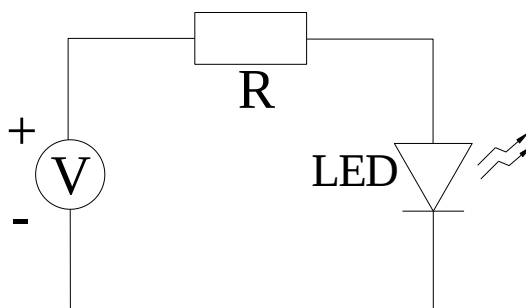
- 1.Customer must finish rework within 5 sec under 260°C.
- 2.The head of iron can not touch copper foil
- 3.Twin-head type is preferred.



- 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 (41°F~86°F)

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

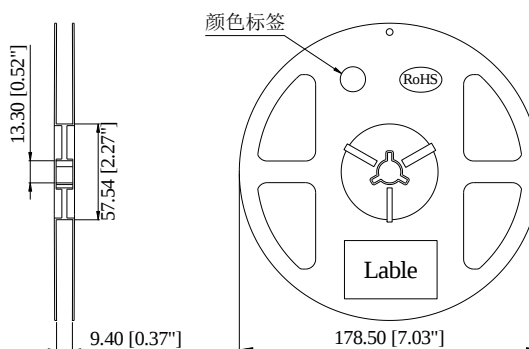
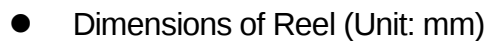
3.2 $100 \pm 3^\circ\text{C}$ x(45min~1hr), bulk type

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

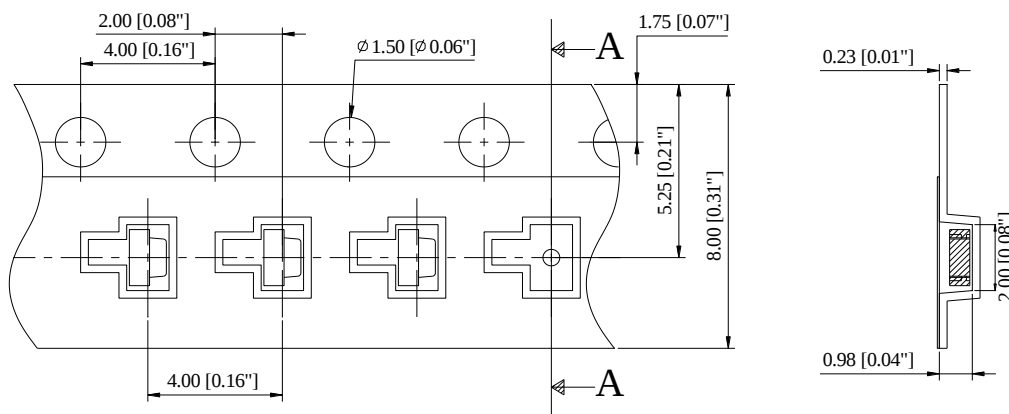
Test items and results of reliability

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20℃ 30min ↑ ↓ 80℃ 30min	100 cycle	0/22
	Thermal Shock	-20℃ 15min ↑ ↓ 80℃ 15min	100 cycle	0/22
	High Humidity Heat Cycle	30℃ ⇔ 65℃ 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	Ta=80℃	1000 hrs	0/22
	Humidity Heat Storage	Ta=60℃ RH=90%	1000 hrs	0/22
	Low Temperature Storage	Ta=-30℃	1000 hrs	0/22
Operation Sequence	Life Test	Ta=25℃ IF=20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60℃ RH=90% IF=10mA	500 hrs	0/22
	Low Temperature Life Test	Ta=-20℃ IF=20mA	1000 hrs	0/22

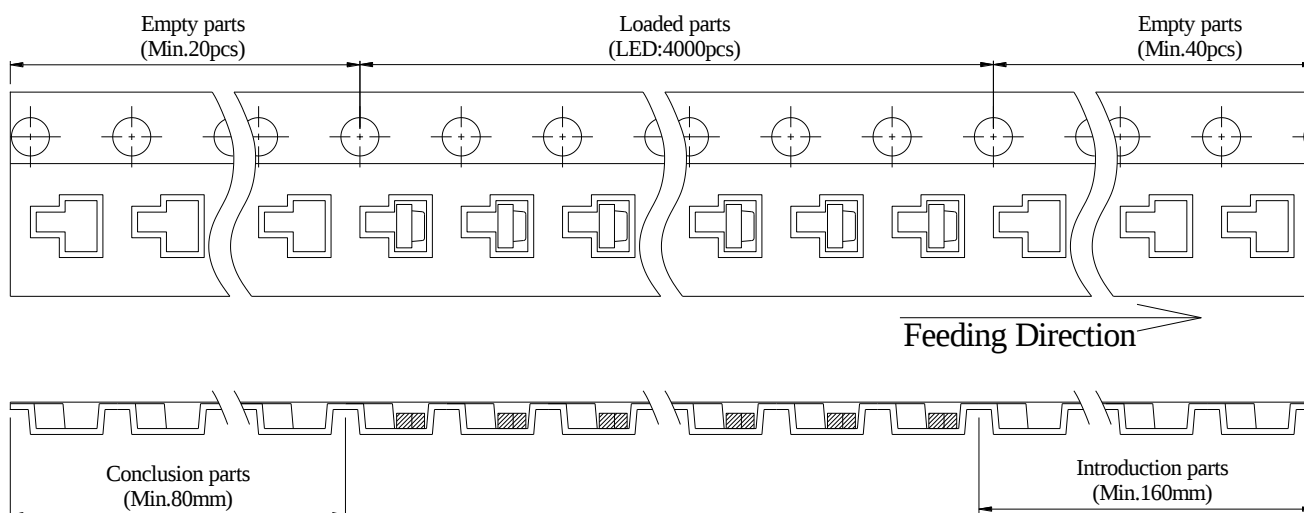
- Feeding Direction



- Dimensions of Tape (Unit: mm)



- Arrangement of Tape



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. 4,000 pcs/Reel.

- Packaging specifications



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