



ROHS

Specification

Client Name: _____

Client P/N: _____

Factory P/N: HL-PCEBA-3010S9AS11GC

Sending Date: _____

Client approval			Hong li approval		
Approval	Audit	Confirmation	Approval	Audit	Confirmation
			殷小平		谭娅
<input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified			DATE: _____		

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Web: www.honglitronic.com

HL-PCEBA-3010S9AS11GC

Features

- Extremely wide viewing angle
- Suitable for all SMT assembly and solder process
- Available on tape and reel
- Moisture sensitivity level: Level 4
- Package:3000pcs/reel
- RoHS compliant

Description

The Greenish Yellow source color devices are made with InGaN on Substrate Light Emitting Diode
The Red source color devices are made with AlGaInP on Substrate Light Emitting Diode



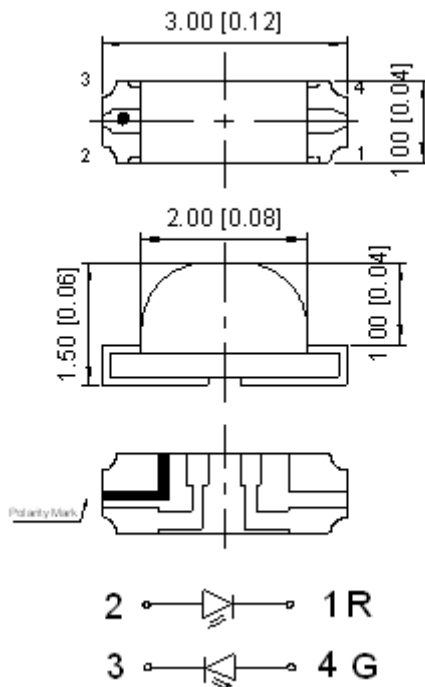
Applications

- Optical indicator
- Indoor display
- Backlighting in dashboard and switch
- Flat backlighting for LCD, symbol and display
- General use

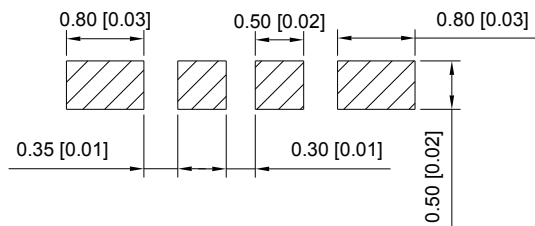


ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Package Dimensions



Recommended Soldering Pattern



Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is $\pm 0.15\text{mm}$ unless otherwise noted.



HL-PCEBA-3010S9AS11GC

Selection Guide

Part No.	Dice	Lens Type	Luminous intensity(mcd) @ 20mA		Viewing Angle
			Min.	TYP.	2θ1/2
HL-PCEBA-3010S9AS11GC	Red(AIGaInP)	Water Clear	60	80	120°
	Greenish Yellow (InGaN)	Water Clear	40	60	

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. the above luminous intensity measurement allowance tolerance ±10%.

Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	Red			Greenish Yellow			Units	Test Conditions
		Min.	Typ.	Max	Min.	Typ.	Max		
Forward Voltage	V _F	1.8	--	2.4	1.8	--	2.4	V	I _F =20mA
Reverse Current	I _R	--	--	10	--	--	10	uA	V _R = 5V
Dominate Wavelength	λ _d	626	--	636	568	--	578	nm	I _F =20mA

Absolute Maximum Ratings at Ta=25°C

Parameter	Value (Red)	Value (Greenish Yellow)	Units
Power dissipation	75	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	140	100	mA
Reverse Voltage	5	5	V
Electrostatic Discharge (HBM)	2000	1000	V
Operating Temperature	-40 ~ +85		°C
Storage Temperature	-40 ~ +100		°C

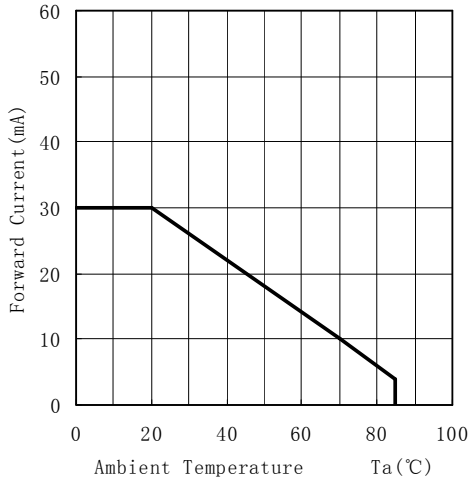
Note:

1. 1/10 Duty cycle, 0.1ms pulse width.
2. The above forward voltage measurement allowance tolerance ±0.1V.

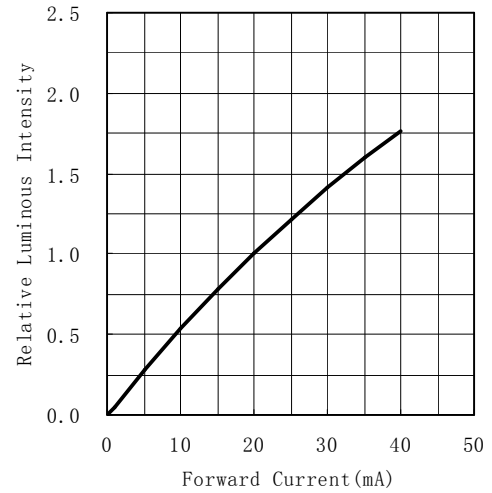
HL-PCEBA-3010S9AS11GC

Typical optical characteristics curves

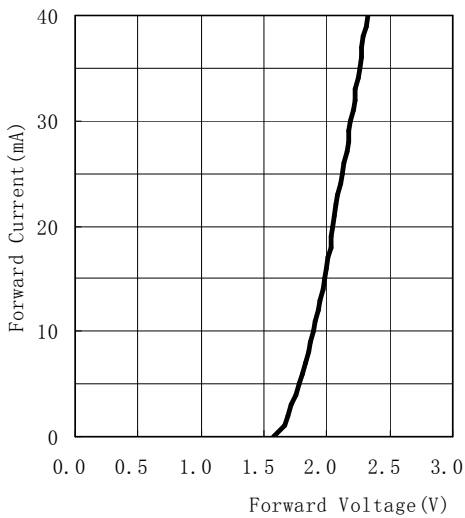
Ambient Temperature VS. Forward Current



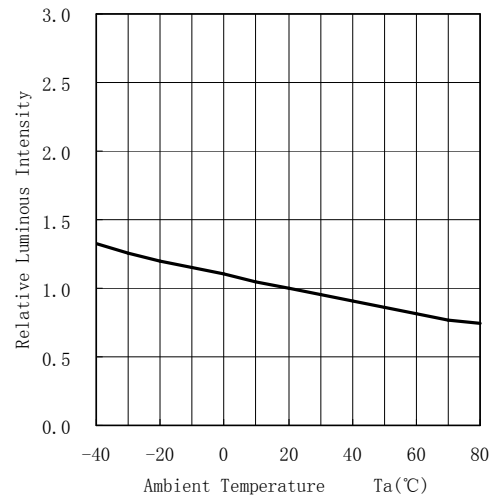
Forward Current VS. Relative Intensity



Forward Voltage VS. Forward Current



Ambient Temperature VS. Relative Intensity



Relative spectral emission

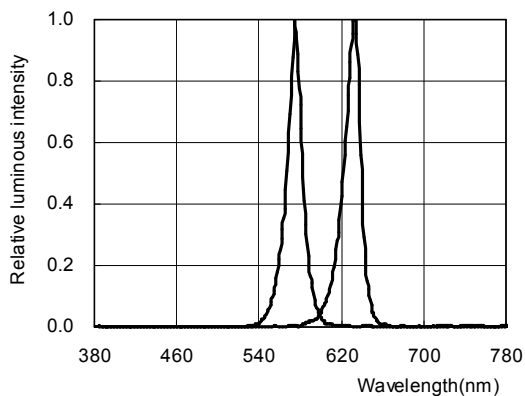
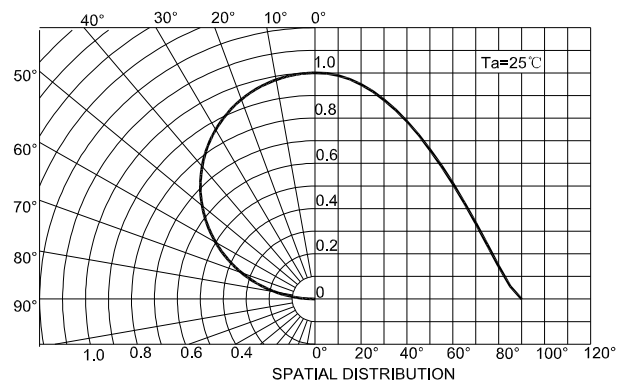


Diagram characteristics of radiation





HL-PCEBA-3010S9AS11GC

Reliability Test Items And Conditions

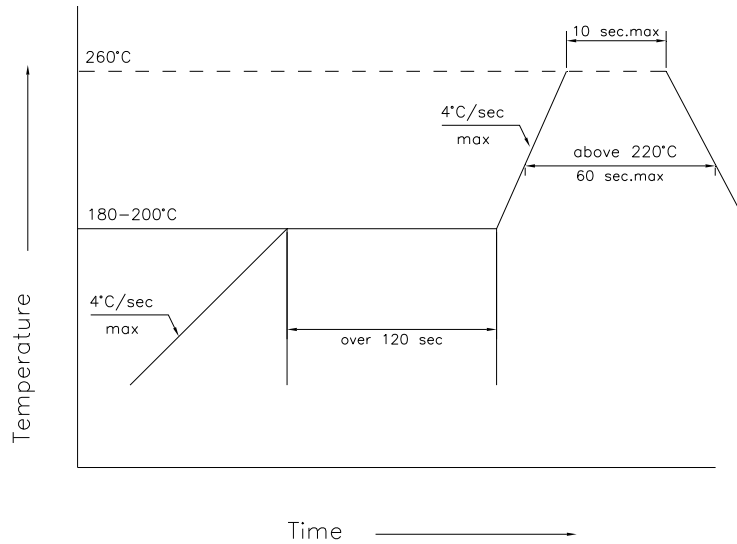
The reliability of products shall be satisfied with items listed below.
Confidence level :90%
LTPD :10%

No.	Items	Ref.Standard	Test Condition	Test Hours/ Cycles	Sample Size	Ac/Re
1	Reflow	JESD22-B106	Temp:260°Cmax T=10 sec	3 times.	22Pcs.	0/1
2	Temperature Cycle	JESD22-A104	100°C±5°C 30 min. ↑↓5 min -40°C±5°C 30 min.	100 Cycles	22Pcs.	0/1
3	Thermal Shock	JESD22-A106	100°C±5°C 5 min. ↑↓ -40°C±5°C 5 min.	100 Cycles	22Pcs.	0/1
4	High Temperature Storage	JESD22-A103	Temp:100°C±5°C	1000Hrs.	22Pcs.	0/1
5	Low Temperature Storage	JESD22-A119	Temp:-40°C±5°C	1000Hrs.	22Pcs.	0/1
6	DC Operating Life	JESD22-A108	Ta=25°C±5°C IF=20mA	1000Hrs.	22Pcs.	0/1
7	High Temperature High Humidity	JESD22-A101	85°C±5°C/ 85%RH IF=5mA	1000Hrs.	22Pcs.	0/1

*The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

HL-PCEBA-3010S9AS11GC

SMT Reflow Soldering Instructions



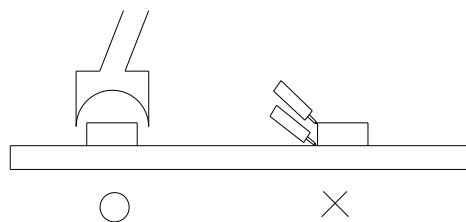
1. Reflow soldering should not be done more than two times
2. When soldering, do not put stress on the LEDs during heating

Soldering iron

1. When hand soldering, the temperature of the iron must be less than 300°C for 3 seconds
2. The hand solder should be done only one time

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.



HL-PCEBA-3010S9AS11GC

Label

IV: Luminous intensity rank
 λ D: Dominate Wavelength
 VF: Forward voltage rank



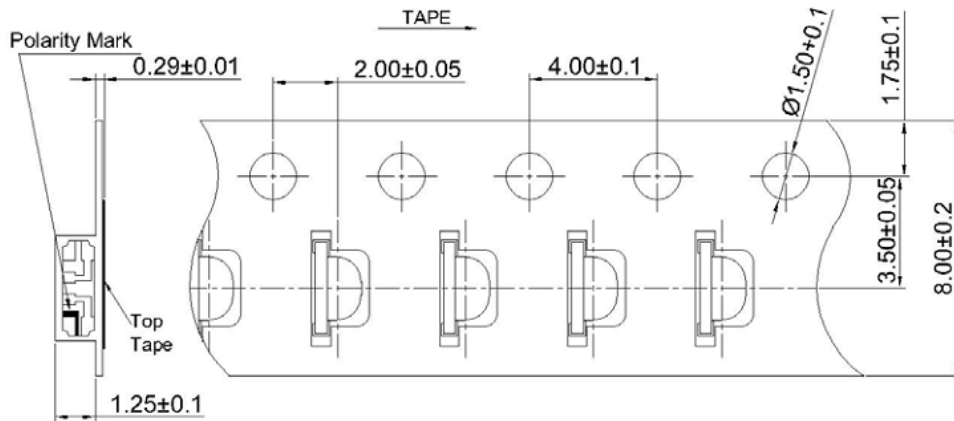
HONGLITRONIC
鸿利光电

RoHS

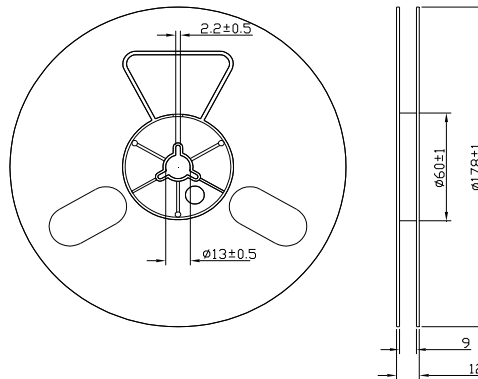
Part No: XXXXXXXXXXXXXXXXXXXXXXXX
 IV: VF: WD:
 Quantity:
 Sealing date: XXXXXXXXXXXXXXXXXXXX



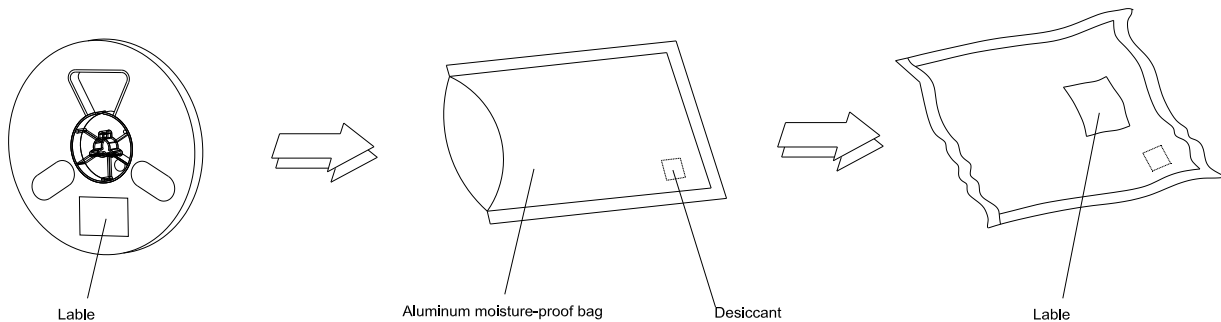
Tape Specifications (Units : mm)



Reel Dimensions



Moisture Resistant Packaging



Note: The tolerances unless mentioned is ± 0.1 mm , Unit: mm