

Specification for approval

CUSTOMER NAME: _____

DIRECTOR: _____ TITLE: _____

CUSTOMER PART NO.: _____

PART NUMBER: IE-2012O-SB-C-08 REVISION: 2.0

ISSUE DATE: 2014/11/21 RETURN DATE: / /

CUSTOMER'S PROPOSAL

- AGREE
- DISAGREE

REASON _____

CUSTOMER SIGNATURE: _____

ATTENTION

注意

ESD protected area
静电防护区域



Observe precautions for
handling electrostatic
discharge sensitive devices
接触静电敏感元件时
请采取适当的预防措施

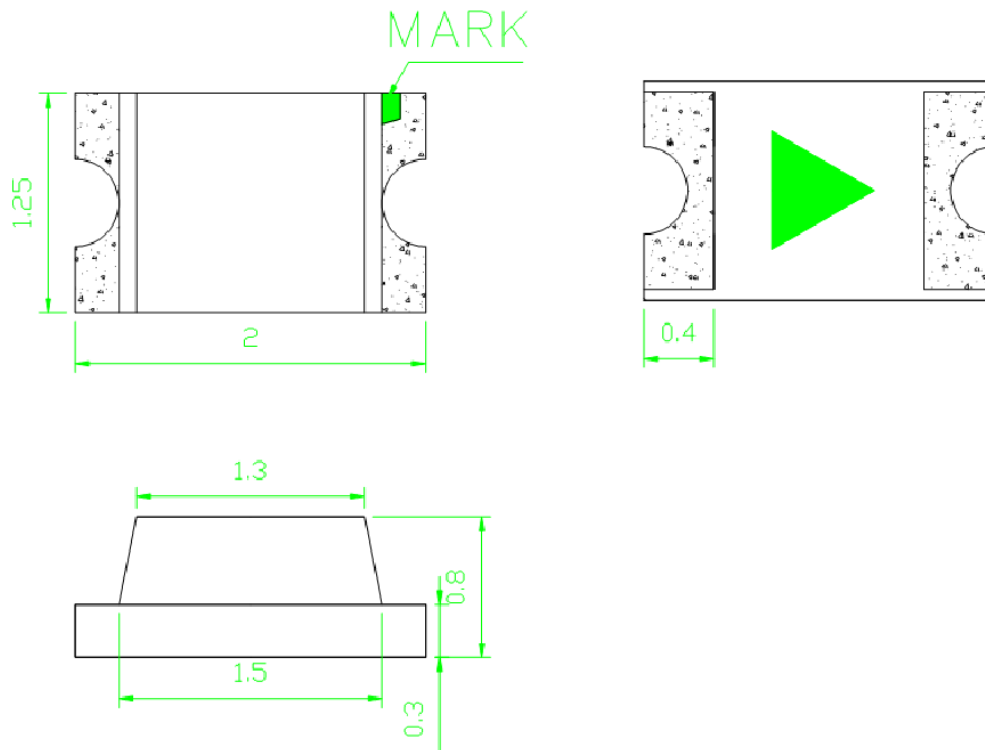
Features

- _2.0mmX1.25mm SMT LED, 0.80mm THICKNESS.
- _LOW POWER CONSUMPTION.
- _WIDE VIEWING ANGLE.
- _IDEAL FOR BACKLIGHT AND INDICATOR.
- _VARIOUS COLORS AND LENS TYPES AVAILABLE.
- _PACKAGE: 3000PCS / REEL.
- _RoHS COMPLIANT.

Description

The Super Bright Orange device is made with DH InGaAlP (on GaAs substrate) light emitting diode chip.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2 θ 1/2
IE-2012O-SB-C-08	SUPER BRIGHT ORANGE (InGaAlP)	WATER CLEAR	70	150	120

Note:

1. 01/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Mix	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Super Bright Orange	600	610	nm	IF=20mA
λ _D	Dominant Wavelength	Super Bright Orange			nm	IF=20mA
Δλ _{1/2}	Spectral Line Half-width	Super Bright Orange	29		nm	IF=20mA
C	Capacitance	Super Bright Orange	30		pF	VF=0V;f=1MHz
VF	Forward Voltage	Super Bright Orange	1.9	2.3	V	IF=20mA
IR	Reverse Current	Super Bright Orange		2	uA	VR = 7

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

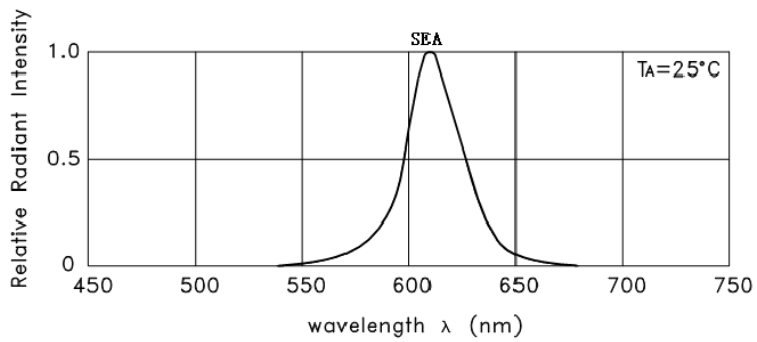
Note: Accuracy may depend on the sorting parameters

Absolute Maximum Ratings at T_A=25°C

Parameter	Super Bright Orange	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	80	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

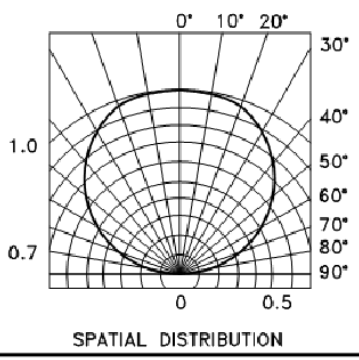
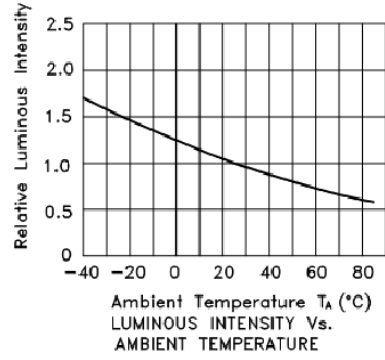
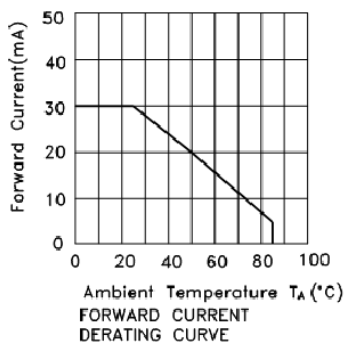
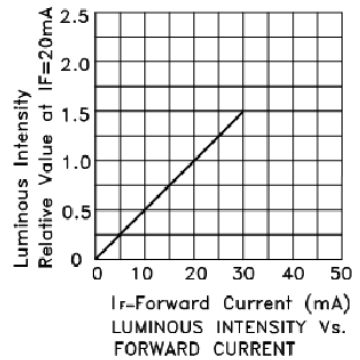
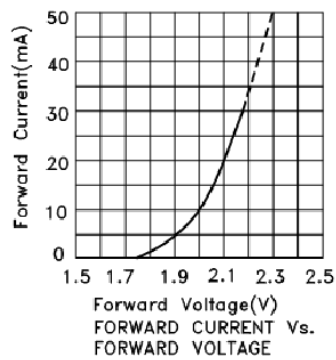
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



RELATIVE INTENSITY Vs. WAVELENGTH

Super Bright Orange



RELIABILITY

Test Items and Results

1		JEITA ED-4701	-40°C ~ 25°C ~ 100°C ~ 25°C 30 5 30 5	100	50	0/50
2		MIL-STD-202G	-40°C ~ 100°C 15 15	500	50	0/50
3		JEITA ED-4701 200 201	T _a =100°C	1000	50	0/50
4		JEITA ED-4701 200 201	T _a =-40°C	1000	50	0/50
5			T _a =25±5°C I _f =20mA	1000	50	0/50
6			T _a =60°C RH=85% I _f =20mA	1000	50	0/50
7		JEITA ED-4701 300 303	T _{sol} =235°C±5°C,5	5	10	0/10
8		JEITA ED-4701 300 301	T _{sol} =260°C,10 35°C 95%RH 96	10	10	0/10

5. Cautions

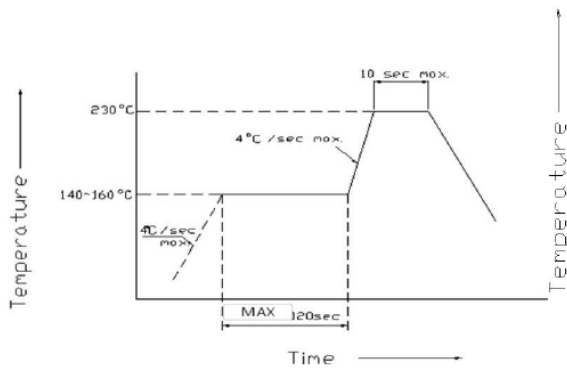
(1) Soldering Conditions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

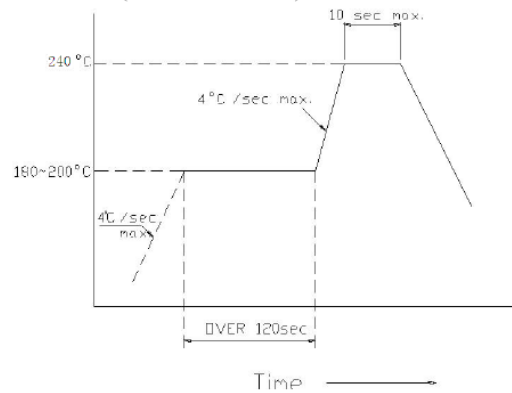
(Recommended soldering conditions)

Reflow Soldering			Temperature Soldering time	350° C Max. 3 sec. Max. (one time only)
	Lead Solder	Lead-free Solder		
Pre-heat	140 ~ 160° C	180 ~ 200° C		
Pre-heat time	120 sec. Max.	120 sec. Max.		
Peak temperature	230° C Max.	240° C Max.		
Soldering time	10 sec. Max.	10 sec. Max.		
Condition				

(Lead Solder)

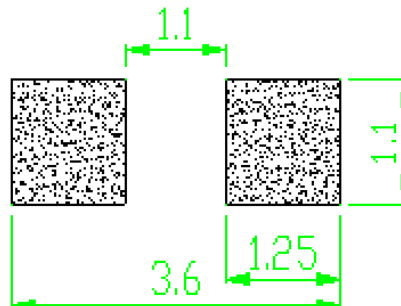


(Lead-Free Solder)



Recommended Soldering Pattern

(Units : mm)



(2) Static Electricity

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

All devices, equipment and machinery must be properly grounded.

2.0V Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current. Criteria : (VF > 2.0V at IF=0.5mA)

(3) Moisture Proof Package

It is recommended that moisture proof package be used .

(4)

Cautions:

4.1.

Please check if there is air leak before opening the package, if so, please return the goods back to take drying process for later using.

4.2

Products can be used within 15days after packaging, after that, they must be:

4.2.1

Soldered within 24 hrs

4.2.2

Used in the condition: 30°C within and 60%RH below

4.2.3

Stored in 30%RH for moisture below.

4.3.

Products cannot be used for and over 15days after being packaged unless opening the package and take drying our process in 85°C/6H.

4.4.

Products not be used for or over 60days after being packaged please return back to take drying out and packaging process for forward using.

4.5.

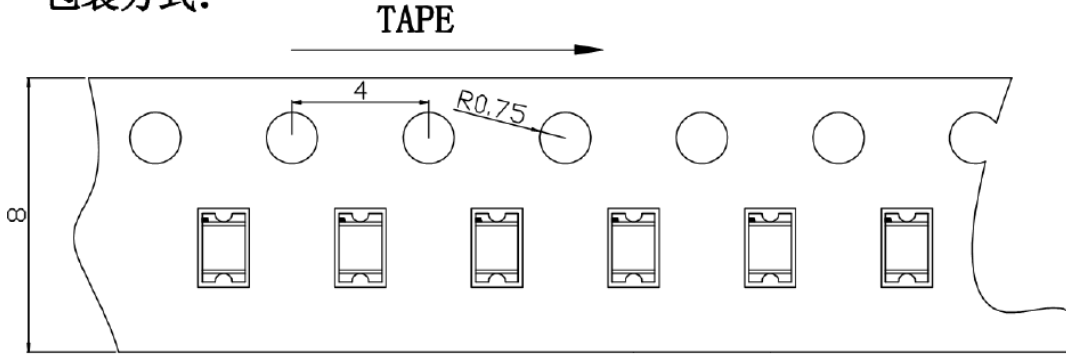
Products not be used after opening the package need to be dried out for 85°C/6H



包装 PACKAGING

LEDS 在装带之后纸箱包装. The LEDs are packed in cardboard boxes after taping.

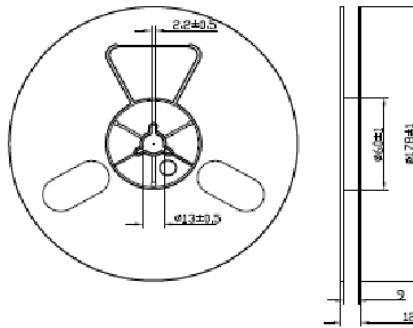
包装方式:



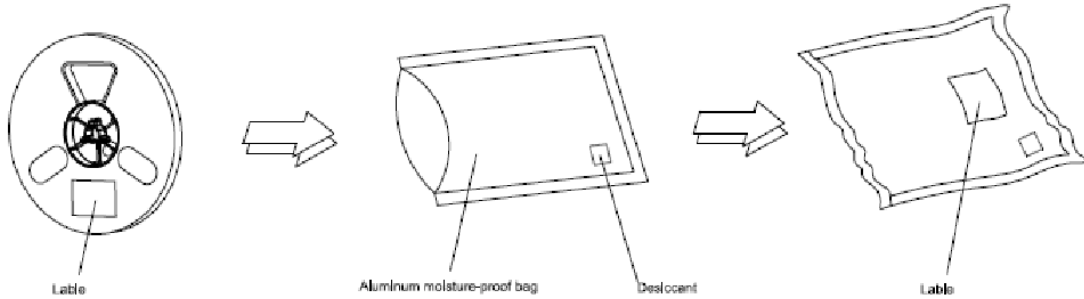
Package: 3000 pcs/reel

Reel Dimensions

卷轴尺寸



Moisture Resistant Packaging 防潮带包装



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit: mm 注: 标注公差为 $\pm 0.1\text{MM}$, 单位: MM