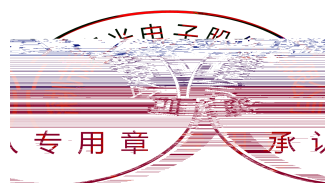
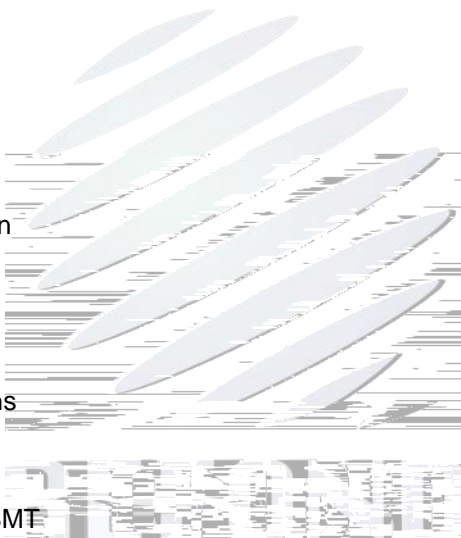
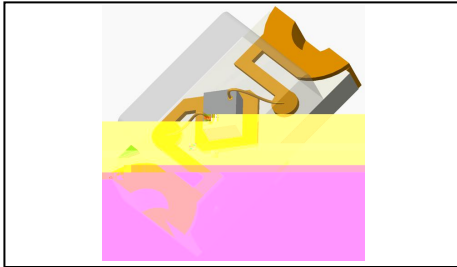


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4.1 Handling Precautions	17





The Colour LED which was fabricated using a blue chip Package Dimension :
1.6mmX0.8mmX0.7mm.

LED

1.6mmX0.8mmX0.7mm

Extremely wide viewing angle.

Suitable for all SMT assembly and solder process.

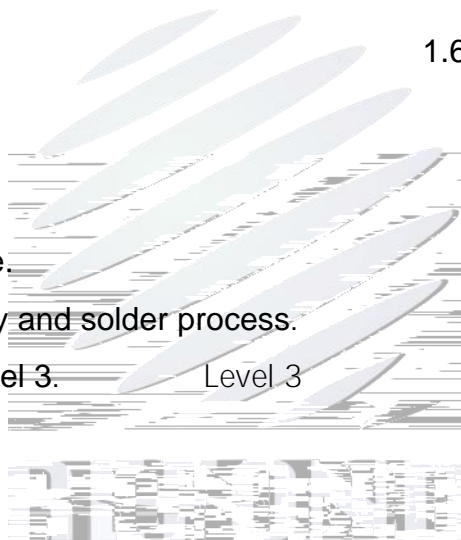
Moisture sensitivity level: Level 3.

Level 3

SMT

RoHS compliant.

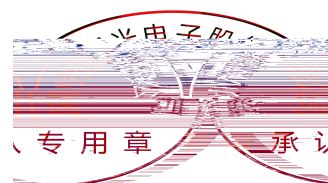
RoHS



Optical indicator.

Switch and symbol, display.

General use.



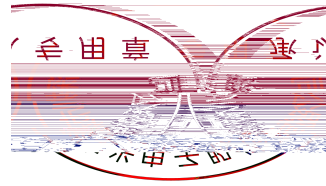


Fig.1-1 Top view

Fig.1-

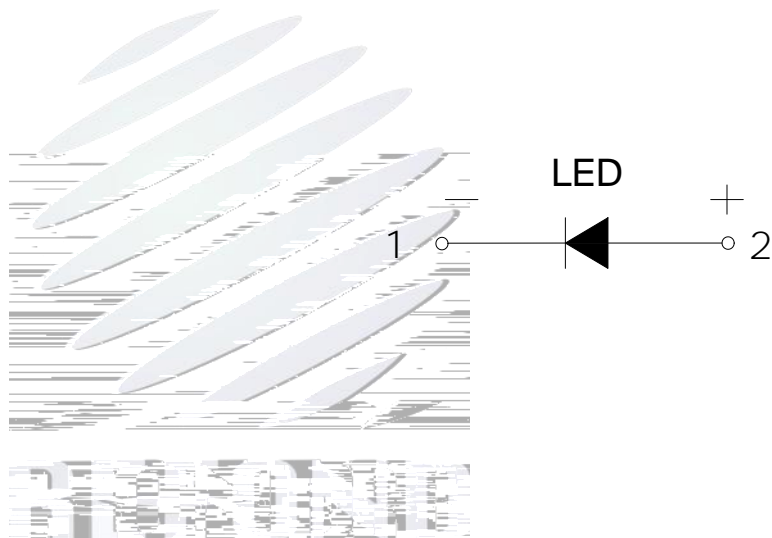


Table 1-1 Electrical / Optical Characteristics at Ts=25°C

Item	Test Condition	Symbol	Value			Unit	
			Min. ()	Typ.	Max.		
Spectral Half Bandwidth	I _F =20mA		--	15	--	nm	
Forward Voltage	I _F =20mA	V _F	G1	2.8	--	2.9	V
			G2	2.9	--	3.0	V
			H1	3.0	--	3.1	V
			H2	3.1	--	3.2	V
			I1	3.2	--	3.3	V
			I2	3.3	--	3.4	V
			J1	3.4	--	3.5	V
Dominant Wavelength	I _F =20mA		D10	465.0	--		
			D				

Notes : V_R=5V For test conditions. V_R=5V

PROPOSE

228015

Notes

1. 1/10 Duty cycle, 0.1ms pulse width. $0.1ms$, $1/10$.
2. The above forward voltage measurement allowance tolerance is $\pm 0.1V$.
3. The above dominant wavelength measurement allowance tolerance is $\pm 2nm$.



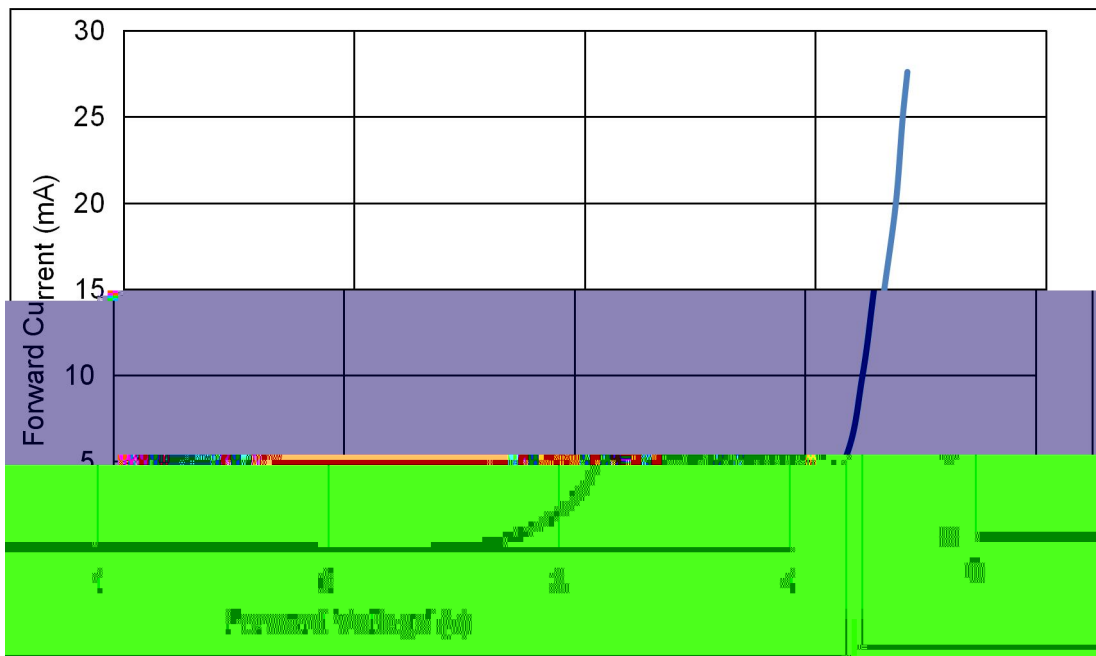


Fig 1-6 Forward Voltage Vs. Forward Current

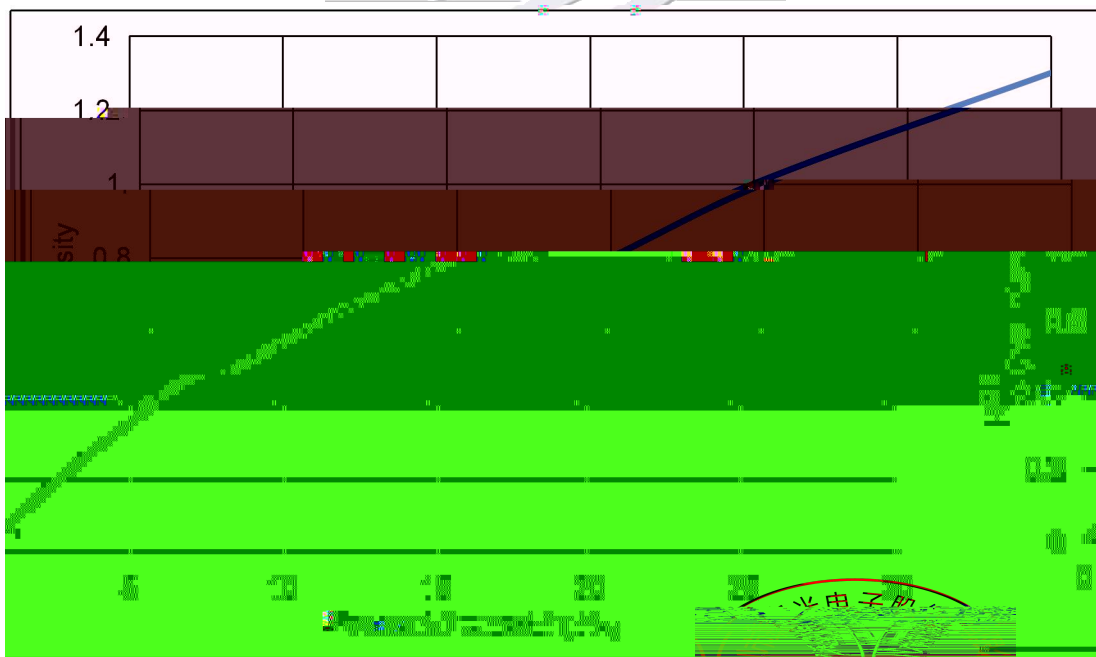
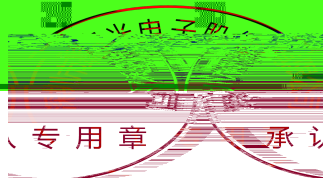


Fig 1-7 Forward Current Vs. Relative Intensity



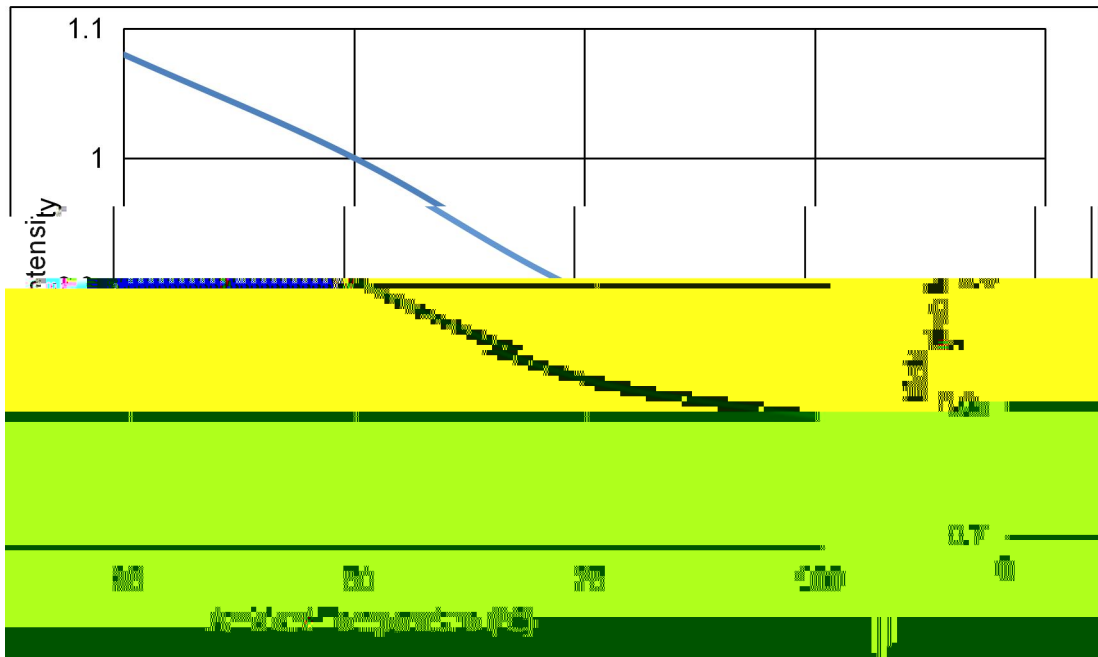


Fig 1-8 Pin Temperature Vs Relative Intensity

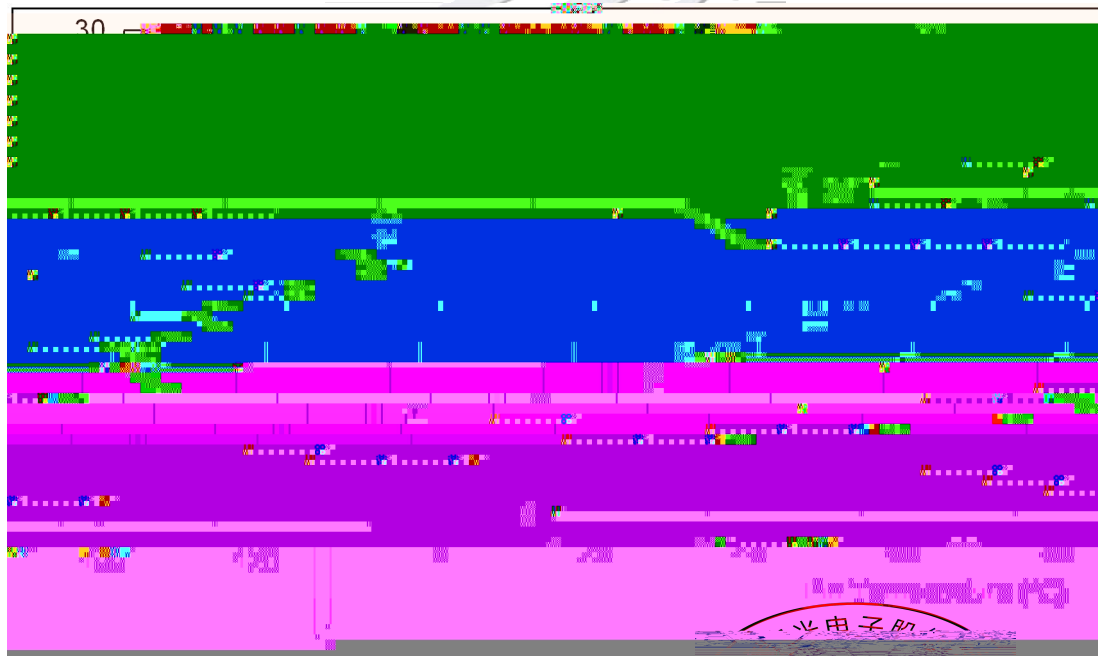
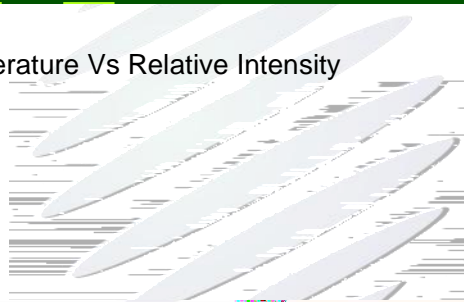
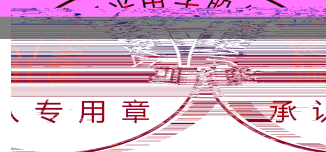


Fig 1-9 Pin Temperature Vs Forward Current



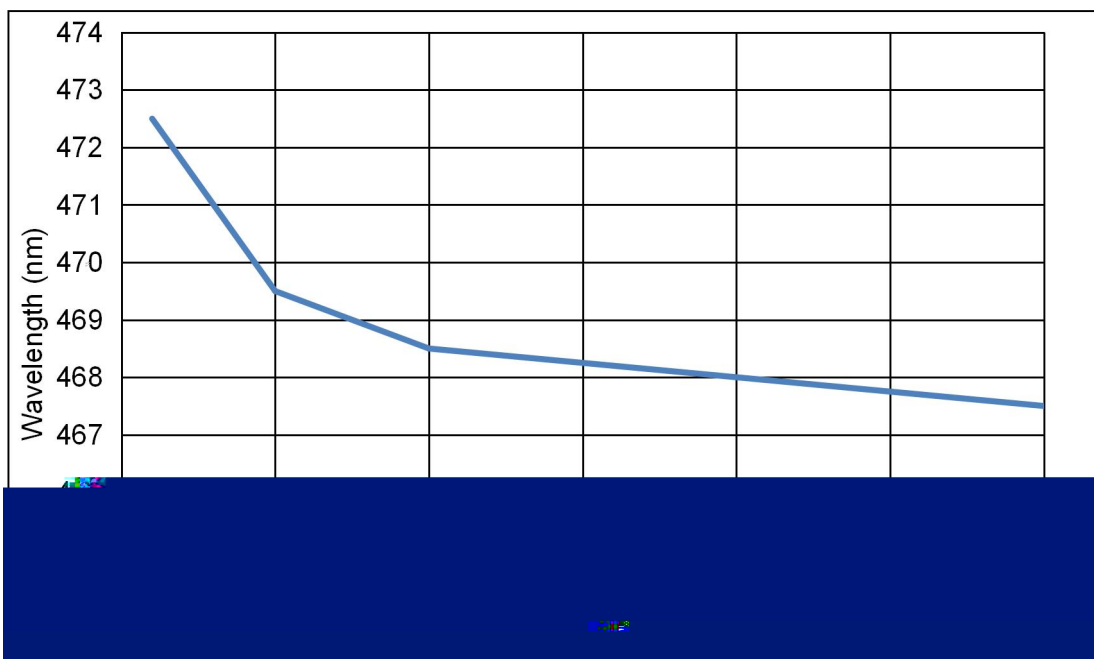


Fig 1-10 Forward Current Vs. Dominate Wavelength (Ta=25)

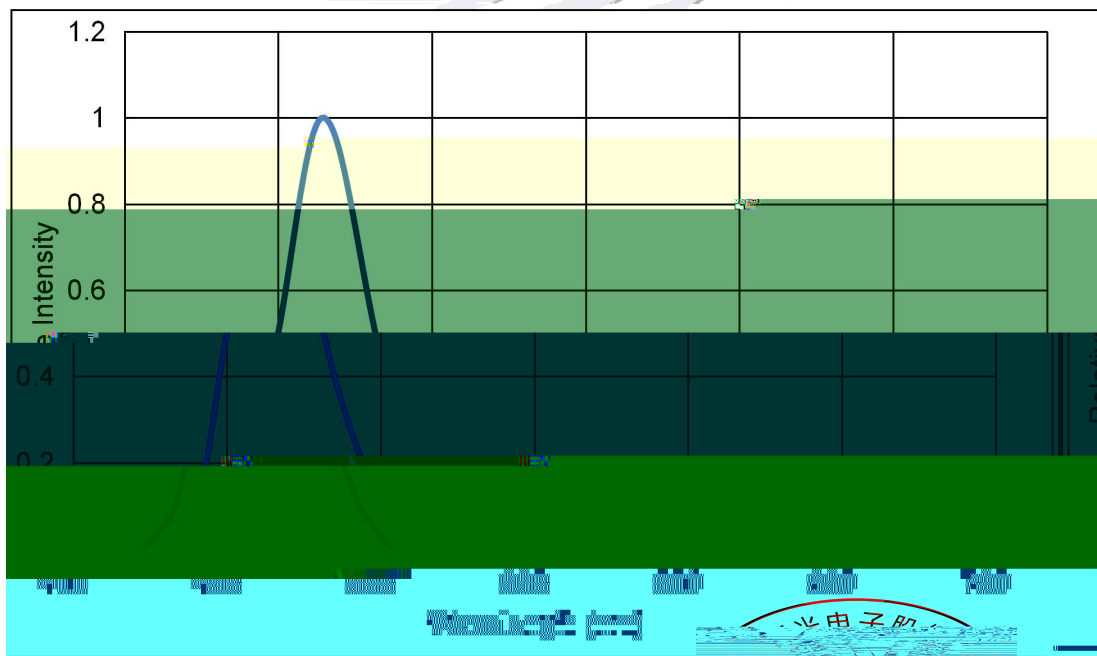
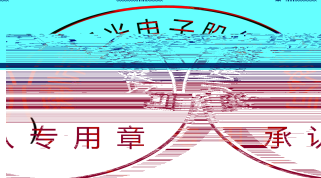


Fig 1-11 Relative Intensity Vs. Wavelength (Ta=25)



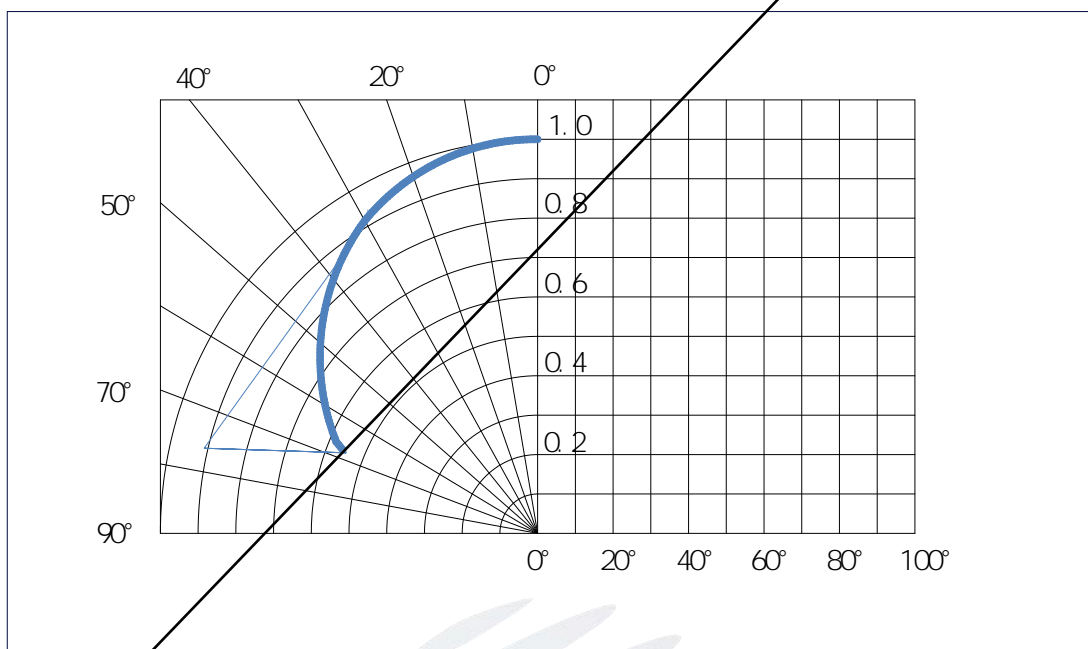
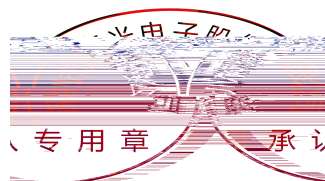
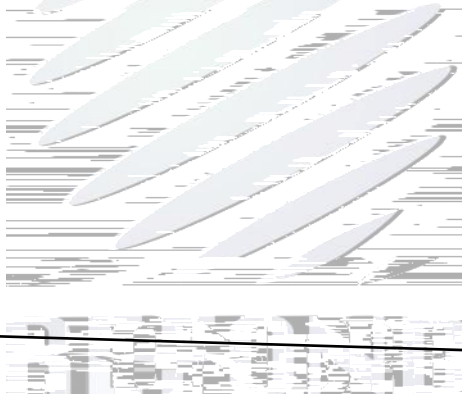


Fig 1-12 Diagram characteristics of radiation



Package:4000pcs/reel. 4000pcs

2.1.1 Carrier Tape Dimension



Fig.2-1 Carrier Tape Dimension

2.1.2 Reel Dimension

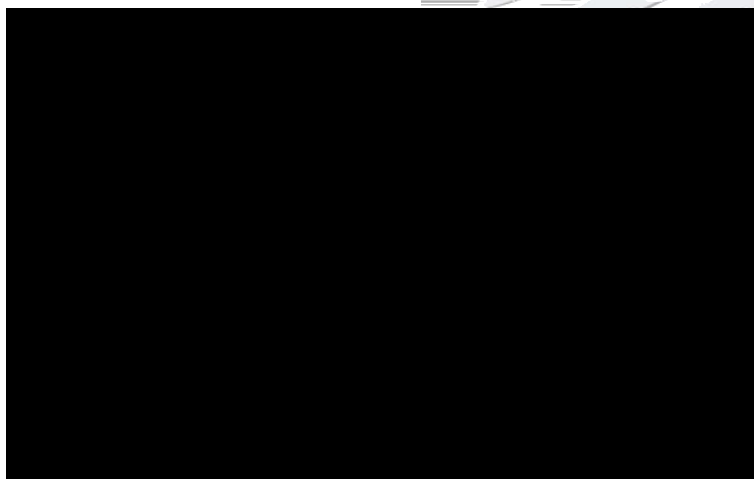


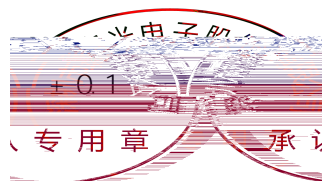
Fig.2-2 Reel Dimension

Table 2-1 Dimension

A	8.0± 0.1mm
B	178± 1mm
C	60± 1mm
D	13.0± 0.5mm

Notes

The tolerances unless mentioned ±0.1mm. Unit : mm



2.1.3 Label Form Specification

Table 2-2 Parameter

PART NO.	Part Number
SPEC NO.	Spec Number
LOT NO.	Lot Number
BIN CODE	Bin Code

Fig. 2-3 Label Form Specification



Fig.2-4 Moisture Resistant Packing

H

Lo

Tel: +
REFON

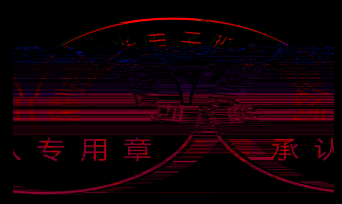


Table 2-4 Criteria For Judging Damage

Test Items	Symbol	Test Condition	Criteria For Judgement	
			Min.	Max.
Forward Voltage	V_F	$I_F=20\text{mA}$	-	U.S.L*)x1.1
Reverse Current	I_R	$V_R= 5\text{V}$	-	U.S.L*)x2.0
Luminous Flux		$I_F=20\text{mA}$	L.S.L*)x0.7	-

Notes

1.U.S.L: Upper standard level

L.S.L: Lower standard level

2.The above reliability tests is based on the verification of a single/strip LED of Refond's existing experimental platform,the reliability experiment was taken under good heat dissipation conditions. When customers applies the LED to the series and parallel circuit,should take consideration of all the factors such as the current, voltage distribution, heat dissipation and others.

LED

3.The technical information shown in the data sheets is 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.

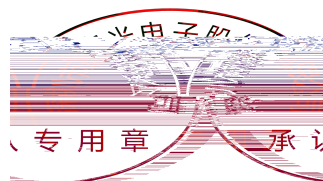


Fig.3-1 SMT Reflow Soldering Instructions SMT

Table 3-1 Parameter

Average temperature rise speed

T_{smax} T_P

3 °C/ Max 3 °C/ s

Preheating: minimum temperature

(T_{smin})

150 °C

Notes

(1) Reflow soldering should not be done more than twice. If more than 24 hours between the two solderings, LED will be damaged.



(2) When soldering, do not put stress on the LEDs during heating.

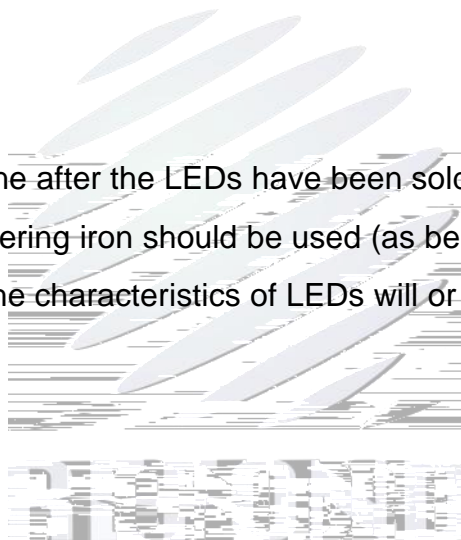
3.1.1 Soldering Iron

(1) When do soldering by hand, keep the temperature of iron below less 300 seconds, less than 300, 3

(2) Soldering by hand should be done only one time.

3.1.2 Repairing

Repairing 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 in advance whether the characteristics of LEDs will or not be damaged by



(4) In designing a circuit, the current through each LED can not exceed the absolute maximum rating specified for each LED. In the meanwhile, resistors for protection should be applied, otherwise slight voltage shift will cause big current change, burn out may happen. The driving circuit must be designed to allow forward voltage only when it is ON or OFF. If the reverse voltage is applied to LED, migration can be generated resulting in LED damage. LED

LED

(5) Thermal Design is paramount importance because heat generation may result in the Characteristics decline, such as brightness decreased, Color change and so on. Please consider the heat generation of the LEDs when making the system design. LED

LED

(6) Storage

Table 4-1 Storage

Conditions		Temperature	Humidity	Time
Storage	Before Opening Aluminum Bag	30	75%	Within 1 Year From Date
	After Opening Aluminum Bag	30	60%	168hours 168
Baking		60± 5	-	24hours 24

(7) If the moisture absorbent material silica gel has faded away or the LEDs have exceeded the storage time baking treatment should be performed after unpacking and based on the following condition 60 5 for above 24 hours.

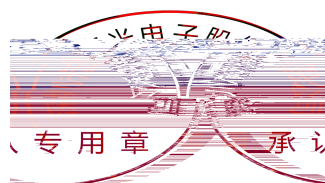
60± 5

If the package is flatulence or damaged, please notify the sales staff to assist.



(8) Similar to most Solid state devices; LEDs are sensitive to Electro-Static Discharge (ESD) and Electrical Over Stress (EOS). LED

(9) Other points for attention, please refer to our relevant information.





Declare

This specification is written both in English and in Chinese and the latter is formal.

