



**健隆投資有限公司**  
**STRONG BASE INVESTMENT LTD.**

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**Approval Sheet**  
**(確認書)**

<b>編號</b> Ref. No.	
<b>日期</b> Issued Date	2015-10-27

**公司名稱** : \_\_\_\_\_  
Company Name

**產品編號** : SB-172DNB-CT  
Part No.

**產品種類** : LED-SMD  
Category

**產品描述** : 0805, BLUE ,WATER CLEAR  
Description

**客戶產品編號** : \_\_\_\_\_  
Customer No.

**備注** : \_\_\_\_\_  
Remarks

STRONG BASE			
ISSUER	APPROVER	CHECKER	ENGINEER
	朱美丽	叶楠	高雪

Authorized Signature 客戶簽字				
<b>部門</b> Department				
<b>簽字</b> Signature				

工廠名稱:宇之亮電子(深圳)有限公司  
工廠地址:廣東省深圳市龍崗區橫崗鎮荷坳村金源工業區  
Company Name: Pretty Light (Shen Zhen) Limited  
Factory Address:jin-Yuan,Industrial Zone He-Ao Cun,Heng-Gang

Zhen Long-Gang Area,Shen-Zhen City,

TEL: (755) 8976 7303 2862 5421 FAX: (755) 28684819 2862 5922



### Surface Mounted Chip LED

Model No. : SB-172DNB-CT

■ Features :

- Compatible with automatic placement equipment
- Compatible with reflow solder process

■ Applications :

- Automotive\_Telecommunication
- Indicators
- LCD Back-lights
- Illuminations

Dice Material	Light Color	Lens Color
InGaN	Blue	Water Clear

### Absolute Maximum Ratings

( Ta=25°C )

Item	Symbol	Maximum	Unit
Power Dissipation	P <sub>D</sub>	100	mW
Continuous Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Derating Linear From 25°C		0.4	mA/°C
Operating Temperature Range	Topr	-30 to +80	°C
Storage Temperature Range	Tstg	-40 to +85	°C

### Electrical / Optical Characteristics

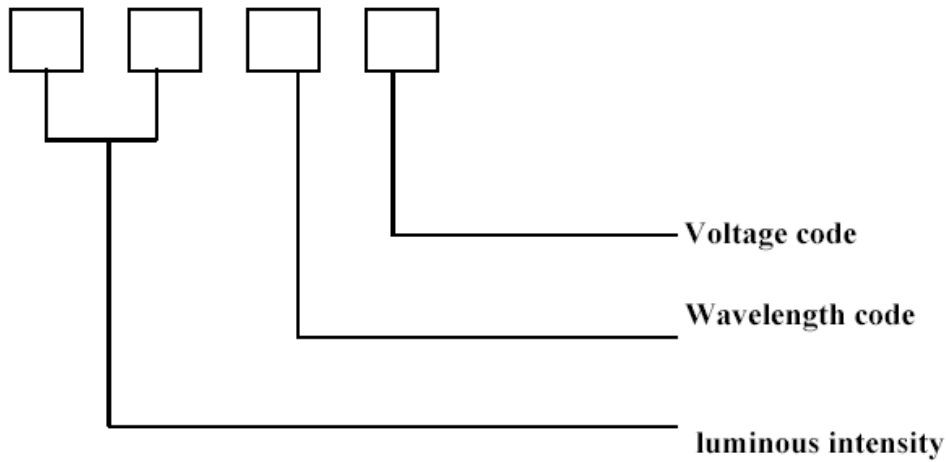
( Ta=25°C )

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	IF=20mA		3.20	3.80	V
Reverse Current	I <sub>R</sub>	VR=5V			20	uA
Peak Emission Wavelength	λ <sub>P</sub>	IF=20mA		465		nm
Dominant Wavelength	λ <sub>D</sub>	IF=20mA		470		nm
Viewing Angle	2θ 1/2	IF=20mA		130		Deg
Luminous Intensity	I <sub>V</sub>	IF=20mA	40.0	80.0		mcđ



◆ Packing coding principle

Notice: Bin code: luminous intensity / wavelength / voltage.



◆ The Luminous Intensity Grade of Blue Chip-LED Products

● Test Condition : @ 20mA

Range,mcd	Bin code
28.5/36	H1
36/45	H2
45/57	J1
57/72	J2
72/90	K1

◆ Dominant Wavelength Grade of Blue Chip-LED Products

● I type @ 20mA

BIN	Range	BIN	Range
1	463.5~466	4	471~473.5
2	466~468.5	5	473.5~476
3	468.5~471		

◆ Forward Voltage Grade of Blue Chip-LED Products

● I type @ 20mA

BIN	Range	BIN	Range
3	3.0~3.1	6	3.3~3.4
4	3.1~3.2	7	3.4~3.5
5	3.2~3.3		



◆ **Descriptions :**

- The Chip-LED Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature application, etc.

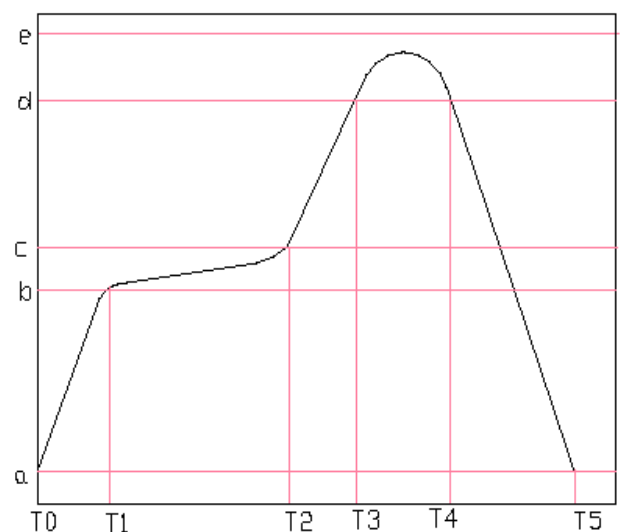
◆ **Reliability Test Items And Conditions :**

NO.	Item	Test Conditions	Test Hours / Cycle	Sample Q'ty	Ac / Re
1	Solder Heat	TEMP : 260°C±5°C	5 sec	36 pcs	0 / 1
2	Temperature Cycle	H : +100°C 30min. ∫ 5min. L : -40°C 30min.	50 cycle	36 pcs	0 / 1
3	Thermal Shock	H : +100°C 5min. ∫ 10sec L : -40°C 5min.	50 cycle	36 pcs	0 / 1
4	High Temperature Storage	TEMP : 100°C	1000 hrs	36 pcs	0 / 1
5	Low Temperature Storage	TEMP : -40°C	1000 hrs	36 pcs	0 / 1
6	DC Operating Life	I <sub>F</sub> = 20mA	1000 hrs	36 pcs	0 / 1
7	High Temperature / High Humidity	85°C / 90~95%R.H.	1000 hrs	36 pcs	0 / 1

◆ **Reflow Temp. / Time : :**

Please refer to the following figure :

Temp.(°C)		Time(Sec)	
a	25	T0~T1	Max. 3°C/sec
b	150	T1~T2	90~130 sec
c	200	T2~T3	Max. 3°C/sec
d	220	T3~T4	Max. 30~50 sec
e	260		
		T4~T5	Max. -3°C/sec
Blet Speed		70~90 cm/min	

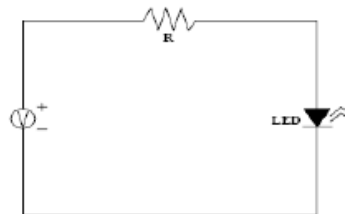




◆ **Precautions For Use :**

- Over - current - proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change ( Burn out will happen )



- Storage

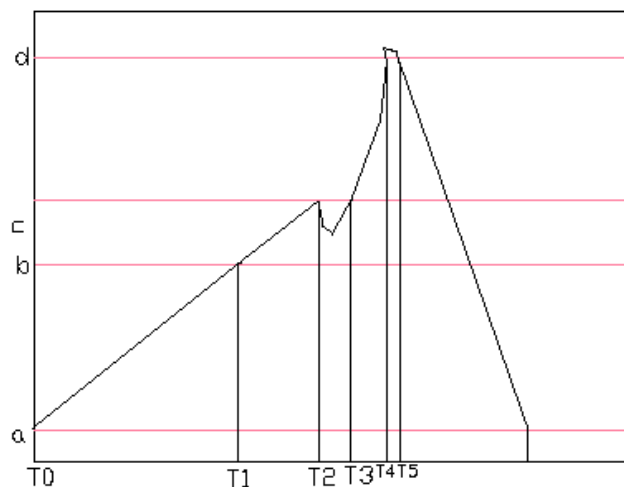
1. The operation of temperature and R.H. are :  $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$ , R.H.60% Max..
2. Once the package is opened, the products should be used within 72 hrs. Otherwise, they should be kept in a dampproof box with desiccating reagent. Considering the tape life, we suggest our customers to use our products within 1 year ( from production date ) .
3. It's recommended to bake before soldering when the package is unsealed after 72 hrs. The condition is :  $80^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 24hrs.

◆ **Soldering Iron :**

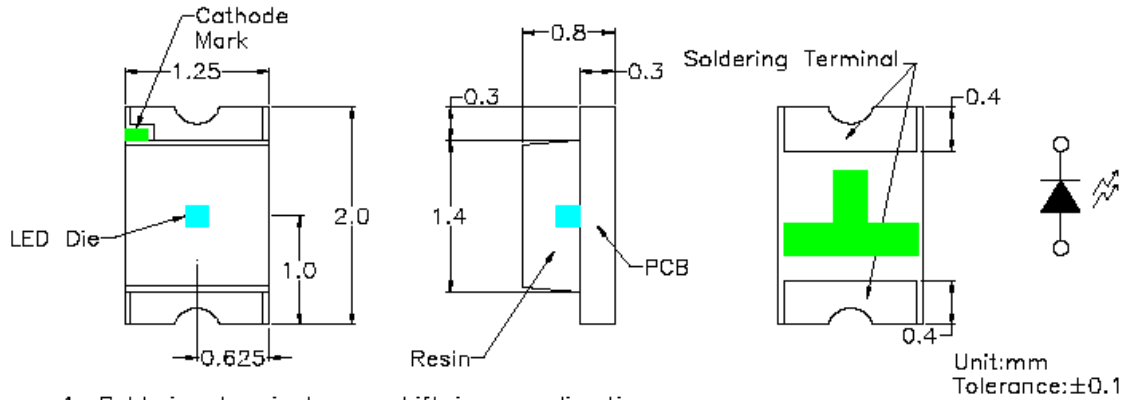
- Temperature at tip of iron :  $300^{\circ}\text{C}$  Max. (25W Max.)
- Soldering time :  $5 \pm 1\text{sec}$ .

◆ **Wave Soldering Temp. / Time :**

Temp.( $^{\circ}\text{C}$ )		Time(Sec)	
a	25	T1~T2	$60 \pm 20$
b	$130 \pm 10$	T2~T3	
c	185	T3~T6	
d	$260 \pm 3$	T4~T5	$3 \pm 2$

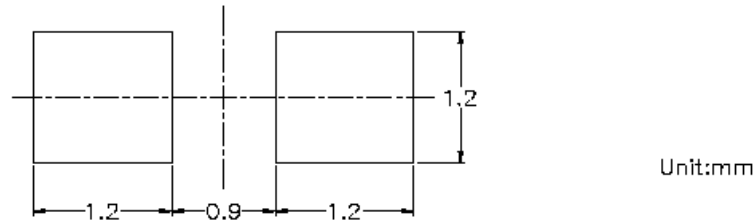


◆ Package Dimensions of Device ( SB-172 Series )



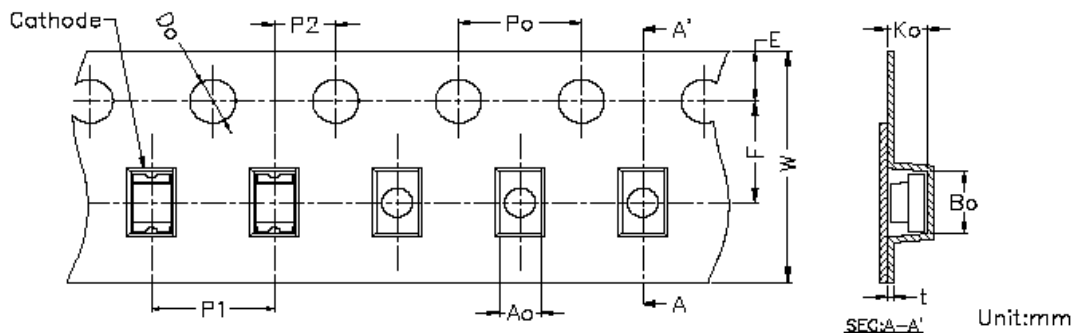
1. Soldering terminal may shift in x, y direction.
2. Polarity referring onto the cathode mark is reversed on the HR/UR/SR

◆ Recommended Soldering Pad Dimensions

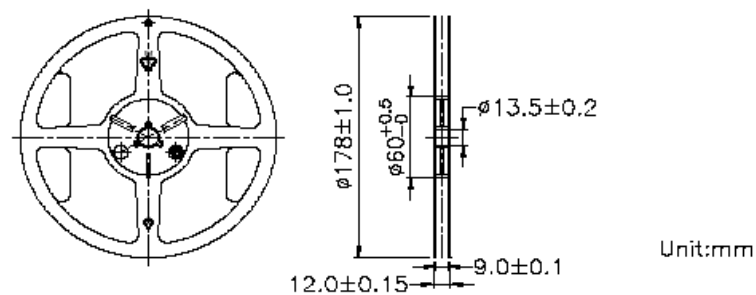


◆ Tape Specification : 4000pcs Per Reel

Packing Size													
Item	W	P1	E	F	D <sub>o</sub>	D1	P <sub>o</sub>	10P <sub>o</sub>	P2	A <sub>o</sub>	B <sub>o</sub>	K <sub>o</sub>	t
Spec.	8.00	4.00	1.75	3.50	1.50	1.00	4.00	40.00	2.00	1.45	2.25	1.10	0.23
Tolerance	±0.20	±0.10	±0.10	±0.05	$\begin{matrix} +0.10 \\ -0.08 \end{matrix}$	±0.05	±0.05	±0.20	±0.05	±0.10	±0.10	±0.10	±0.05

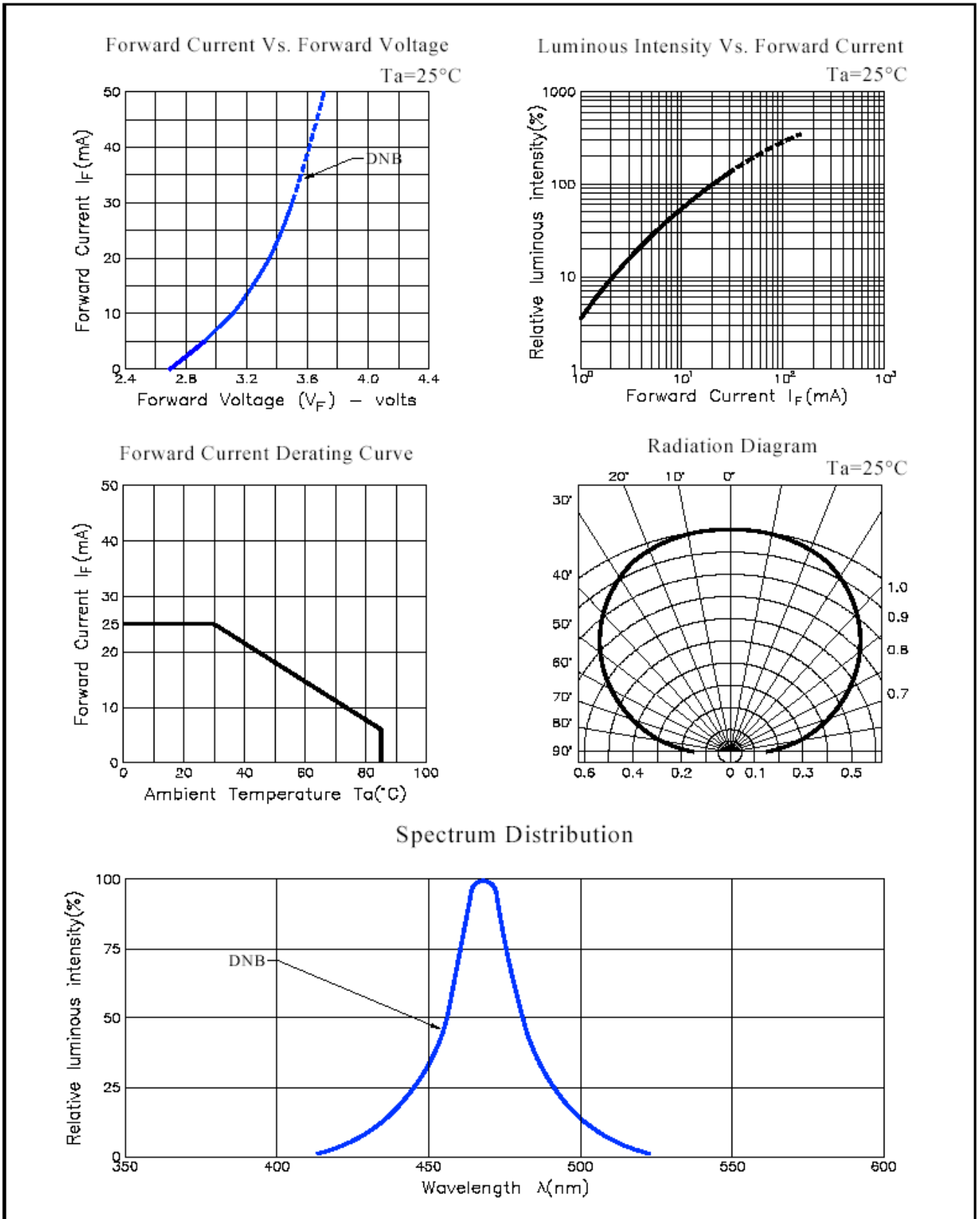


◆ Package Dimensions of Reel





◆ **Typical Electro-Optical Characteristic Curves: Special Color**





◆Packing and Shipping Spec.

