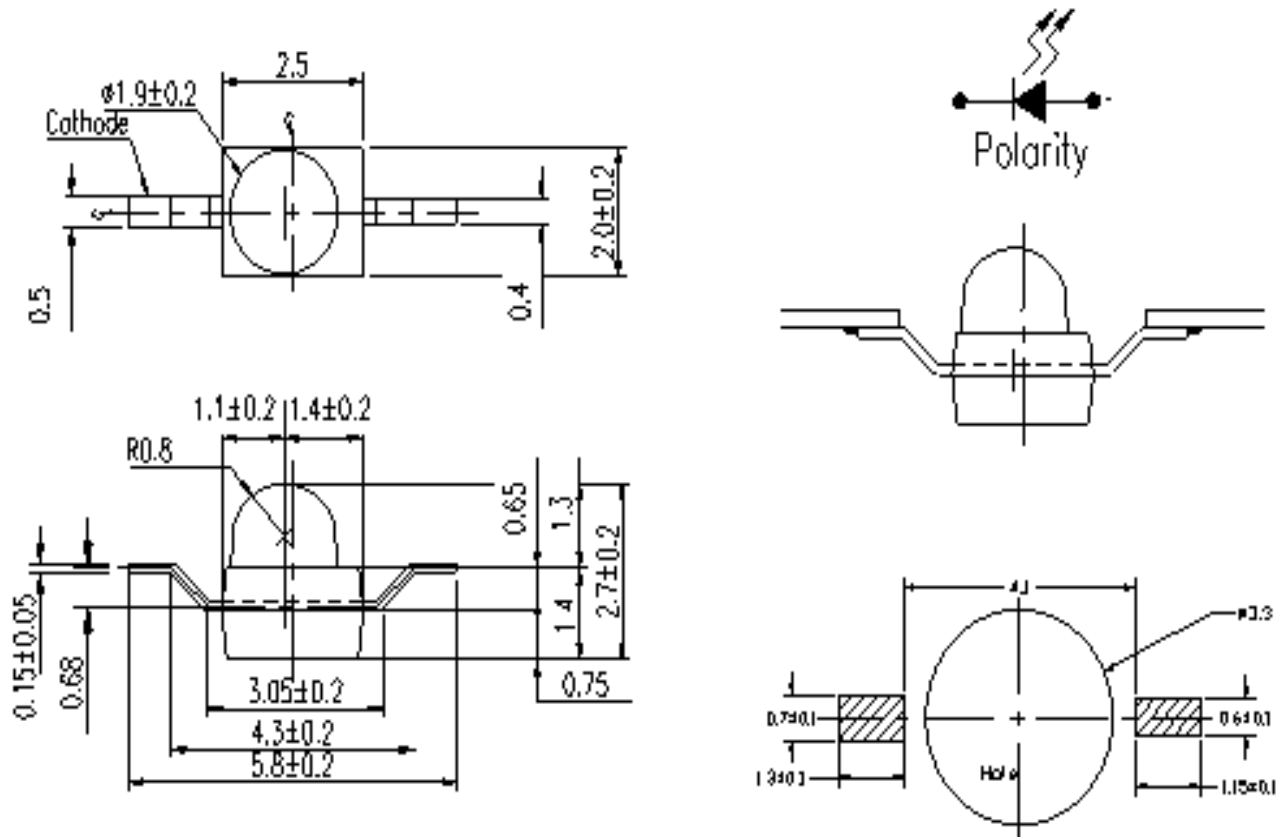


91-21SUBC/S400-A6/TR10
Package Outline Dimensions


Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm

91-21SUBC/S400-A6/TR10

Absolute Maximum Ratings (Ta=25°C)

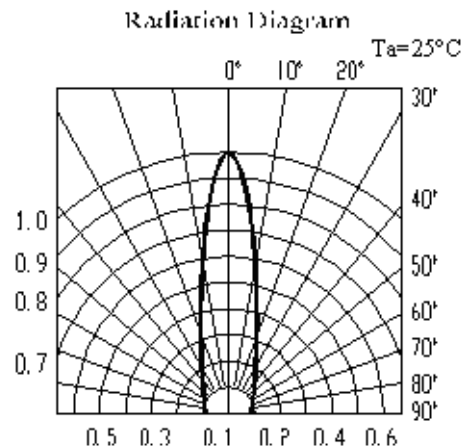
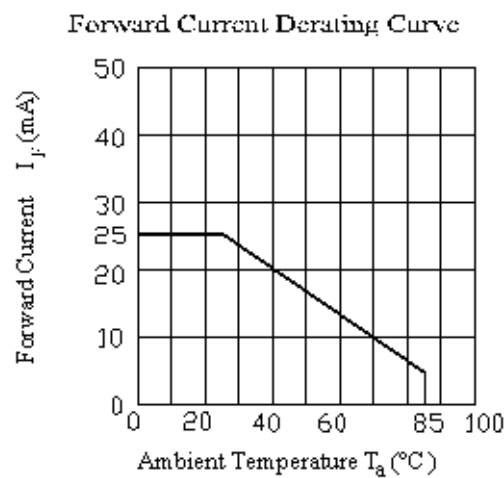
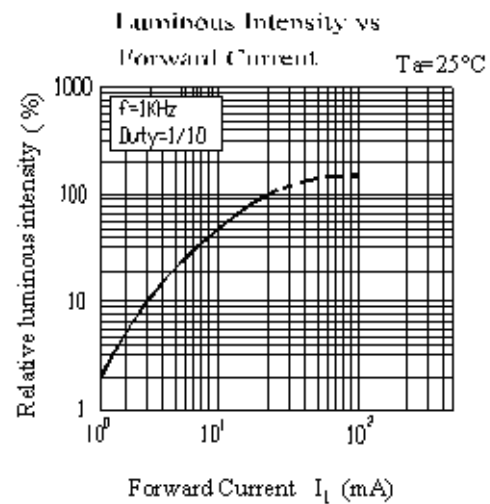
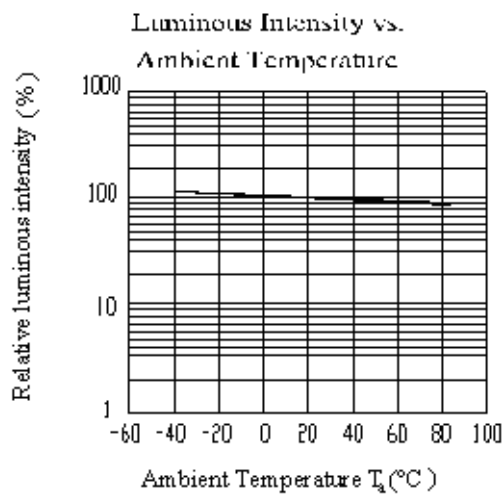
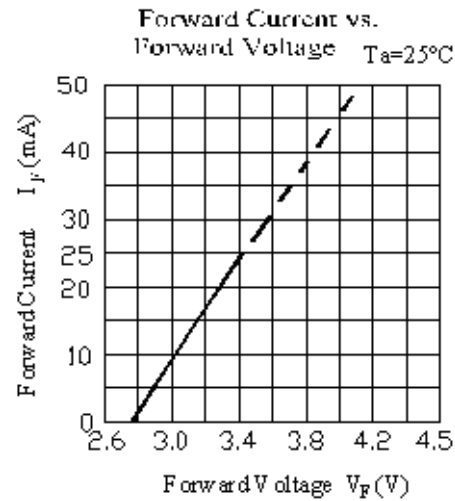
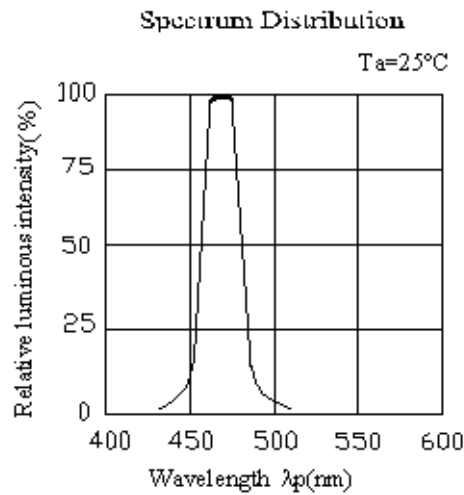
Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	I _{FP}	100	mA
Power Dissipation	P _d	95	mW
Electrostatic Discharge(HBM)	ESD	150	V
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +90	°C
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I _v	650	800	----	mcd	I _F =20mA
Viewing Angle	2θ 1/2	----	25	----	deg	
Peak Wavelength	λ _p	----	468	----	nm	
Dominant Wavelength	λ _d	----	470	----	nm	
Spectrum Radiation Bandwidth	△λ	----	25	----	nm	
Forward Voltage	V _F	----	3.3	3.7	V	V _R =5V
Reverse Current	I _R	----	----	50	μA	

91-21SUBC/S400-A6/TR10

Typical Electro-Optical Characteristics Curves



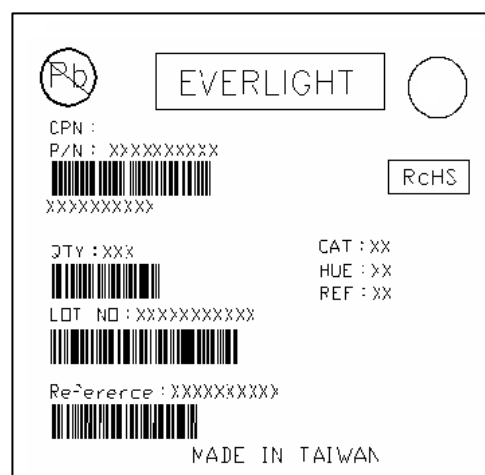
91-21SUBC/S400-A6/TR10

Label explanation

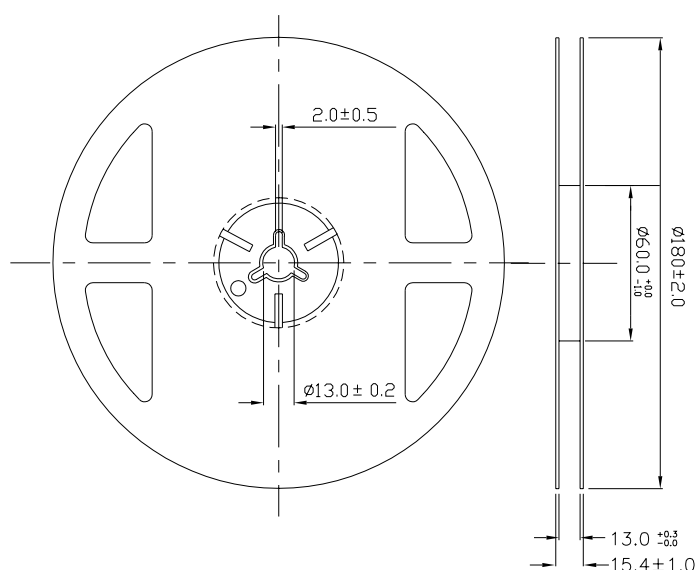
CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



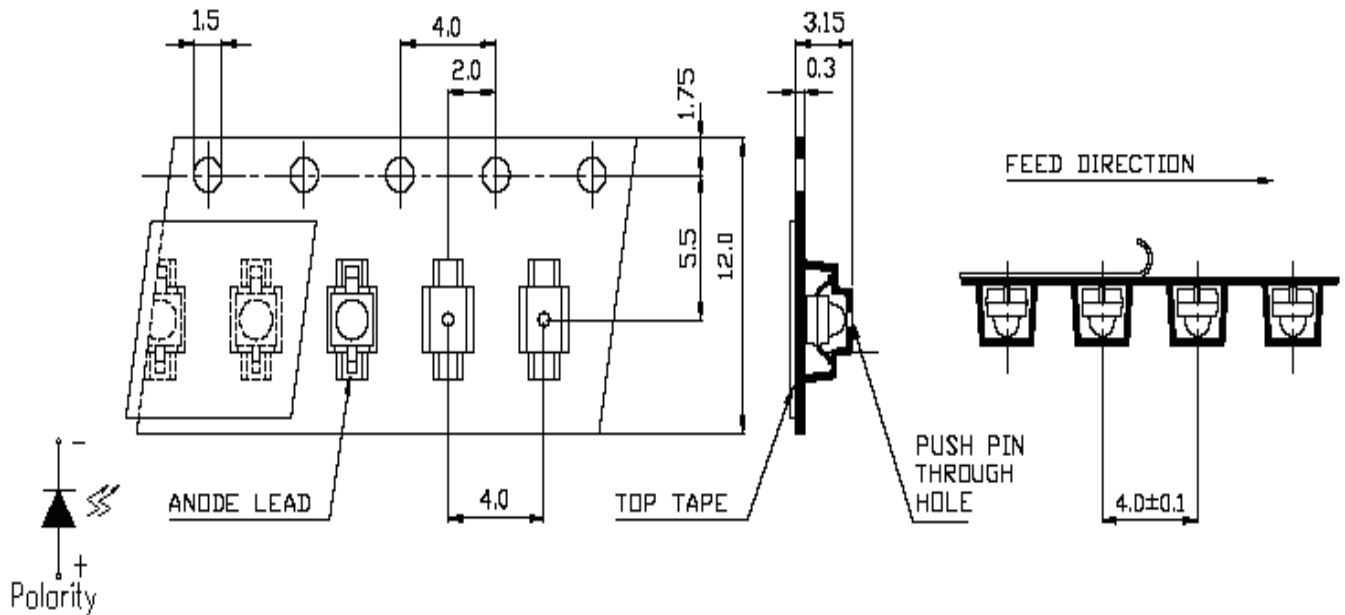
Reel & Carrier Tape Dimensions



Note: The tolerances unless mentioned are ± 0.1 , unit=mm.

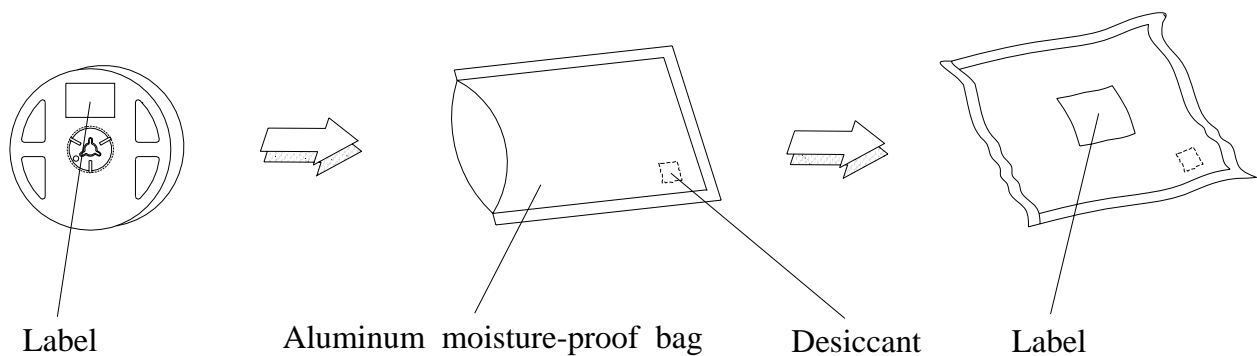
91-21SUBC/S400-A6/TR10

Loaded quantity per reel 1000 PCS/reel



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit = mm

Moisture Resistant Packaging



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level : 90 %

LTPD : 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260°C ±5°C Min. 5 sec.	6 Min.	22 Pcs.	0/1
2	Temperature Cycle	H : +100°C 15 min. § 5 min. L : -40°C 15 min.	300 Cycles	22 Pcs.	0/1
3	Thermal Shock	H : +100°C 5 min. § 10 sec. L : -10°C 5 min.	300 Cycles	22 Pcs.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	Temp. : -40°C	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	I _F = 20 mA	1000 Hrs.	22 Pcs.	0/1
7	High Temperature / High Humidity	85°C / 85% RH	1000 Hrs.	22 Pcs.	0/1

Precautions For Use**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

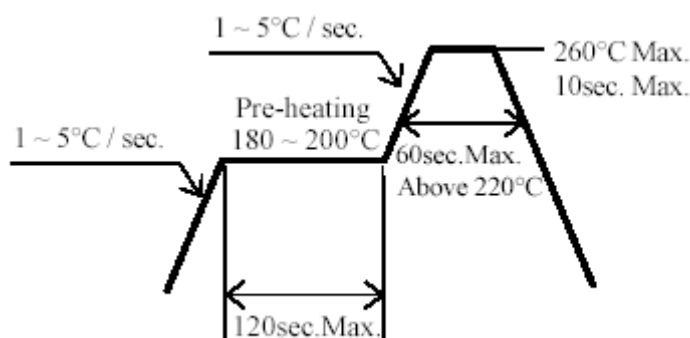
2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

2.3 After opening the package: The LED's floor life is 1 year under 30°C or less and 60% RH or less.

If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

3. Soldering Condition**3.1 Pb-free solder temperature profile**

3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

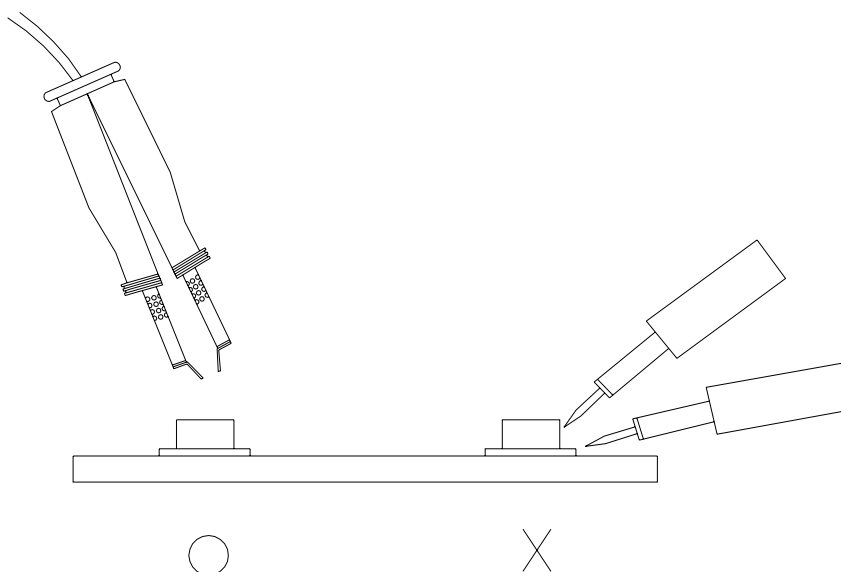
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.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 the LEDs will or will not be damaged by repairing.



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