EVERLIGHT ELECTRONICS CO.,LTD.

Technical Data Sheet

1.6mm round Subminiature Chip LEDs

26-21/Y2C-AT2V2B/CT

Features

- Package in 12mm tape on 7″ diameter reel.
- Compatible with automatic placement equipment.-
- Compatible with infrared and vapor phase reflow
  solder process.
- Mono-color type.
- Pb-free.
- The product itself will remain within RoHS compliant version.

Descriptions

- The 26-21 SMD 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 applications. etc.
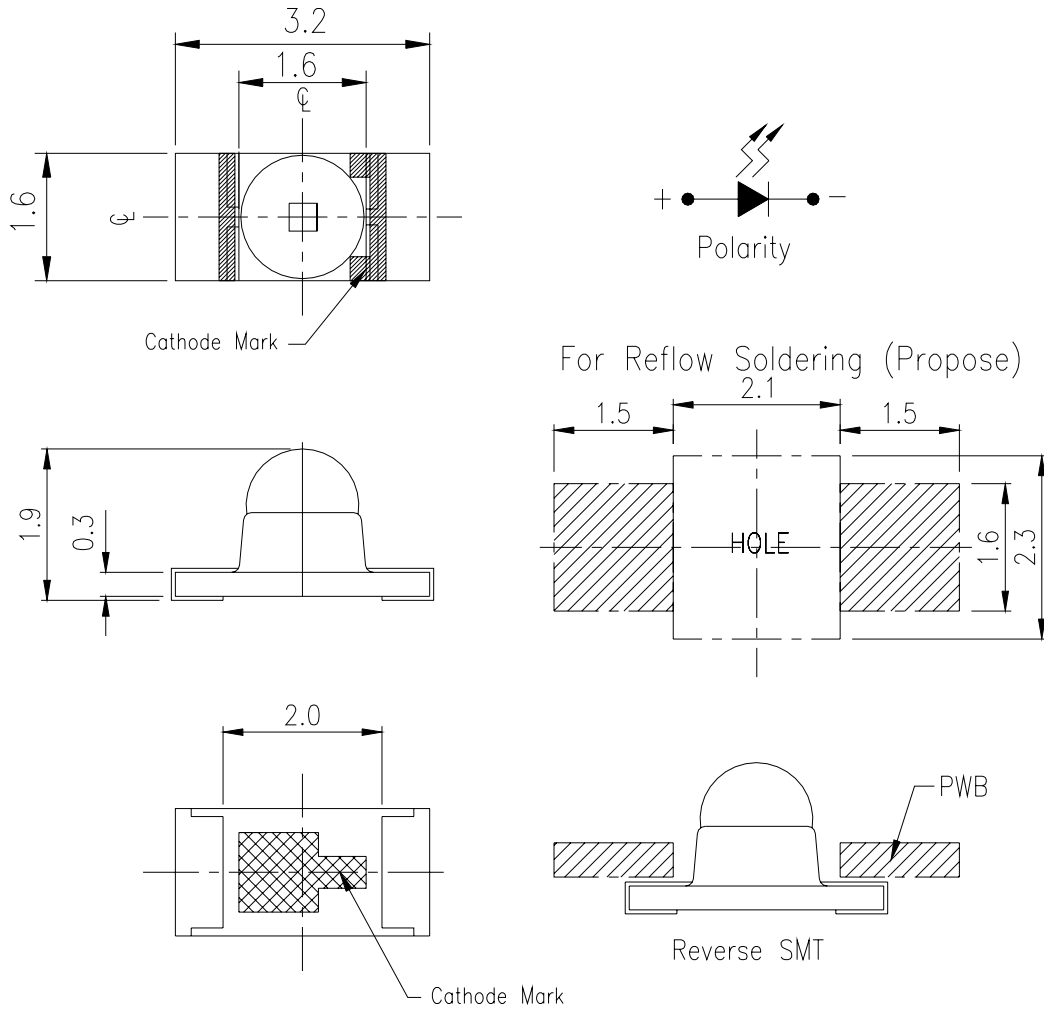
Applications

- Backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
26-21/Y2C-AT2V2B/CT	AlCaInP	Brilliant Yellow	Water Clear

26-21/Y2C-AT2V2B/CT

Package Outline Dimensions

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

26-21/Y2C-AT2V2B/CT

Absolute Maximum Ratings (Ta=25℃)

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}	60	mA
Power Dissipation	Pd	60	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	Reflow Soldering : 260 ℃ for 10 sec. / Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	360	-----	1120	mcd	I_F=20mA
Viewing Angle	$2\theta 1/2$	-----	30	-----	deg	
Peak Wavelength	λp	-----	591	-----	nm	
Dominant Wavelength	λd	585.5	-----	594.5	nm	
Spectrum Radiation Bandwidth	$\triangle \lambda$	-----	15	-----	nm	
Forward Voltage	V_F	1.75	-----	2.35	V	
Reverse Current	I_R	-----	-----	10	μA	V_R=5V

Notes:
1.Tolerance of Luminous Intensity ±10%
2.Tolerance of Dominant Wavelength ±1nm
3.Tolerance of Forward Voltage ±0.1V

Bin Range Of Dom. Wavelength

Group	Bin	Min	Max	Unit	Condition
	D3	585.5	588.5		
A	D4	588.5	591.5	nm	IF=20mA
	D5	591.5	594.5		

Bin Range Of Luminous Intensity

Bin	Min	Max	Unit	Condition
T2	360	450		
U1	450	565		
U2	565	715	mcd	IF=20mA
V1	715	900		
V2	900	1120		

Bin Rang Of Forward Voltage

Group	Bin	Min	Max	Unit	Condition
	0	1.75	1.95		
B	1	1.95	2.15	V	IF=20mA
	2	2.15	2.35		

Notes:

   1.Tolerance of Luminous Intensity ±10%

   2.Tolerance of Dominant Wavelength ±1nm

   3.Tolerance of Forward Voltage ±0.1V

26-21/Y2C-AT2V2B/CT

Typical Electro-Optical Characteristics Curves

Spectrum Distribution

Forward Current vs. Forward Voltage

Luminous Intensity vs. Ambient Temperature

Luminous Intensity vs Forward Current

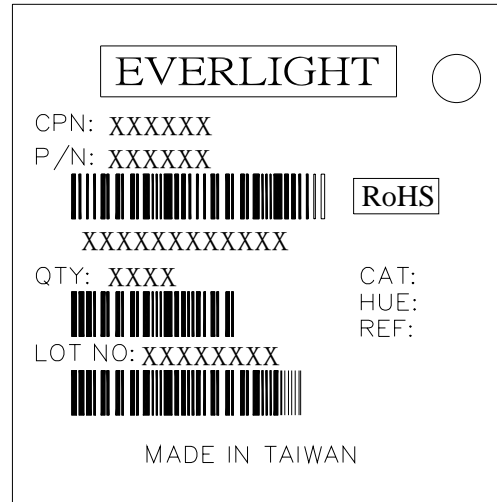
Forward Current Derating Curve

Radiation Diagram
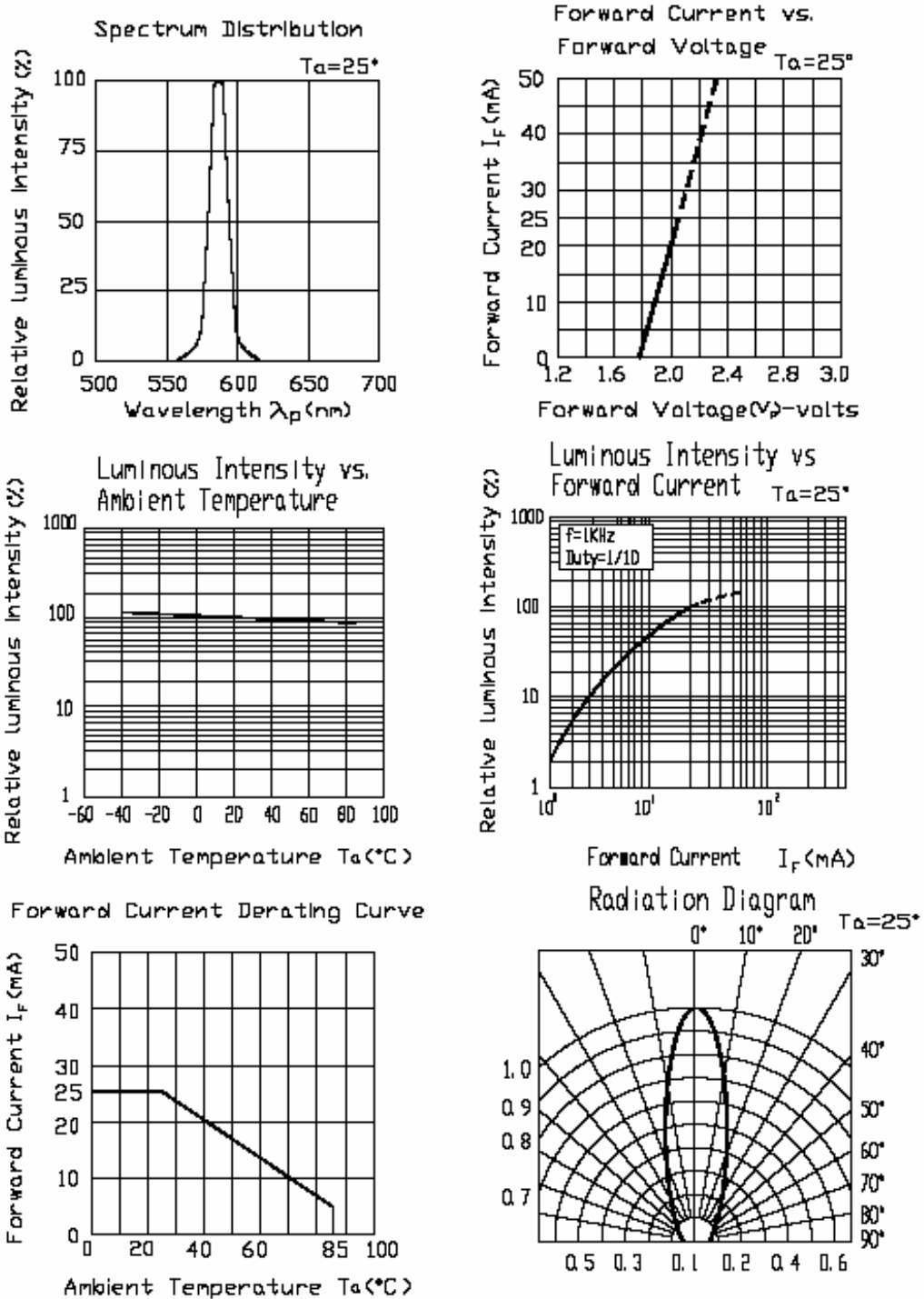
26-21/Y2C-AT2V2B/CT

Label explanation

CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank

```
EVERLIGHT        ◯
CPN: XXXXXX
P/N: XXXXXX
‖‖‖‖‖‖‖‖‖‖‖‖    RoHS
XXXXXXXXXXX
QTY: XXXX            CAT:
                     HUE:
‖‖‖‖‖‖‖‖‖‖           REF:
LOT NO: XXXXXXX
‖‖‖‖‖‖‖‖‖‖‖‖
       MADE IN TAIWAN
```
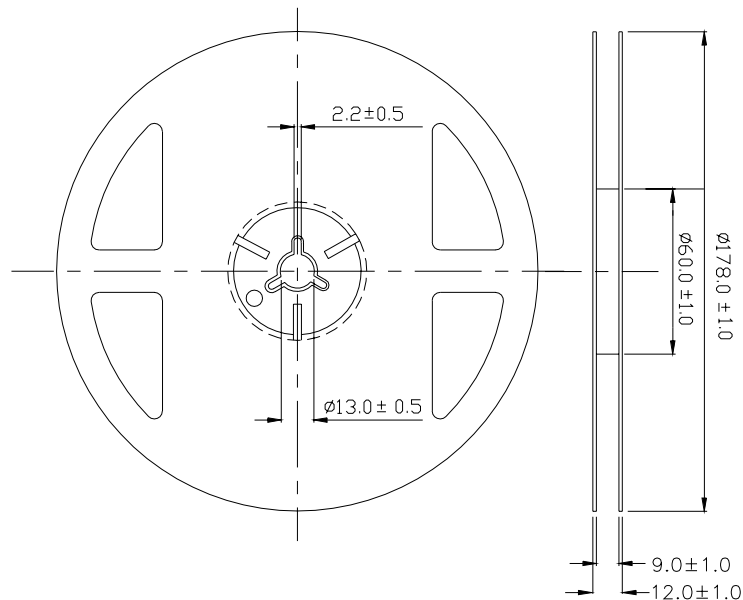
Reel Dimensions

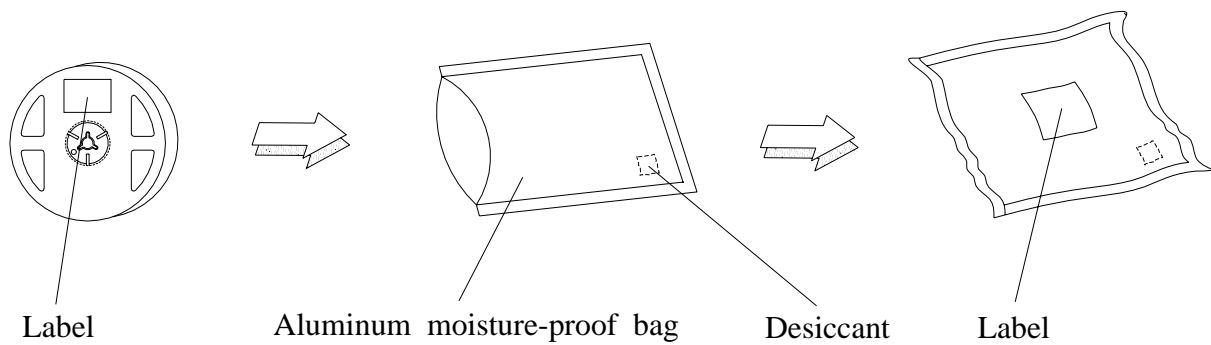**Note:** The tolerances unless mentioned is ±0.1mm ,Unit = mm

Carrier Tape Dimensions: Loaded quantity 1500 PCS per reel
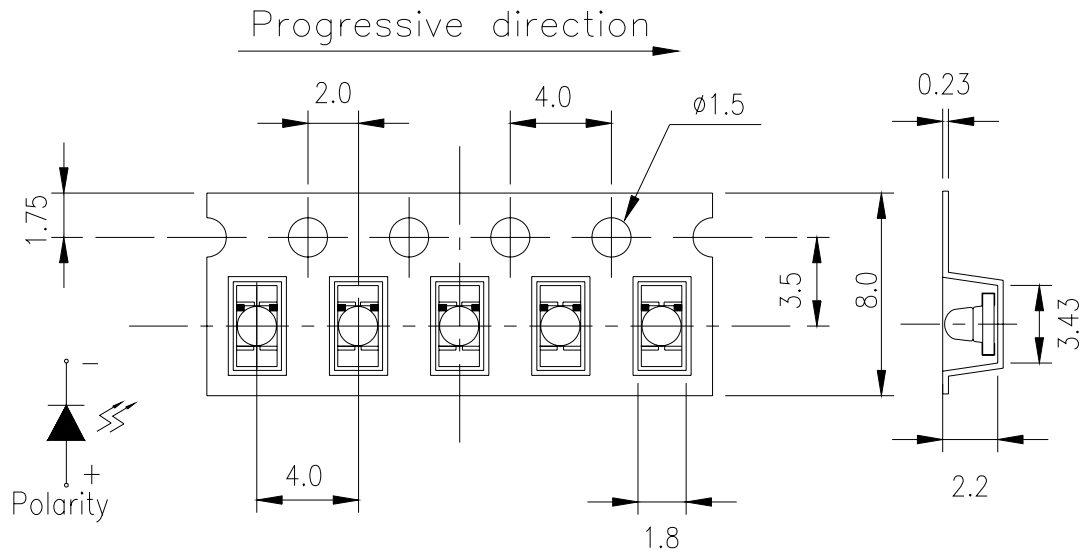
Note: The tolerances unless mentioned is ±0.1mm ,Unit = mm

Moisture Resistant Packaging

Label   Aluminum moisture-proof bag   Desiccant   Label

26-21/Y2C-AT2V2B/CT

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℃±5℃ Min. 5sec.	6 Min.	22 PCS.	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100℃	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40℃	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℃ / 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℃ or less and 90%RH or less.

2.3 After opening the package: The LED's floor life is 1 year under 30 deg 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.

Baking treatment : 60±5℃ for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile
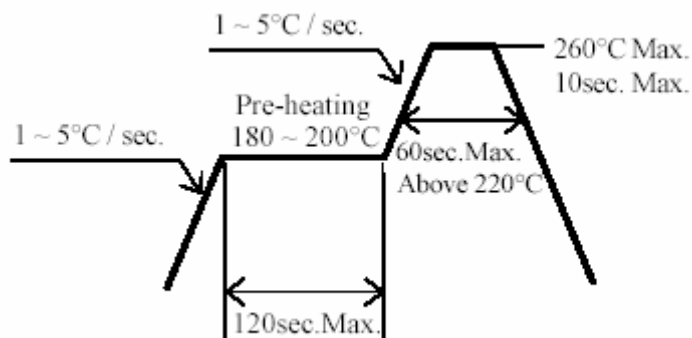
3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.
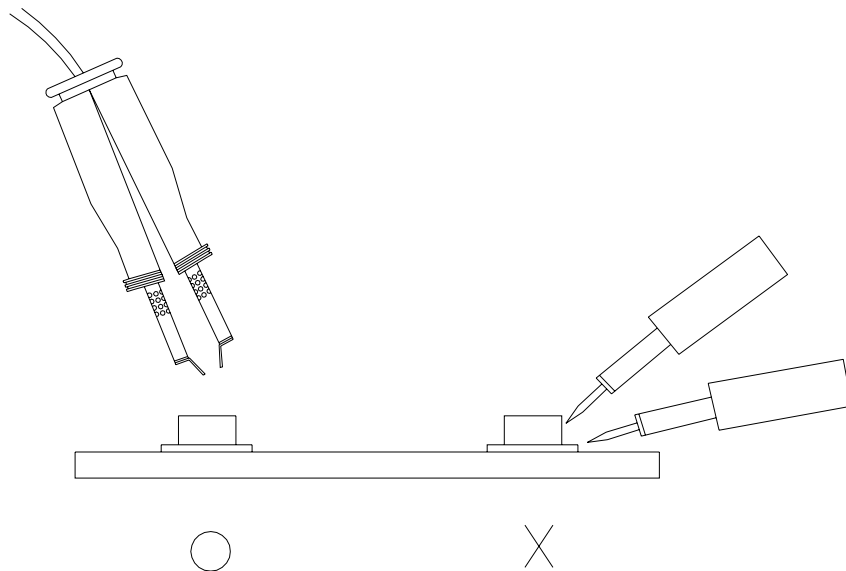
3.4 After soldering, do not warp the circuit board.

26-21/Y2C-AT2V2B/CT

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ 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.