



# EVERLIGHT ELECTRONICS CO.,LTD.

DEVICE NUMBER : DLE-952-205 REV : 1.0  
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## 1.9mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

MODEL NO : 95-21UBGC/TR10

### Features :

- PACKAGE IN 12mm TAPE ON 7" DIAMETER REELS.
- COMPATIBLE WITH AUTOMATIC PLACEMENT EQUIPMENT.
- COMPATIBLE WITH INFRARED AND VAPOR PHASE REFLOW SOLDER PROCESS.
- EIA STD PACKAGE.
- I.C. COMPATIBLE.
- MONO-COLOR TYPE.

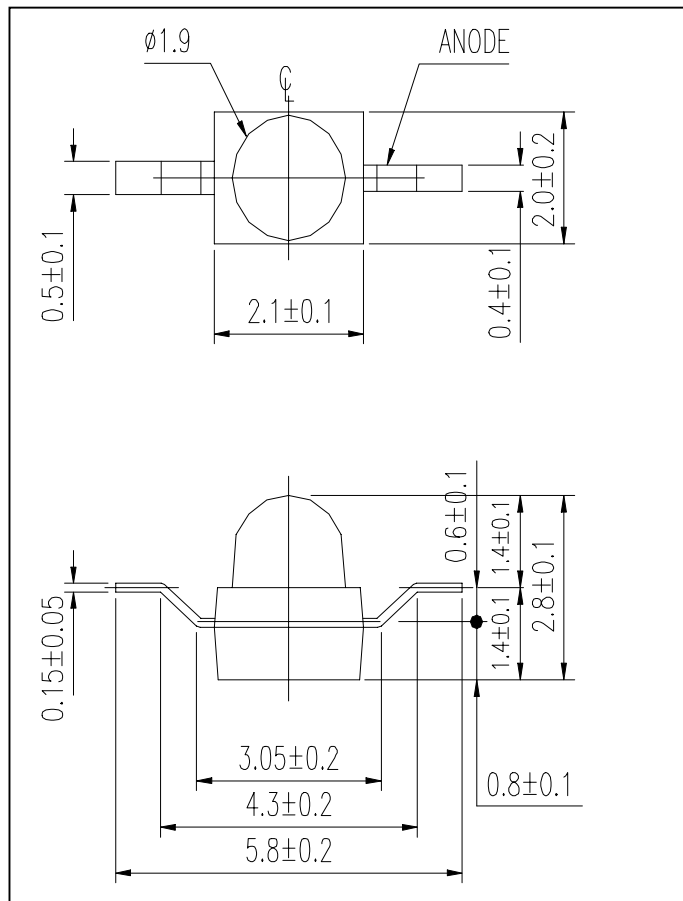
### Description :

- THE 91-21 SMD TAPING IS MUCH SMALLER THAN LEADED COMPONENTS. THUS ENABLE SMALLER BOARD SIZE. HIGHER PACKING DENSITY. REDUCED STORAGE SPACE AND FINALLY SMALLER EQUIPMENT TO BE OBTAINED.
- BESIDES, LIGHT WEIGHT MAKES THEM IDEAL FOR MINIATURE APPLICATION, ECT.
- FURTHERMORE BY AUTOMATION ASSEMBLY MACHINES THE ACCURACY IS ANTICIPATED.

### Applications :

- AUTOMOTIVE : BACKLIGHTING IN DASHBOARD AND SWITCH.
- TELECOMMUNICATION : INDICATOR AND BACKLIGHTING IN TELEPHONE AND FAX.
- INDICATOR AND BACKLIGHT FOR AUDIO AND VIDEO EQUIPMENT.
- INDICATOR AND BACKLIGHT FOR BATTERY DRIVEN EQUIPMENT.
- SMALL INDICATOR FOR OUTDOOR APPLICATIONS.
- INDICATOR AND BACKLIGHT IN OFFICE EQUIPMENT.
- FLAT BACKLIGHT FOR LCD, SWITCH AND SYMBOL.
- GENERAL USE.

### Package Dimension :



| PART NO.       | CHIP                |                  | Lens Color  |
|----------------|---------------------|------------------|-------------|
|                | Material            | Emitted Color    |             |
| 95-21UBGC/TR10 | InGaN/SiC Substrate | Super Blue Green | Water Clear |

OFFICE : NO. 25, Lane 76, Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

TEL : 886-2-2267-2000, 2267-9936

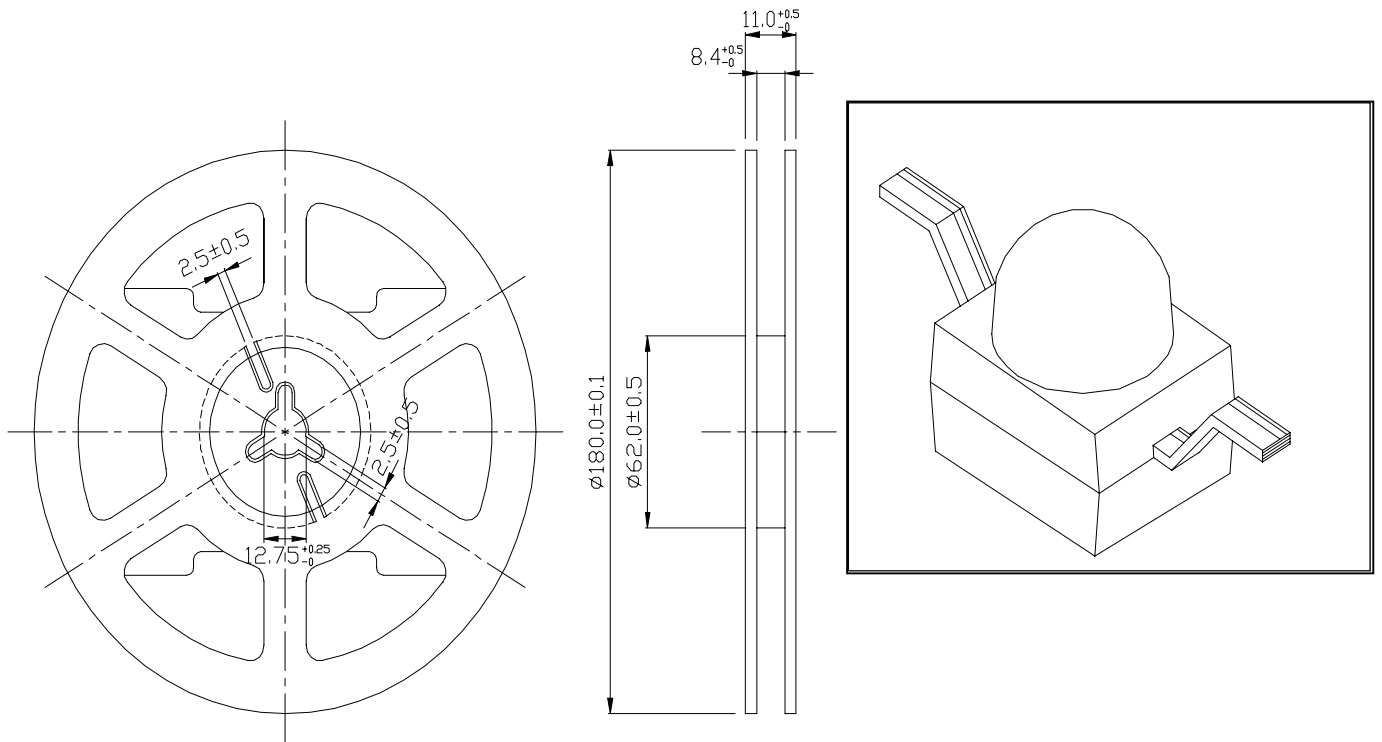
FAX : 886-2-2267-6244, 2267-6189, 2267-6306

<http://www.everlight.com>

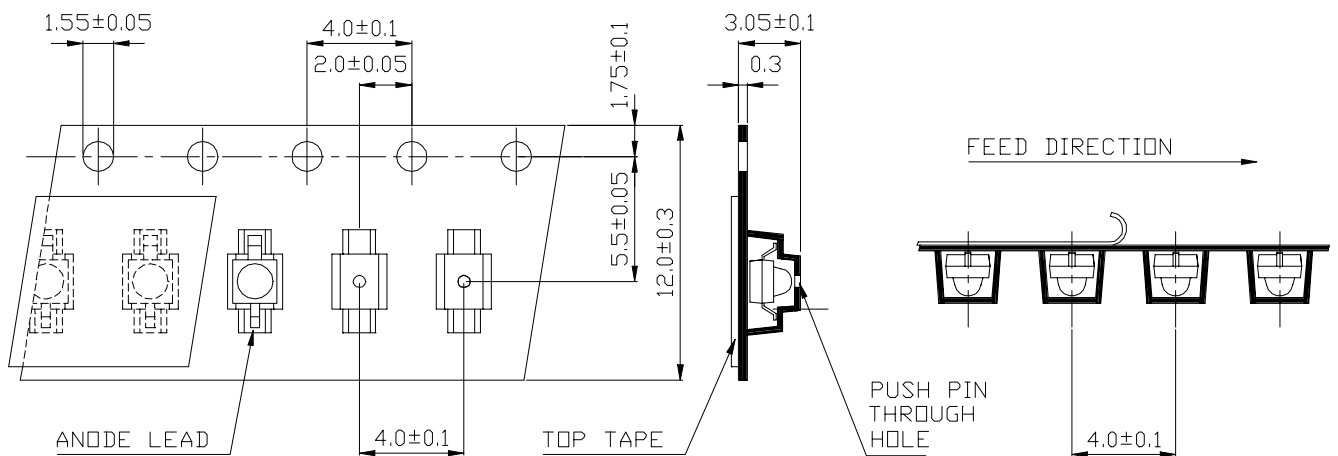
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### ■ Package Dimensions



### ■ Loaded Quantity Per Reel 1000 Pcs/Reel



1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. LEAD SPACING IS MEASURED WHERE THE LEAD EMERGE FROM THE PACKAGE
3. PROTRUDED RESIN UNDER FLANGE 1.5 mm (0.59") MAX.

**1.9mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs**MODEL NO : 95-21UBGC/TR10**■ Absolute Maximum Ratings at Ta = 25°C**

| Parameter                              | Symbol   | Rating            | Unit |
|--|----------|-------------------|------|
| Reverse Voltage                        | Vr       | 5                 | V    |
| Forward Current                        | If       | 30                | mA   |
| Operating Temperature                  | Topr     | -40 ~ +85         | °C   |
| Storage Temperature                    | Tstg     | -40 ~ +100        | °C   |
| Soldering Temperature                  | Tsol     | 260 ± 5 for 5 sec | °C   |
| Electrostatic Discharge                | ESD      | 1000              | V    |
| Power Dissipation                      | Pd       | 120               | mW   |
| Peak Forward Current(Duty 1/10 @ 1KHZ) | If(Peak) | 100               | mA   |

**■ Electronic Optical Characteristics :**

| Parameter                    | Symbol  | MIN. | TYP. | MAX. | Unit | Condition |
|------------------------------|---------|------|------|------|------|-----------|
| Luminous intensity           | Iv      | 407  | 703  | ---- | mcd  | If = 20mA |
| Viewing Angle                | 2 θ 1/2 | ---- | 25   | ---- | deg  |           |
| Peak Wavelength              | λ p     | ---- | 502  | ---- | nm   |           |
| Dominant Wavelength          | λ d     | ---- | 505  | ---- | nm   |           |
| Spectrum Radiation Bandwidth | △ λ     | ---- | 30   | ---- | nm   |           |
| Forward Voltage              | Vf      | ---- | 3.5  | 4.0  | V    | Vr=5V     |
| Reverse Current              | Ir      | ---- | ---- | 10   | μ A  |           |



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### ■ Reliability Test Item And Condition

| NO. | Item                             | Test Conditions  | Test Hours/<br>Cycle | Sample<br>Size | Ac/Re |
|-----|----------------------------------|--|----------------------|----------------|-------|
| 1   | Solder Heat                      | TEMP : 260°C ± 5 °C  | 5 sec                | 76 pcs         | 0/1   |
| 2   | Temperature Cycle                | H : +85°C    30 min<br>↑<br>5 min<br>↓<br>L : -55°C    30 min  | 50 cycle             | 76 pcs         | 0/1   |
| 3   | Thermal Shock                    | H : +100°C    5 min<br>↑<br>10 sec<br>↓<br>L : -10°C    30 min | 50 cycle             | 76 pcs         | 0/1   |
| 4   | High Temperature Storage         | TEMP. : +100°C   | 1000 hrs             | 76 pcs         | 0/1   |
| 5   | Low Temperature Storage          | TEMP. : -55°C  | 1000 hrs             | 76 pcs         | 0/1   |
| 6   | DC Operating Life                | If = 20 mA   | 1000 hrs             | 76 pcs         | 0/1   |
| 7   | High Temperature / High Humidity | 85°C / 85% R.H.  | 1000 hrs             | 76 pcs         | 0/1   |



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### Typical Electro-Optical Characteristic Curves

