

## 1.9mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

MODEL NO : 91-21SYGC/S530-E1/TR10

### Features :

- Package in 12mm tape on 7" diameter reels.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- I.C. compatible.
- EIA std package.
- Mono-color type.

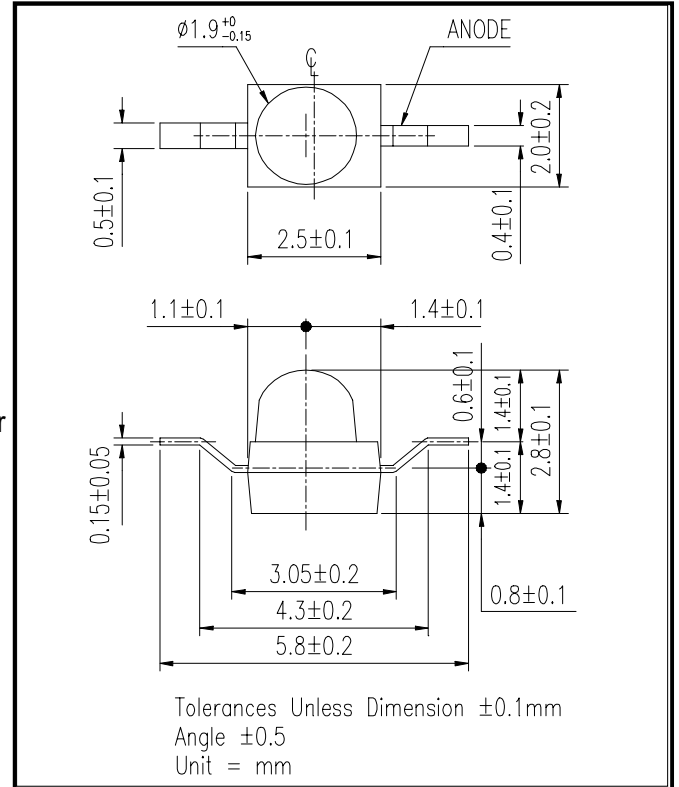
### Description :

- The 91-21 SMD taping is much smaller than leaded compoments. Thusenable 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 :

- Small indicator for outdoor applications.
- Flat backlight for LCD, switch and symbol.
- Indicator and backlight in offic equipment.
- Indicator and backlight for battery driven equipment.
- Indicator and backlight for audio and video equipment.
- Automotive : backlighting in dashboard and switch.
- Telecommunication : indicator and backlighting in telephone and fax.
- General use.

### Package Dimension :



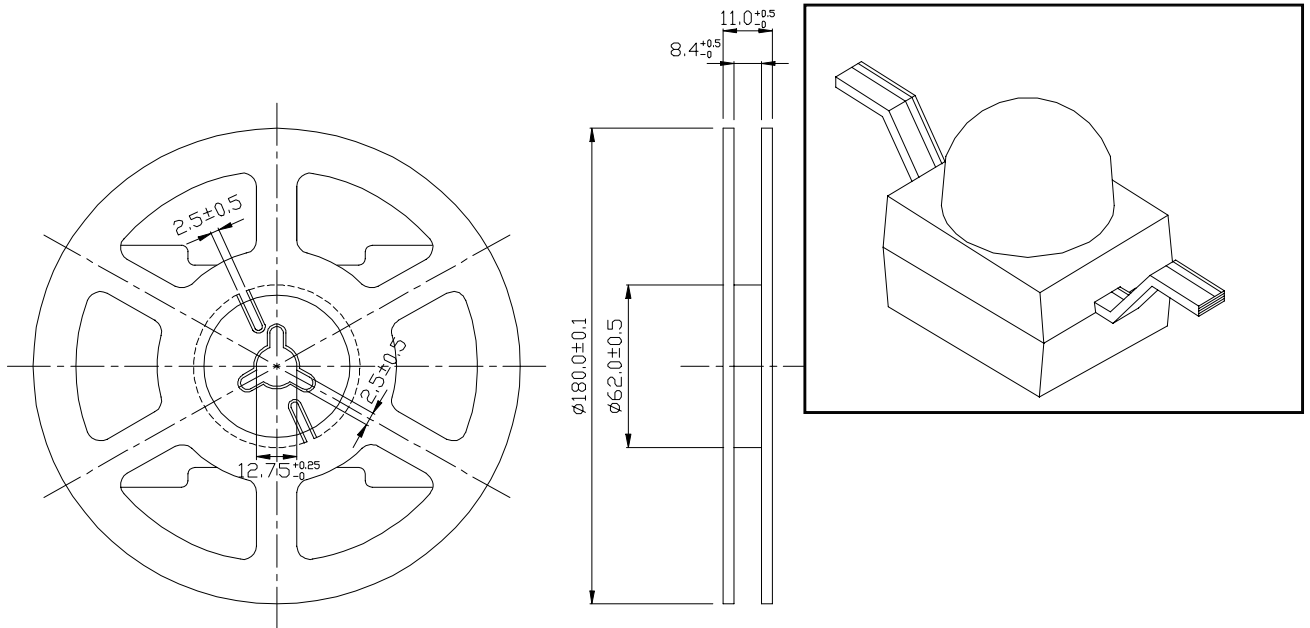
PART NO.	CHIP		Lens Color
	Material	Emitted Color	
91-21SYGC/S530-E1/TR10	AlGaInP	Super Yellow Green	Water Clear

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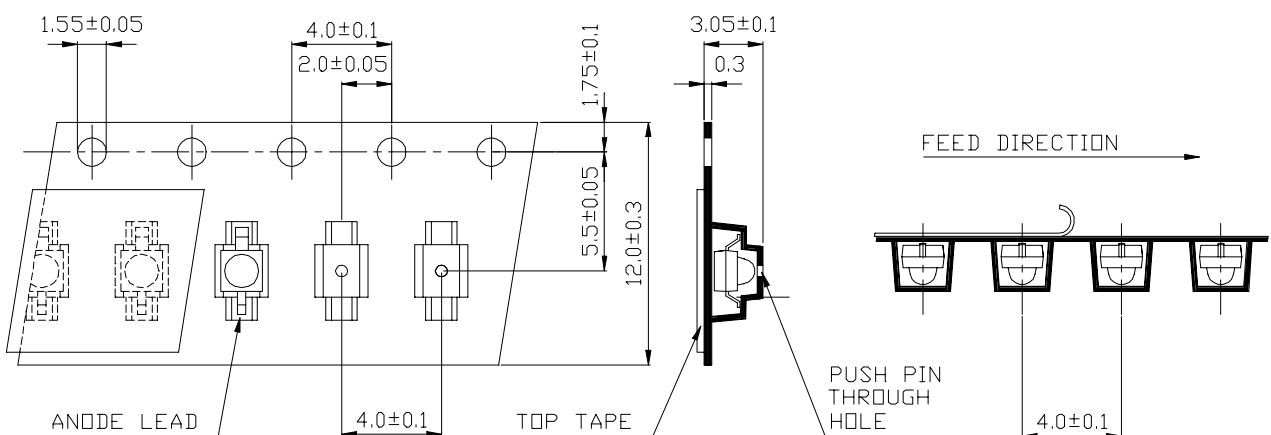
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**Package Dimensions**



**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.



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DEVICE NUMBER : DLE-912-205      REV : 1.0  
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### ■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	Vr	5	V
Forward Current	If	25	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	2000	V
Power Dissipation	Pd	60	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	If(Peak)	160	mA

### ■ Electronic Optical Characteristics :

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous intensity	Iv	----	12	----	mcd	If = 2mA
Luminous intensity	Iv	132	198	----	mcd	If = 20mA
Viewing Angle	2θ 1/2	----	25	----	deg	
Peak Wavelength	λp	----	575	----	nm	
Dominant Wavelength	λd	----	573	----	nm	
Spectrum Radiation Bandwidth	Δλ	----	20	----	nm	
Forward Voltage	Vf	----	2.0	2.4	V	
Reverse Current	Ir	----	----	10	μA	Vr=5V



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### ■ Reliability Test Item And Condition

NO.	Item	Test Conditions	Test Hours/ Cycle	Sample 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 ↑ 5 min ↓ L : -55°C    30 min	50 cycle	76 pcs	0/1
3	Thermal Shock	H : +100°C    5 min ↑ 10 sec ↓ 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

