

DEVICE NUMBER : DLE-912-282

ECN : _____

REV : 1.0PAGE : 1/5

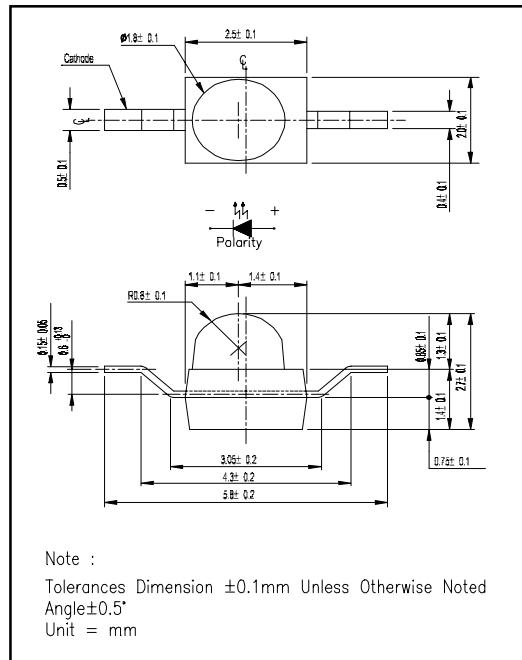
1.8mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

PART NO. : 91-21GC/TR10

■ Features :

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

■ Package Dimensions :



■ Descriptions :

- The 91-21 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, light weight makes them ideal for miniature applications, etc.
- Furthermore by automation assembly machines the accuracy is anticipated.

■ Applications :

- Small indicator for outdoor applications.
- Flat backlight for LCD, switches and symbols.
- Indicator and backlight in office equipment.
- Indicator and backlight for battery driven equipment.
- Indicator and backlight for audio and video equipment.
- Automotive : backlighting in dashboards and switches.
- Telecommunication : indicator and backlighting in telephone and fax.
- General use.

PART NO.	Chip		Lens Color
	Material	Emitted Color	
91-21GC/TR10	GaP	Green	Water Clear

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

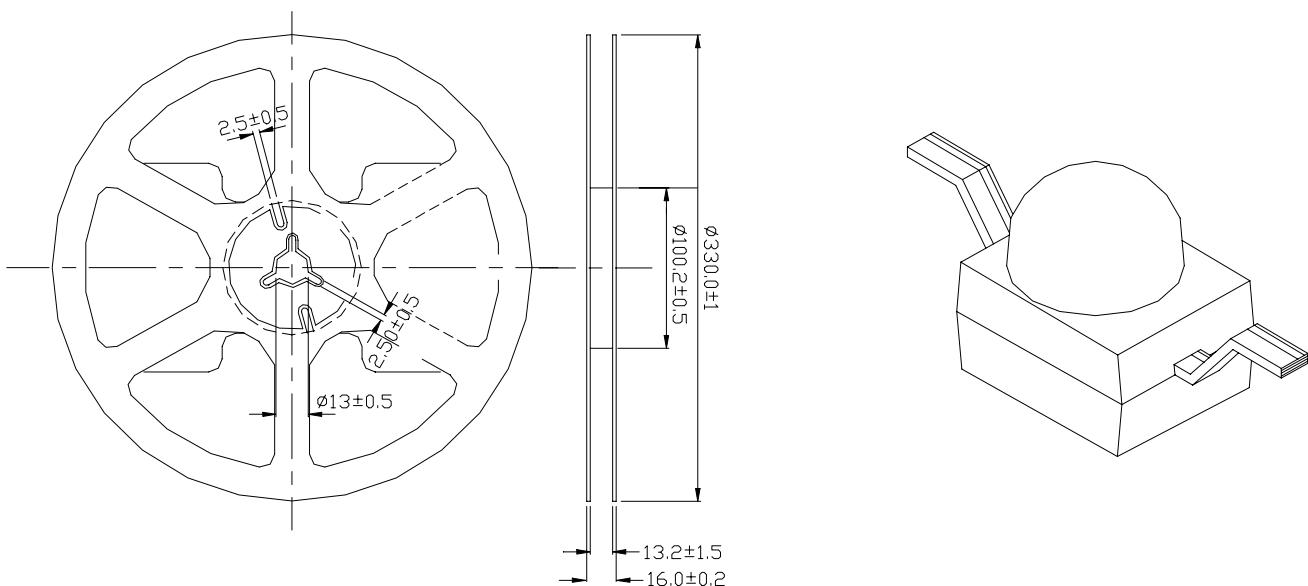
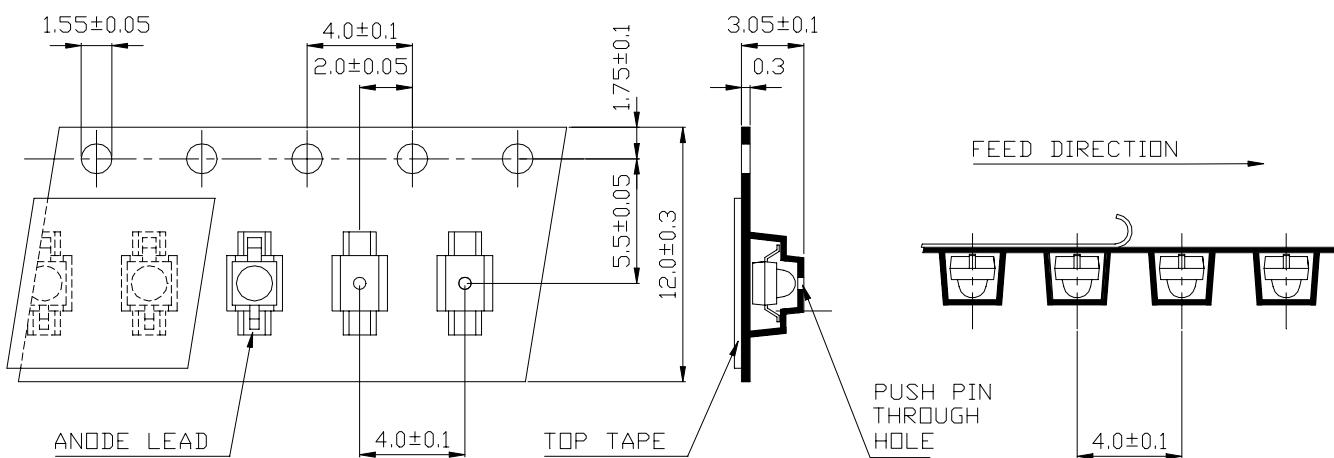
TEL : 886-2-2267-2000,2267-9936

FAX : 886-2-2267-6244,22676189,22676306

<http://www.everlight.com>

DEVICE NUMBER : DLE-912-282 REV : 1.0
ECN : _____ PAGE : 2/5

1.8mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

PART NO. : 91-21GC/TR10**■ 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.



EVERLIGHT ELECTRONICS CO.,LTD.

DEVICE NUMBER : DLE-912-282 REV : 1.0
ECN : _____ PAGE : 3/5

1.8mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

PART NO. : 91-21GC/TR10

■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	30	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature	T _{sol}	260 ± 5 for 5 sec	°C
Power Dissipation	P _d	100	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _F (Peak)	160	mA

■ Electronic Optical Characteristics :

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I _v	14	21	----	mcd	I _F = 10mA
Viewing Angle	2θ 1/2	----	25	----	deg	I _F = 20mA
Peak Wavelength	λ _p	----	565	----	nm	
Dominant Wavelength	λ _d	----	570	----	nm	
Spectrum Radiation Bandwidth	△λ	----	30	----	nm	
Forward Voltage	V _F	1.7	2.1	2.4	V	
Reverse Current	I _R	----	----	10	μA	V _R =5V

DEVICE NUMBER : DLE-912-282

REV : 1.0

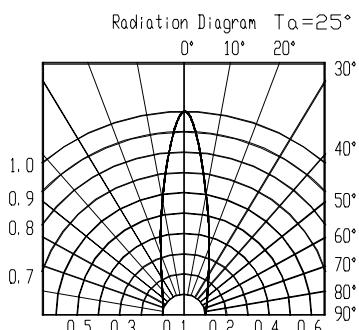
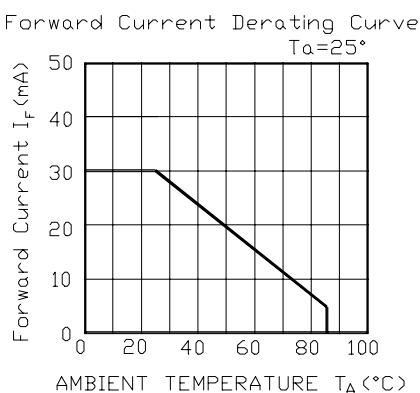
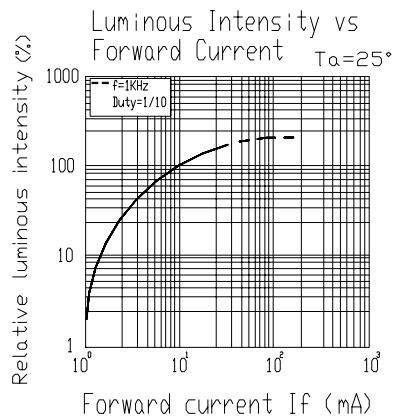
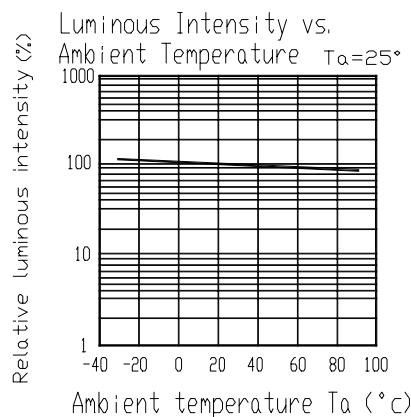
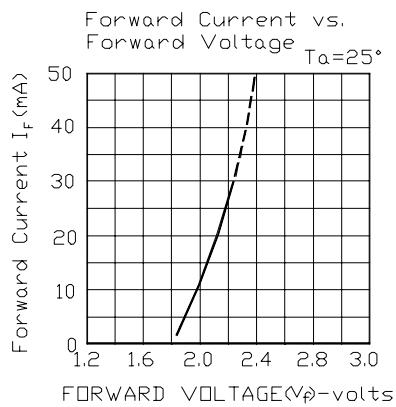
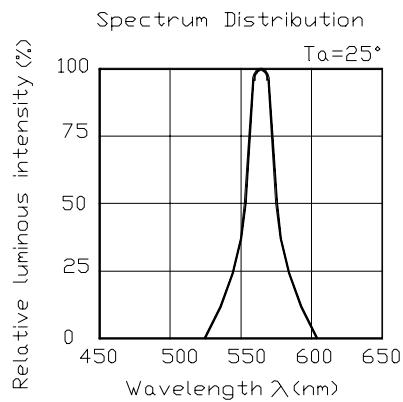
ECN :

PAGE : 5/5

1.8mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

PART NO. : 91-21GC/TR10

■ Typical Electro-Optical Characteristic Curves





EVERLIGHT ELECTRONICS CO.,LTD.

DEVICE NUMBER : DLE-912-282 REV : 1.0
ECN : _____ PAGE : 4/5

1.8mm Round Subminiature "Z-Bend" Lead (Square Base) LEDs

PART NO. : 91-21GC/TR10

■ Reliability Test Items And Conditions

NO.	Item	Test Conditions	Test Hours/ Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP. : $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$	5 SEC.	76 PCS	0/1
2	Temperature Cycle	H : $+85^{\circ}\text{C}$ 30 min. L : -55°C 30 min.	5 min. 50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : $+100^{\circ}\text{C}$ 5 min. L : -10°C 30 min.	10 sec. 50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP. : $+100^{\circ}\text{C}$	1000 HR.	76 PCS	0/1
5	Low Temperature Storage	TEMP. : -55°C	1000 HR.	76 PCS	0/1
6	DC Operating Life	IF = 20 mA	1000 HR.	76 PCS	0/1
7	High Temperature / High Humidity	$85^{\circ}\text{C} / 85\% \text{ R H}$	1000 HR.	76 PCS	0/1
