



# EVERLIGHT ELECTRONICS CO.,LTD.

DEVICE NUMBER : DLE-912-267 REV : 1.0

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## 1.8mm Round Subminiature Special Forming Axial LEDs

PART NO. : 91-21UBC/C430/F2

### 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.

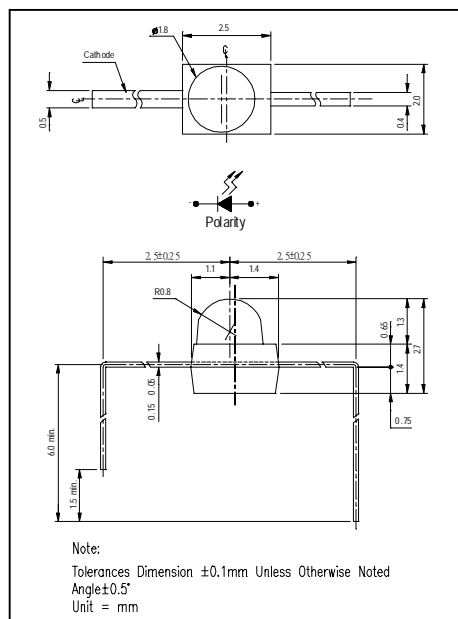
### Descriptions :

- 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 applications, ect.
- 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 offic 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.

### Package Dimensions :



PART NO.	Chip		Lens Color
	Material	Emitted Color	
91-21UBC/C430/F2	GaN/SiC Substrate	Blue	Water Clear

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### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	30	mA
Operating Temperature	T <sub>opr</sub>	-20 ~ +80	°C
Storage Temperature	T <sub>stg</sub>	-30 ~ +90	°C
Soldering Temperature	T <sub>sol</sub>	260 ± 5 for 5 sec	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	P <sub>d</sub>	140	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I <sub>F</sub> (Peak)	70	mA

### Electronic Optical Characteristics :

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I <sub>v</sub>	160	203	----	mcd	I <sub>F</sub> = 20mA
Viewing Angle	2 θ 1/2	----	25	----	deg	
Peak Wavelength	λ <sub>p</sub>	----	428	----	nm	
Dominant Wavelength	λ <sub>d</sub>	----	466	----	nm	
Spectrum Radiation Bandwidth	△ λ	----	65	----	nm	
Forward Voltage	V <sub>F</sub>	----	3.8	4.5	V	V <sub>R</sub> =5V
Reverse Current	I <sub>R</sub>	----	----	10	μ A	

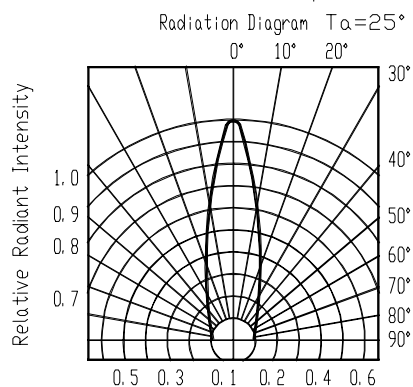


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### ■ Typical Electro-Optical Characteristic Curves





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### ■ Reliability Test Items And Conditions

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 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100°C 5 min. § 10 sec. L : -10°C 30 min.	50 CYCLES	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	I <sub>F</sub> = 20 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C / 85% R H	1000 HRS	76 PCS	0/1