



# EVERLIGHT ELECTRONICS CO., LTD.

MODEL NO: 94-22UBC/C430

Device Number : DSE-942-017 REV. 1.1

**High Performance with Reflector LEDs**

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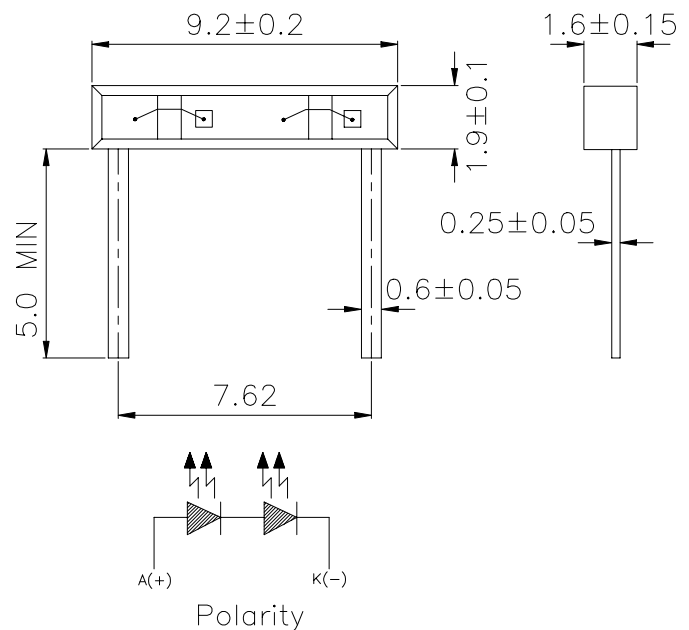
## Features :

- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- EIA std package.
- IC compatible.

## 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 LED, switches and symbol.
- General use.

## Package Dimensions :



## Notes :

Tolerances Unless Dimension  $\pm 0.1\text{mm}$

Angle  $\pm 0.5^\circ$

Unit = mm

Part NO.	Chip		Lens Color
	Material	Emitted Color	
94-22UBC/C430	GaN/SiC	Blue	Water Clear

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■ Absolute Maximum Ratings at Ta = 25°C :

Parameter	Symbol	Rating	Unit
Reverse Voltage	Vr	5	V
Forward Current	If	30	mA
Operating Temperature	Topr	-20~+80	°C
Storage Temperature	Tstg	-30~+90	°C
Soldering Temperature	Tsol	260(for 5second)	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	Pd	280	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	If(Peak)	70	mA

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	Iv	-----	4	-----	mcd	If=2mA
		35	65	-----	mcd	If=20mA
Viewing Angle	2θ 1/2	-----	130	-----	deg	If=20mA
Peak Wavelength	λ p	-----	430	-----	nm	If=20mA
Dominant Wavelength	λ d	-----	466	-----	nm	If=20mA
Spectrum Radiation Bandwidth	△ λ	-----	65	-----	nm	If=20mA
Forward Voltage	Vf	-----	7.6	9.0	V	If=20mA
Reverse Current	Ir	-----	-----	50	μ A	Vr=5V



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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 30min ∫ 5 min L : -55°C 30min	50 CYCLE	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	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% RH	1000 HRS	76 PCS	0/1



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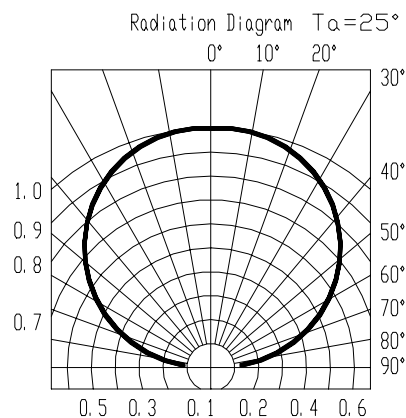
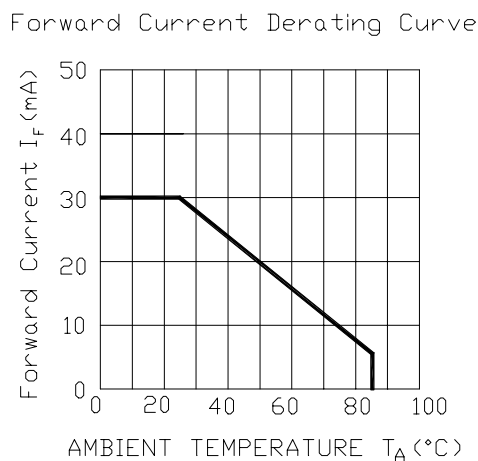
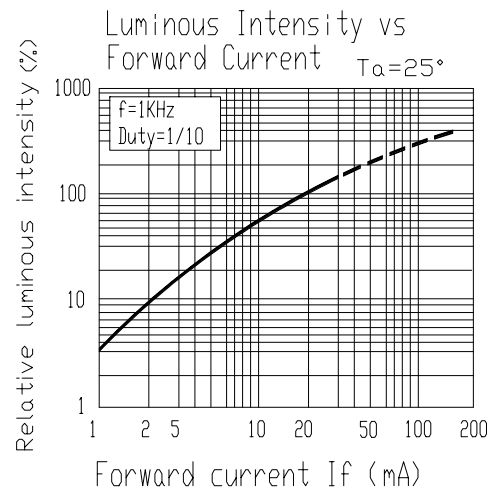
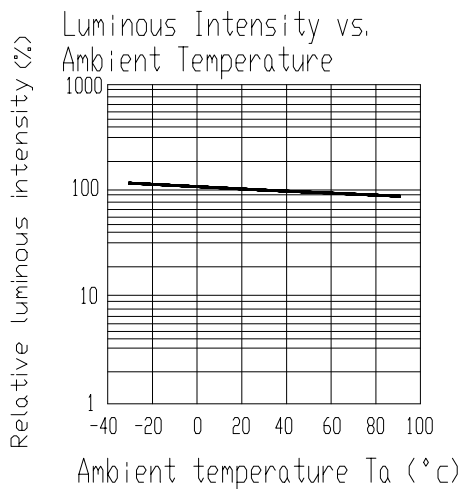
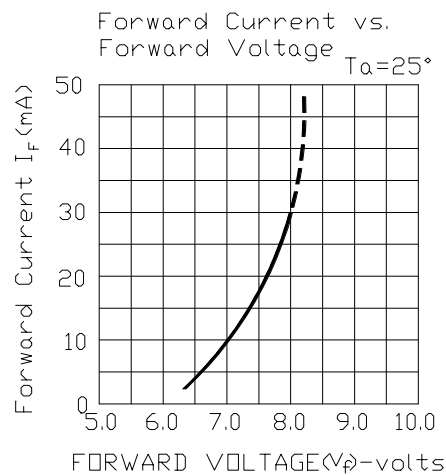
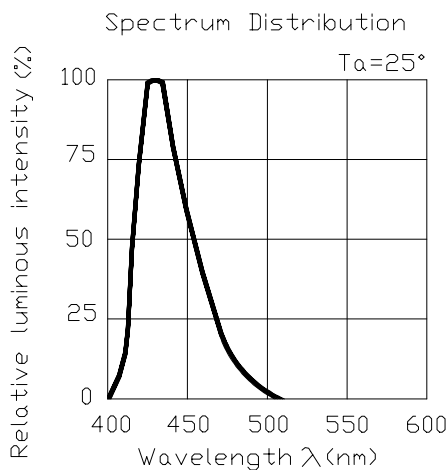
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### Typical Electro-Optical Characteristic Curves :





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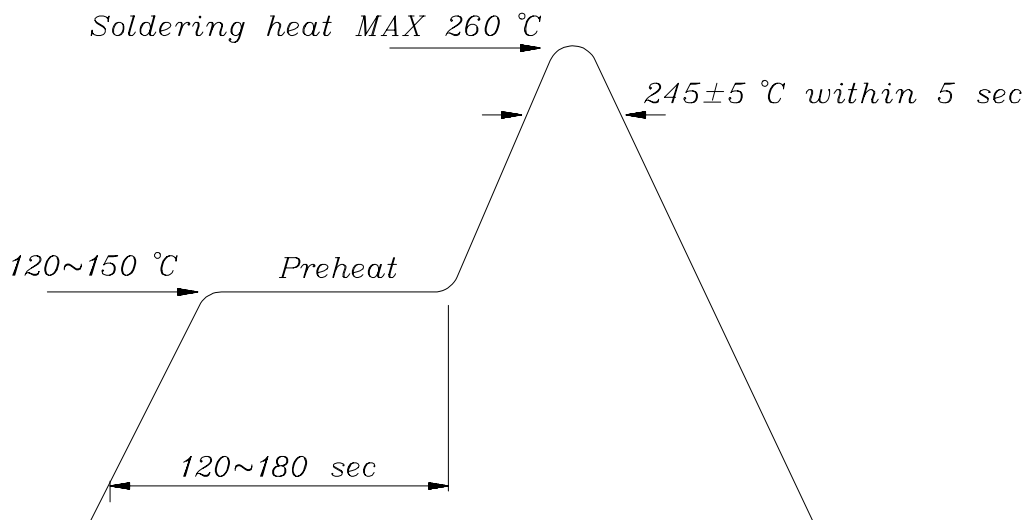
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### ■ Soldering heat reliability ( DIP ) :

Please refer to the following figure :

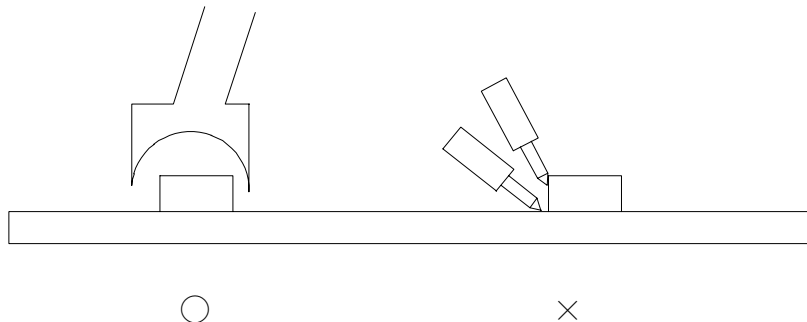


### ■ Soldering Iron :

Basic spec is  $\leq 5$  sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of Iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under 230 °C .

### ■ Rework :

1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.





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■ Reflow Temp / Time :

