



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-431-022 REV: 1.0

## 0.39" Single Digit Displays

MODEL NO : ELS-431SURWA/S530-A2 ECN :            Page: 1/5

### ■ Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.

### ■ Applications:

- Audio equipment
- Instrument panels
- Digital read out display

### ■ Description :

- The ELS-431 series is a large 10.0mm (0.39")high seven segment display design for viewing distances up to 7 meters.
- These displays provide excellent readability in bright ambient light .
- These device is made with white segments and gray surface.

PART NO	CHIP		C.C. or C.A.
	Material	Emitted Color	
ELS-431SURWA/S530-A2	AlGaInP	Hyper Red	C.C.

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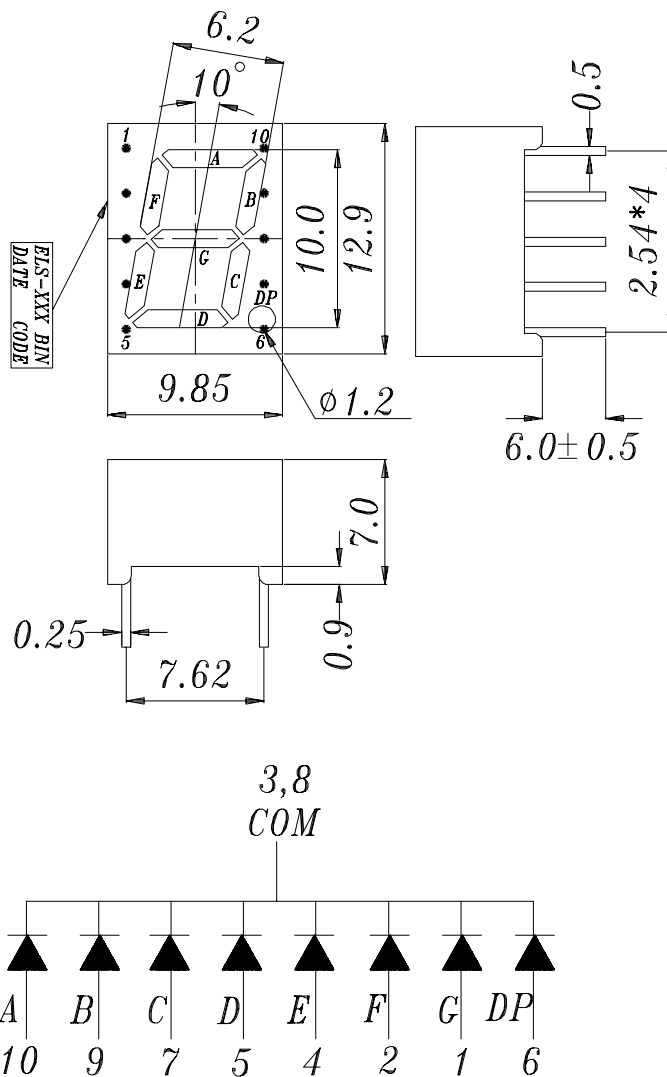
<http://www.everlight.com>



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### ■ Package Dimension:



COMMON CATHODE

1 ANODE G  
2 ANODE F  
3 COMMON CATHODE  
4 ANODE E  
5 ANODE D  
6 ANODE DP  
7 ANODE C  
8 COMMON CATHODE  
9 ANODE B  
10 ANODE A

### ■ NOTES:

- 1.All dimensions are millimeters ,tolerance is 0.25mm unless otherwise noted.
- 2.Above specification may be changed without notice.  
Supplier will reserve authority on material change for above specification.



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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 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°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	Per segment	Iv	1.05	2.9	----	mcd	If=2mA
			7.80	19.4	----	mcd	If=10mA
Intensity	Per decimal point		0.45	1.05	----	mcd	If=2mA
			2.80	5.60	----	mcd	If=10mA
Peak Wavelength		$\lambda$ p	----	632	----	nm	If=20mA
Dominant Wavelength		$\lambda$ d	----	624	----	nm	If=20mA
Spectrum Radiation Bandwidth		$\triangle \lambda$	----	20	----	nm	If=20mA
Forward Voltage		Vf	----	2.0	2.4	V	If=20mA
Reverse Current		Ir	----	----	10	V	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 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 = 10 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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## Typical Electro-Optical Characteristic Curves:

<SUR>

