



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-431-020 REV: 1.0

0.39" Single Digit Displays

MODEL NO : ELS-431SYGWA/S530-E1 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-431SYGWA/S530-E1 | AlGaInP | Super Yellow Green | C.C. |

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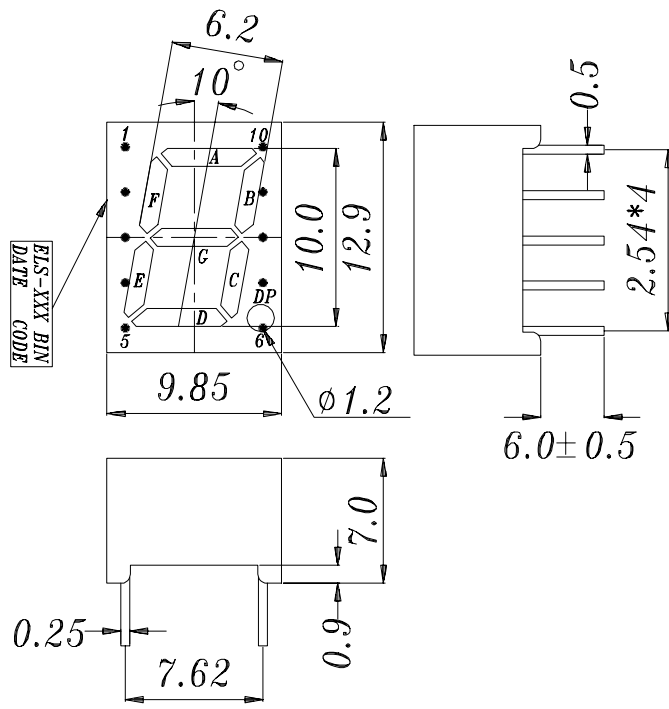
FAX : 886-2-2267-6244,22676189,22676306

<http://www.everlight.com>

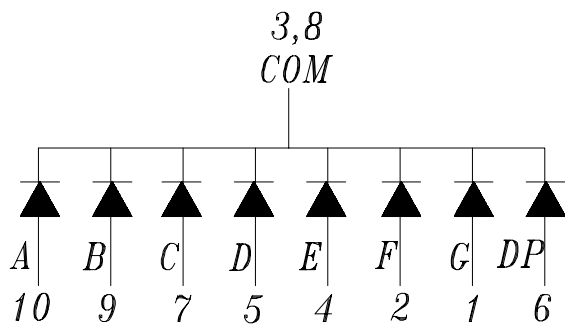


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■ Package Dimension:



- 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 | 0.45 | 1.5 | ---- | mcd | If=2mA |
| | | | 4.00 | 10.0 | ---- | mcd | If=10mA |
| Intensity | Per decimal point | Iv | 0.11 | 0.45 | ---- | mcd | If=2mA |
| | | | 1.40 | 4.00 | ---- | mcd | If=10mA |
| Peak Wavelength | | λ_p | ---- | 575 | ---- | nm | If=20mA |
| Dominant Wavelength | | λ_d | ---- | 573 | ---- | nm | If=20mA |
| Spectrum Radiation Bandwidth | | $\Delta \lambda$ | ---- | 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:

SYG

