



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-516-015 REV: 1.0

0.52" Single Digit Displays

MODEL NO : ELS-516SYGWA/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-516 series is a large 13.2mm (0.52")high seven segment display design for viewing distances up to 7 meters.
- These displays provide excellent reliability 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-516SYGWA/S530-E1 | AlGaInP  | Super Yellow Green | C.A.         |

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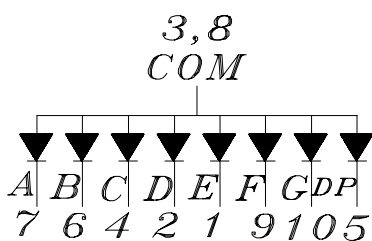
<http://www.everlight.com>



REV: 1.0

ECN : \_\_\_\_\_

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- 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℃ :

| Parameter                              | Symbol   | Rating      | Unit |
|----------------------------------------|----------|-------------|------|
| Reverse Voltage                        | Vr       | 5           | V    |
| Forward Current                        | If       | 25          | mA   |
| Operating Temperature                  | Topr     | -40 to +85  | ℃    |
| Storage Temperature                    | Tstg     | -40 to +100 | ℃    |
| Soldering Temperature                  | Tsol     | 260 ± 5     | ℃    |
| 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 Intensity           | Per segment       | I <sub>v</sub> | 0.45 | 1.6  | ---- | mcd  | If=2mA             |
|                              |                   |                | 4.00 | 10.5 | ---- | mcd  | If=10mA            |
|                              | Per decimal point |                | 0.11 | 0.75 | ---- | mcd  | If=2mA             |
|                              |                   |                | 1.40 | 5.60 | ---- | mcd  | If=10mA            |
| Peak Wavelength              |                   | λ <sub>p</sub> | ---- | 575  | ---- | nm   | If=20mA            |
| Dominant Wavelength          |                   | λ <sub>d</sub> | ---- | 573  | ---- | nm   | If=20mA            |
| Spectrum Radiation Bandwidth |                   | △λ             | ---- | 20   | ---- | nm   | If=20mA            |
| Forward Voltage              |                   | V <sub>f</sub> | ---- | 2.0  | 2.4  | V    | If=20mA            |
| Reverse Current              |                   | I <sub>r</sub> | ---- | ---- | 10   | μA   | V <sub>r</sub> =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<br>└ 5 min<br>L : -55°C 30min | 50 CYCLE         | 76 PCS      | 0/1   |
| 3  | Thermal Shock                    | H : +100°C 5min<br>└ 10 sec<br>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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0.52" Single Digit Displays

Typical Electro-Optical Characteristic Curves:

SYG

