

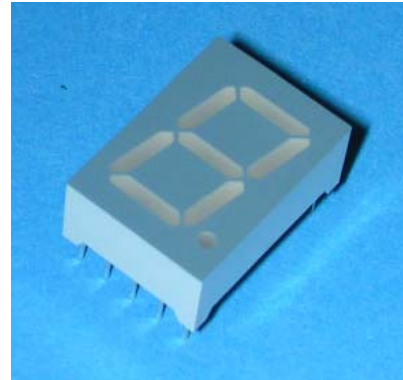


**Technical Data Sheet**  
**0.52" Single Digit Displays**

**ELS-515SYGWA/S530-E2**

■ **Features :**

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



■ **Descriptions :**

- The ELS-515 series is a large 13.2 mm (0.52")high seven segment display designed for viewing distances up to 7 meters.
- These displays provide excellent reliability in bright ambient light.
- These devices are made with white segments and gray surface.

■ **Applications :**

- Audio equipment
- Instrument panels
- Digital read out display

| PART NO.             | Chip     |                    |
|----------------------|----------|--------------------|
|                      | Material | Emitted Color      |
| ELS-515SYGWA/S530-E2 | AlGaInP  | Super Yellow Green |

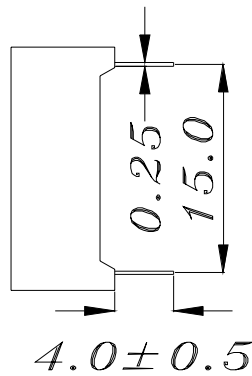
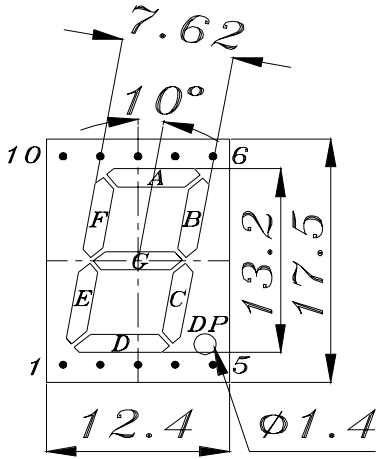
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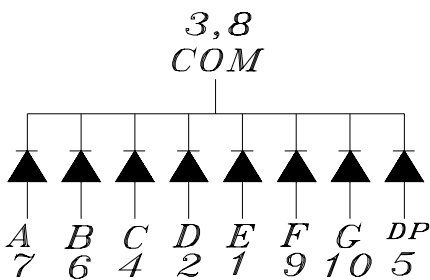
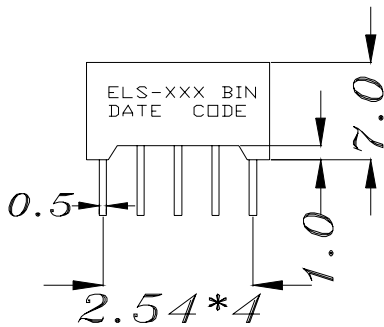
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Package Dimensions



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



- Notes:**
1. All dimensions are in 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                        | V <sub>R</sub>       | 5           | V    |
| Forward Current                        | I <sub>F</sub>       | 25          | mA   |
| Operating Temperature                  | T <sub>opr</sub>     | -40 to +85  | °C   |
| Storage Temperature                    | T <sub>stg</sub>     | -40 to +100 | °C   |
| Soldering Temperature                  | T <sub>sol</sub>     | 260 ± 5     | °C   |
| Electrostatic Discharge                | ESD                  | 2000        | V    |
| Power Dissipation                      | P <sub>d</sub>       | 60          | mW   |
| Peak Forward Current(Duty 1/10 @ 1KHZ) | I <sub>F(Peak)</sub> | 60          | mA   |

## ■ Electronic optical characteristics :

| Parameter                    |                   | Symbol         | Min.  | Typ. | Max. | Unit | Condition            |
|------------------------------|-------------------|----------------|-------|------|------|------|----------------------|
| Luminous Intensity           | Per segment       | I <sub>v</sub> | ----  | 0.6  | ---- | mcd  | I <sub>F</sub> =2mA  |
|                              |                   |                | 2.0   | 3.2  | ---- |      | I <sub>F</sub> =10mA |
|                              | Per decimal point |                | ----  | 0.2  | ---- | mcd  | I <sub>F</sub> =2mA  |
|                              |                   |                | 0.6   | 1.0  | ---- |      | I <sub>F</sub> =10mA |
| Peak Wavelength              |                   | λ <sub>p</sub> | ----  | 575  | ---- | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength          |                   | λ <sub>d</sub> | ----  | 573  | ---- | nm   | I <sub>F</sub> =20mA |
| Spectrum Radiation Bandwidth |                   | Δλ             | ----  | 20   | ---- | nm   | I <sub>F</sub> =20mA |
| Forward Voltage              |                   | V <sub>F</sub> | ----- | 2.0  | 2.4  | V    | I <sub>F</sub> =20mA |
| Reverse Current              |                   | I <sub>R</sub> | ----  | ---- | 100  | μA   | V <sub>R</sub> =5V   |

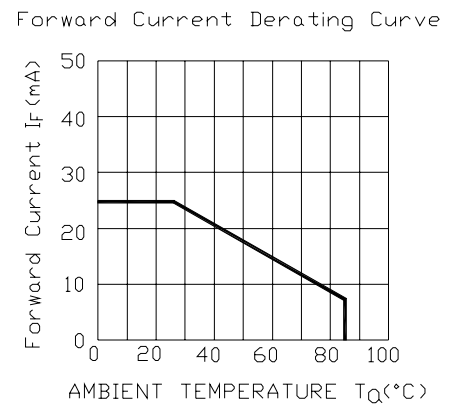
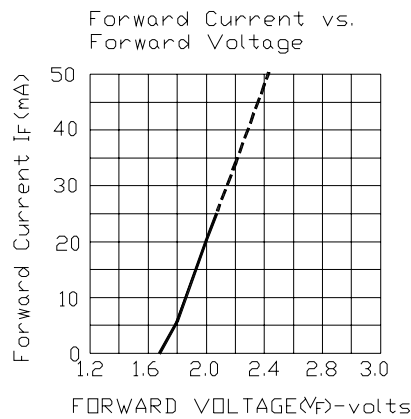
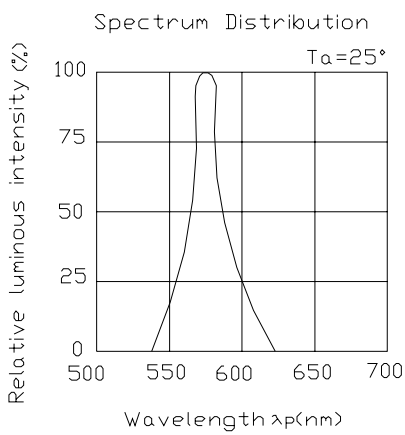


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■ Typical Electro-Optical Characteristic Curves:

CHIP Material:ALGaInP  
Emitted Color:Super Yellow Green





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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<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   |