



# EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : CDDS-512-001 REV: 2

## 0.56" Single Digit Displays

PART NO. : ELS-512EWR ECN :                      Page: 1/5

### ■ Features :

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

### ■ Applications:

- Audio equipment
- Instrument panels
- Digital read out display

### ■ Descriptions :

- The ELS-512 series is a large 14.22mm (0.56")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 red surface.

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| PART NO.   | Chip      |               |
|------------|-----------|---------------|
|            | Material  | Emitted Color |
| ELS-512EWR | GaAsP/GaP | Orange        |

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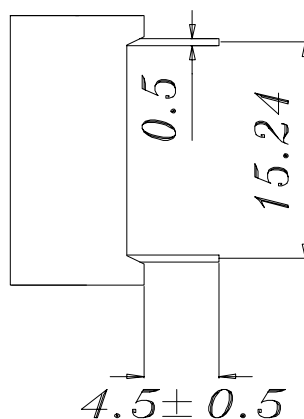
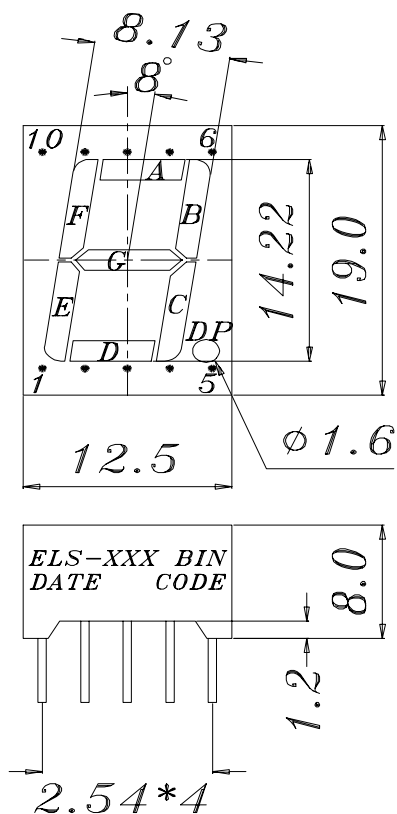
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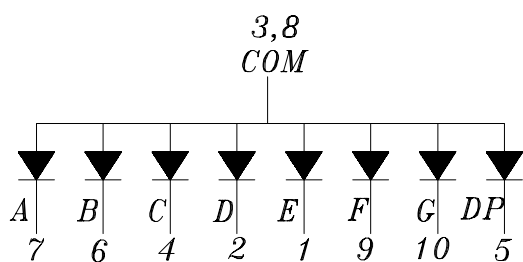
0.56" Single Digit Displays

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## ■ Package Dimensions:



COMMON ANODE  
 1 CATHODE E  
 2 CATHODE D  
 3 COMMON ANODE  
 4 CATHODE C  
 5 CATHODE DP  
 6 CATHODE B  
 7 CATHODE A  
 8 COMMON ANODE  
 9 CATHODE F  
 10 CATHODE 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                        | VR       | 5           | V    |
| Forward Current                        | IF       | 30          | mA   |
| Operating Temperature                  | Topr     | -40 to +85  | °C   |
| Storage Temperature                    | Tstg     | -40 to +100 | °C   |
| Soldering Temperature                  | Tsol     | 260 ± 5     | °C   |
| Power Dissipation                      | Pd       | 100         | mW   |
| Peak Forward Current(Duty 1/10 @ 1KHZ) | IF(Peak) | 160         | mA   |

### ■ Electronic optical characteristics :

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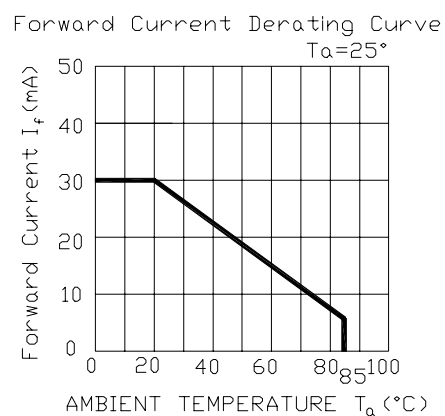
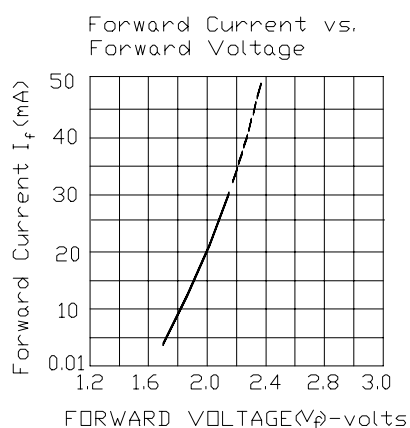
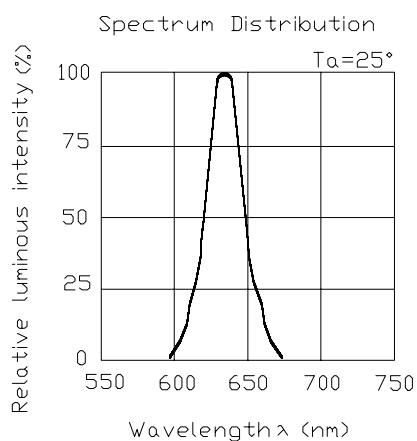
| Parameter                    |                   | Symbol | Min. | Typ. | Max. | Unit | Condition |
|------------------------------|-------------------|--------|------|------|------|------|-----------|
| Luminous Intensity           | Per segment       | Iv     | 0.75 | 2.00 | ---- | mcd  | IF=10mA   |
|                              | Per decimal point |        | 0.25 | 0.50 | ---- |      |           |
| Peak Wavelength              |                   | λ p    | ---- | 635  | ---- | nm   | IF=20mA   |
| Dominant Wavelength          |                   | λ d    | ---- | 625  | ---- | nm   | IF=20mA   |
| Spectrum Radiation Bandwidth |                   | △ λ    | ---- | 45   | ---- | nm   | IF=20mA   |
| Forward Voltage              |                   | VF     | 1.7  | 2.0  | 2.4  | V    | IF=20mA   |
| Reverse Current              |                   | IR     | ---- | ---- | 10   | μ A  | VR=5V     |



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PART NO. : ELS-512EWRECN : Page: 4/5**Typical Electro-Optical Characteristic Curves:**



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PART NO. : ELS-512EWR

ECN :

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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<br>DataSheet4U.com               | 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   |