



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-232-002 REV: 1.1

2.24" Single Digit Displays

PART NO. : ELS-2325IDB 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-2325 series is a large 57.0mm (2.24")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 red segments and black surface.

| PART NO. | Chip | |
|-------------|-----------|---------------|
| | Material | Emitted Color |
| ELS-2325IDB | GaAsP/GaP | Hi-Eff Red |

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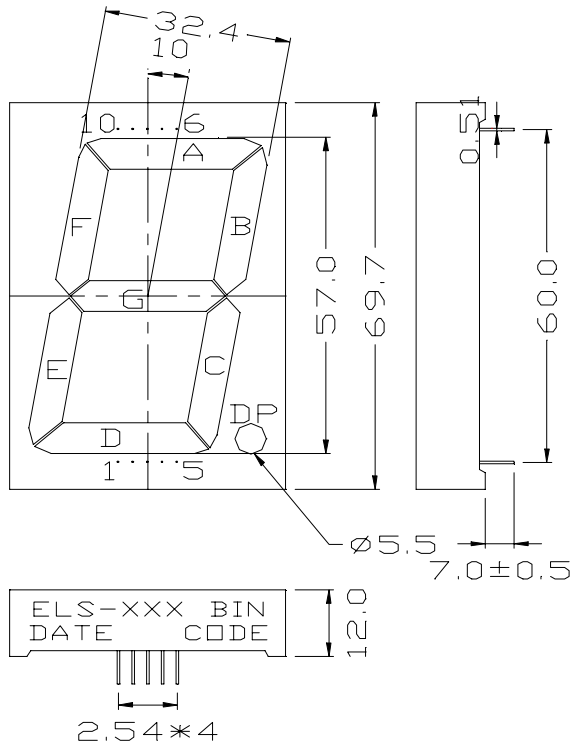
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<http://www.everlight.com>

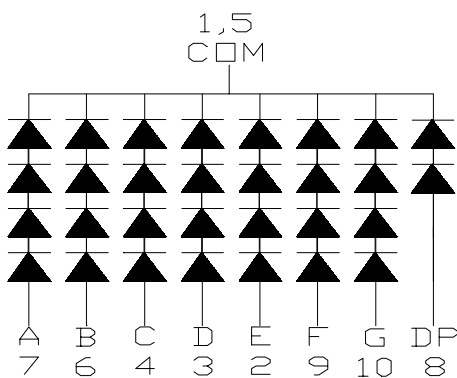


2.24" Single Digit Displays

■ Package Dimensions:



- COMMON CATHODE
- 1 COMMON CATHODE
 - 2 ANODE E
 - 3 ANODE D
 - 4 ANODE C
 - 5 COMMON CATHODE
 - 6 ANODE B
 - 7 ANODE A
 - 8 ANODE DP
 - 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.



2.24" Single Digit Displays

■ 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 :

| Parameter | | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---------------------|-------------------|------------------|------|------|------|---------|-----------|
| Luminous Intensity | Per segment | Iv | 2.0 | 7.5 | ---- | mcd | IF=10mA |
| | Per decimal point | | 0.7 | 2.5 | ---- | | |
| Peak Wavelength | | λp | ---- | 635 | ---- | nm | IF=20mA |
| Dominant Wavelength | | λd | ---- | 625 | ---- | nm | IF=20mA |
| Spectrum Radiation | Bandwidth | $\Delta \lambda$ | ---- | 45 | ---- | nm | IF=20mA |
| Forward Voltage | | VF | 6.8 | 8.0 | 9.6 | V | IF=20mA |
| Reverse Current | | IR | ---- | ---- | 10 | μA | VR=5V |



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ECN :

Page: 4/5

■ Typical Electro-Optical Characteristic Curves:

CHIP Material:GaAsP/GaP
Emitted Color:Hi-Eff Red/Orange

Spectrum Distribution
Ta=25°

| Wavelength λp (nm) | Relative luminous intensity (%) |
|--------------------|---------------------------------|
| 550 | 0 |
| 600 | 25 |
| 630 | 100 |
| 650 | 75 |
| 700 | 25 |
| 750 | 0 |

Forward Current vs. Forward Voltage

| FORWARD VOLTAGE Vp (volts) | Forward Current If (mA) |
|----------------------------|-------------------------|
| 1.6 | 0 |
| 1.8 | 5 |
| 2.0 | 15 |
| 2.2 | 35 |
| 2.4 | 50 |

Forward Current Derating Curve

| AMBIENT TEMPERATURE Ta (°C) | Forward Current If (mA) |
|-----------------------------|-------------------------|
| 0 | 30 |
| 25 | 30 |
| 50 | 20 |
| 75 | 10 |
| 90 | 0 |



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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 ∫ 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 |

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|