



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDT-316-005 REV: 1.1

0.36" Tripple Digit Display

MODEL NO : ELT-316GDB/S155 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 ELT-316 series is a large 9.2mm (0.36")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 green segments and black surface.

| PART NO | CHIP | | C.C. or C.A. |
|-----------------|----------|---------------|--------------|
| | Material | Emitted Color | |
| ELT-316GDB/S155 | GaP | Green | C.A. |

OFFICE : NO. 25,Lane 76,Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

TEL : 886-2-2267-2000,2267-9936

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

<http://www.everlight.com>



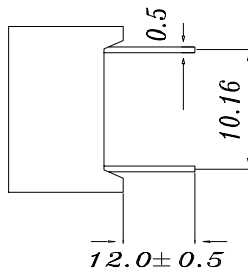
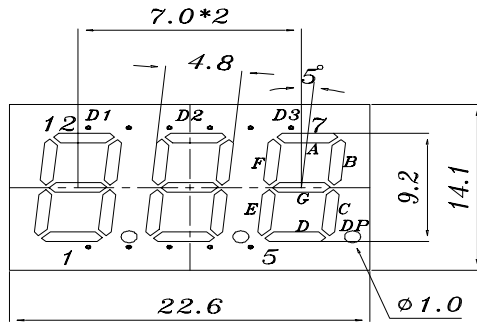
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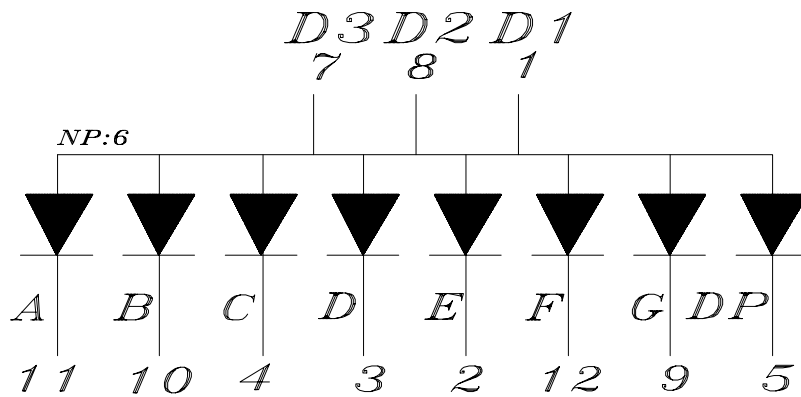
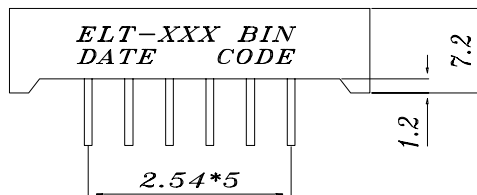
ECN : _____

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■ Package Dimensions:



- COMMON ANODE
- 1 COMMON ANODE D1
- 2 CATHODE E
- 3 CATHODE D
- 4 CATHODE C
- 5 CATHODE DP
- 6 NO PIN
- 7 COMMON ANODE D3
- 8 COMMON ANODE D2
- 9 CATHODE G
- 10 CATHODE B
- 11 CATHODE A
- 12 CATHODE F



■ 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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| 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 | 0.45 | 0.8 | ---- | mcd | If=10mA |
| | Per decimal point | | 0.20 | 0.40 | ---- | | |
| Peak Wavelength | | λp | ---- | 565 | ---- | nm | If=20mA |
| Dominant Wavelength | | λd | ---- | 570 | ---- | nm | If=20mA |
| Spectrum Radiation Bandwidth | | $\Delta \lambda$ | ---- | 30 | ---- | nm | If=20mA |
| Forward Voltage | | Vf | 1.7 | 2.1 | 2.4 | V | If=20mA |
| Reverse Current | | Ir | ---- | ---- | 10 | μA | 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:

Spectrum Distribution
 $T_a=25^\circ$

| Wavelength λ (nm) | Relative luminous intensity (%) |
|---------------------------|---------------------------------|
| 540 | 0 |
| 550 | 25 |
| 565 | 100 |
| 580 | 25 |
| 600 | 0 |

Forward Current vs. Forward Voltage

| FORWARD VOLTAGE (V) (volts) | Forward Current I_f (mA) |
|-----------------------------|----------------------------|
| 1.8 | 0.01 |
| 2.0 | 10 |
| 2.2 | 20 |
| 2.4 | 30 |
| 2.6 | 45 |

Forward Current Derating Curve
 $T_a=25^\circ$

| AMBIENT TEMPERATURE T_a (°C) | Forward Current I_f (mA) |
|--------------------------------|----------------------------|
| 0 | 30 |
| 20 | 30 |
| 40 | 25 |
| 60 | 20 |
| 80 | 15 |
| 85 | 10 |
| 100 | 0 |