



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DLE-031-007 REV: 3.0

4.7mm Round Type LED Lamps

MODEL NO : 313HD ECN : _____ Page: 1/4

■ Features :

- Choice of various viewing angles
- Available on table and reel
- Reliable and robust
- Pb free
- The product itself will remain within RoHS compliant version.

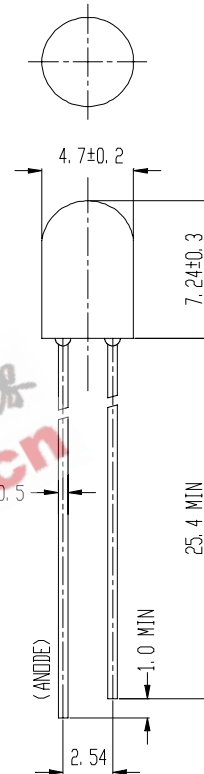
■ Descriptions:

- The series is specially designed for applications requiring higher brightness.
- The LED lamps are available with different colors, intensities, epoxy colors, etc.

■ Applications :

- TV set
- Monitor
- Telephone
- Computer

■ Package Dimensions:



■ Notes :

- 1.All dimensions are in millimeters.
- 2.An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.

| PART NO | Chip | | Lens Color |
|---------|----------|---------------|--------------|
| | Material | Emitted Color | |
| 313HD | GaP | Bright Red | Red Diffused |

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Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|--|----------|-------------|------|
| Forward Current | If | 15 | mA |
| Operating Temperature | Topr | -40 to +85 | °C |
| Storage Temperature | Tstg | -40 to +100 | °C |
| Soldering Temperature | Tsol | 260 ± 5 | °C |
| Power Dissipation | Pd | 45 | mW |
| Peak Forward Current(Duty 1/10 @ 1KHZ) | If(Peak) | 50 | mA |
| Reverse Voltage | Vr | 5 | V |

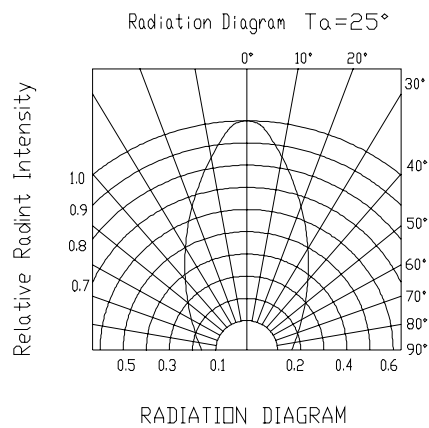
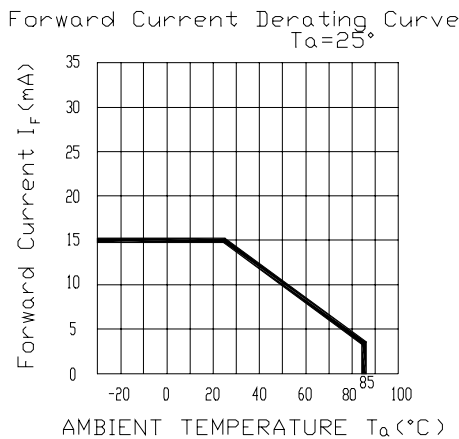
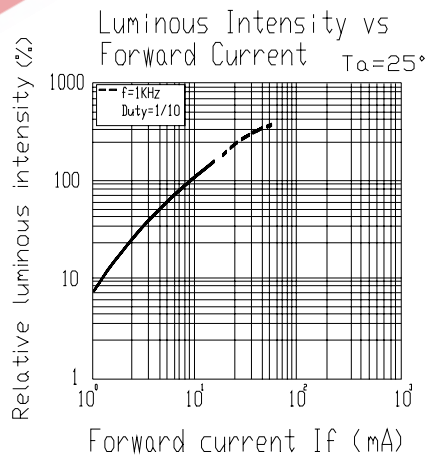
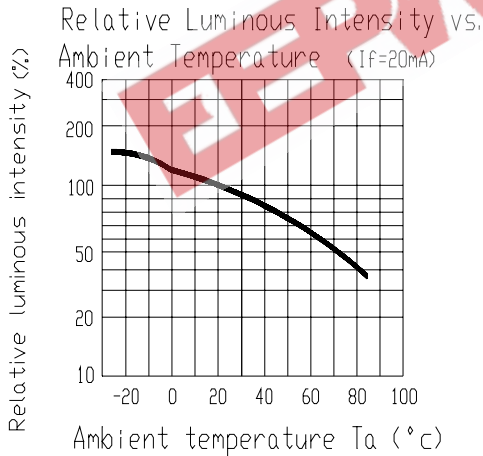
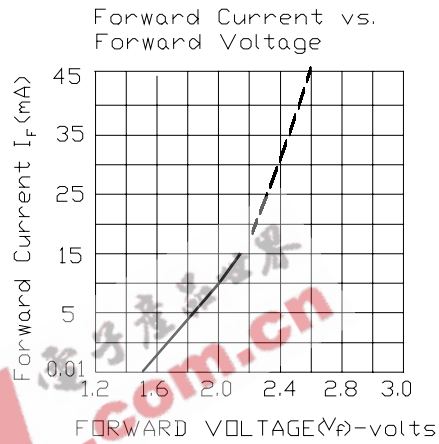
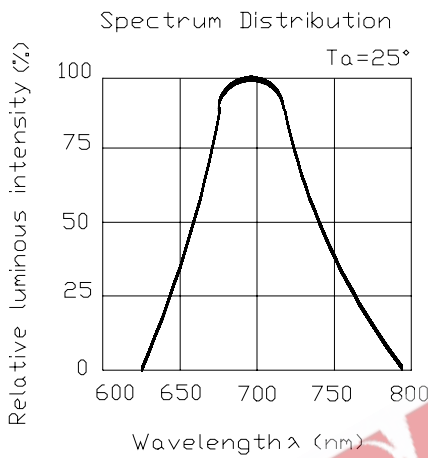
Electronic Optical Characteristics :

| Parameter | Symbol | MIN. | TYP. | MAX. | Unit | Condition |
|------------------------------|--------|------|------|------|------|-----------|
| Luminous intensity | Iv | 0.50 | 1.60 | / | mcd | If= 10 mA |
| Viewing Angle | 2θ 1/2 | / | 60 | / | deg | If= 10 mA |
| Peak Wavelength | λ p | / | 697 | / | nm | If= 10 mA |
| Dominant Wavelength | λ d | / | 650 | / | nm | If= 10 mA |
| Spectrum Radiation Bandwidth | △ λ | / | 90 | / | nm | If= 10 mA |
| Forward Voltage | Vf | 1.5 | 2.0 | 2.4 | V | If= 10 mA |
| Reverse Current | Ir | / | / | 10 | μ A | Vr= 5 V |



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■ Typical Electro-Optical Characteristic Curves





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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 |