

Device Number: \_\_\_\_\_

REV: 1.0

## 4.1\*5.0mm Elliptical Wide Angle LED Lamps

Model No.: **IE-5E34E13D-1B-J07**

ECN: \_\_\_\_\_

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### ■ Features :

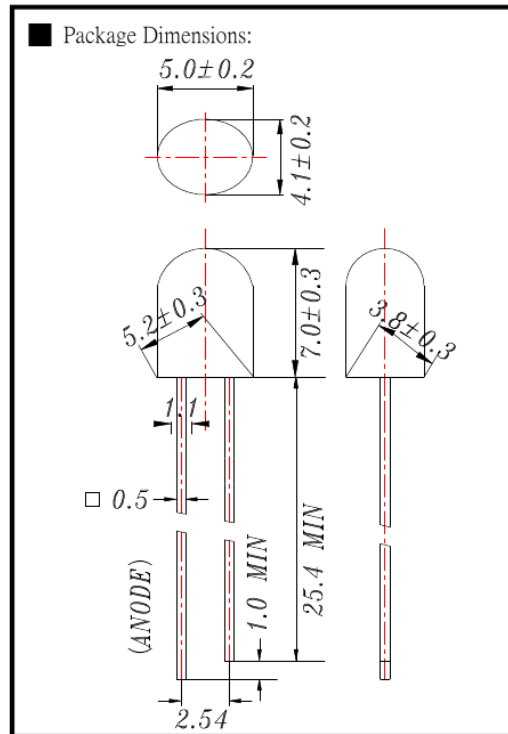
- High radiant intensity
- Choice of various viewing angles
- Reliable and robust

### ■ 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



**Notes:** 1. All dimensions are in millimetres

2. An epoxy meniscus may extend about  $1.5$  mm ( $0.059$ " ) down to the lead.

3. Tolerances unless Dimension  $\pm 0.25$  mm.

| PART NO.           | Chip      |               | Lens Color      |
|--------------------|-----------|---------------|-----------------|
|                    | Material  | Emitted Color |                 |
| IE-5E34E13D-1B-J07 | GaAsP/GaP | Red           | Tinted Diffused |

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■ Absolute Maximum Ratings at Ta = 25°C

| Parameter             | Symbol  | Rating      | Unit |
|-----------------------|---------|-------------|------|
| Forward Current       | IF      | 25          | 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  | DL-4RA- | 160         | mA   |
| Reverse Voltage       | VR      | 5           | V    |

Note: \*1:IFP Conditions --Pulse Width ≤ 1msec and Duty ≤ 1/10.

\*2:Soldering time ≤ 5 seconds.

**Electro-Optical Characteristics (Ta=25°C)**

| Parameter                    | Symbol | Condition     | Min. | Typ.           | Max. | Unit |
|------------------------------|--------|---------------|------|----------------|------|------|
| Forward Voltage              | VF     | IF= 20 mA     | /    | 1.8            | 2.4  | V    |
| Reverse Current              | IR     | VR= 5 V       | /    | /              | 10   | μA   |
| Luminous Intensity           | Iv     | IF= 20        | 6500 | 8500           | /    | mcd  |
| Viewing Angle                | 2θ 1/2 | IF= 20 mA     | /    | (X)45<br>(Y)25 | /    | deg  |
| Peak Wavelength              | λ p    | IF= 20 Notes: | 620  | /              | 625  | nm   |
| Dominant Wavelength          | λ d    | IF= 20 mA     | /    | 622            | /    | nm   |
| Spectrum Radiation Bandwidth | △ λ    | IF= 20 mA     | /    | 18             | /    | nm   |

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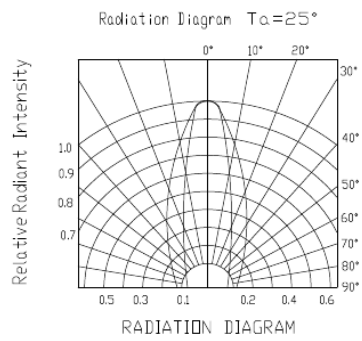
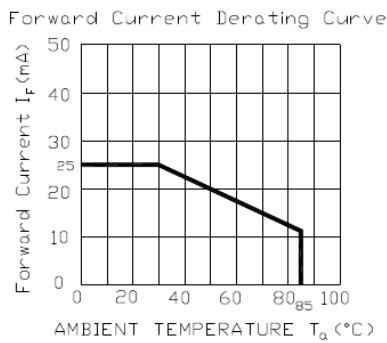
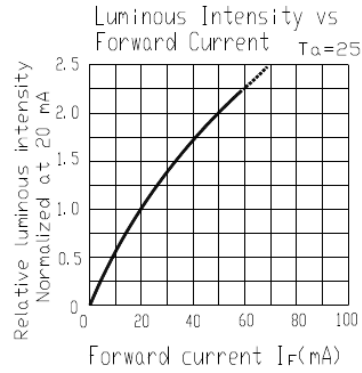
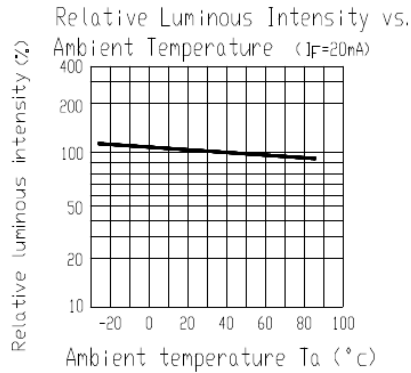
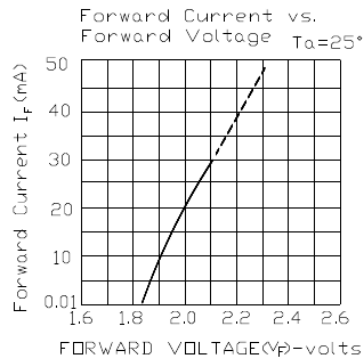
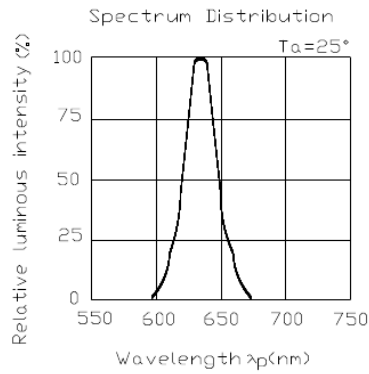
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#### ■ Typical Electro-Optical Characteristic Curves:



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■ Reliability test items and conditions:

| NO | Item                               | Test Conditions                                | Test Hours/Cycle | Sample | Ac/Re |
|----|------------------------------------|--|------------------|--------|-------|
| 1  | Solder Heat                        | TEMP : 260°C ± 5 °C                            | 10 SEC           | 76 PCS | 0/1   |
| 2  | Temperature Cycle                  | H : +100°C 15min<br>∫ 5 min<br>L : -40°C 15min | 300 CYCLES       | 76 PCS | 0/1   |
| 3  | Thermal Shock                      | H : +85°C 5min<br>∫ 10 sec<br>L : -10°C 5min   | 300 CYCLES       | 76 PCS | 0/1   |
| 4  | High Temperature Storage           | TEMP : 100°C                                   | 1000 HRS         | 76 PCS | 0/1   |
| 5  | Low Temperature Storage            | TEMP : -40°C                                   | 1000 HRS         | 76 PCS | 0/1   |
| 6  | DC Operating Life                  | TEMP : 25°C<br>IF = 20mA                       | 1000 HRS         | 76 PCS | 0/1   |
| 7  | High Temperature/<br>High Humidity | 85°C / 85% RH                                  | 1000 HRS         | 76 PCS | 0/1   |