

**Features**

- Uncooled laser diode with MQW structure
- 5mW CW operation at -40~85°C
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Bellcore TA-NWT-000983
- Designed for 2.5G high speed, optical network

**Packaging**

- TO-18 with a flat window cap or a ball lens cap

**Handling Precautions**

This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD guidelines.

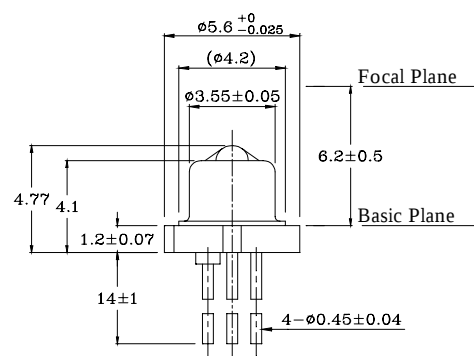
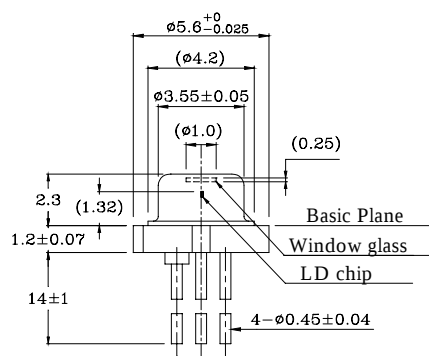
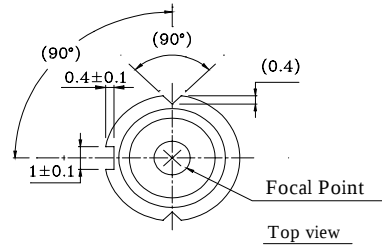
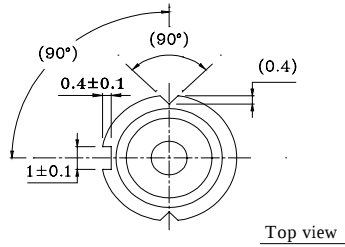
**Absolute Maximum Ratings(Tc=25°C)**

| Parameter             | Symbol           | Value    | Unit |
|-----------------------|------------------|----------|------|
| Optical Output Power  | P <sub>o</sub>   | 6 (CW)   | mW   |
| LD Reverse Voltage    | V <sub>RLD</sub> | 2        | V    |
| PD Reverse Voltage    | V <sub>RPD</sub> | 10       | V    |
| PD Forward Current    | I <sub>FDP</sub> | 2.0      | mA   |
| Operating Temperature | T <sub>opr</sub> | -40~+85  | °C   |
| Storage Temperature   | T <sub>stg</sub> | -40~+100 | °C   |

**Optical and Electrical Characteristics(Tc=25°C)**

| Parameter                         | Symbol                          | Min. | Typ. | Max. | Unit  | Test condition                                |
|-----------------------------------|---------------------------------|------|------|------|-------|-----------------------------------------------|
| Slope Efficiency<br>C-15-002-E-AD | SE                              | 0.2  | 0.25 | -    | mW/mA | CW, P <sub>o</sub> =5mW                       |
| Threshold Current                 | I <sub>th</sub>                 | -    | 10   | 15   | mA    | CW, P <sub>o</sub> =5mW                       |
| Optical Output Power              | P <sub>o</sub>                  | 5    | -    | -    | mW    | CW, kink free                                 |
| Peak Wavelength                   | λ                               | 1530 | 1550 | 1570 | nm    | Note                                          |
| Spectral Width                    | Δλ                              | -    | 2    | 5    | nm    | CW, P <sub>o</sub> =5mW                       |
| Forward Voltage                   | V <sub>F</sub>                  | -    | 1.2  | 1.5  | V     | CW, P <sub>o</sub> =5mW                       |
| Beam Divergence                   | θ <sub>//</sub>                 | -    | 20   | -    | deg.  | CW, P <sub>o</sub> =5mW, FWHM                 |
|                                   | θ <sub>⊥</sub>                  | -    | 40   | -    |       |                                               |
| Rise/Fall Time                    | t <sub>r</sub> / t <sub>f</sub> | -    | -    | 150  | ps    | I <sub>bias</sub> =I <sub>th</sub> , 10-90 %  |
| PD Monitor Current                | I <sub>m</sub>                  | 100  | -    | -    | μA    | CW, P <sub>o</sub> =5mW, V <sub>RPD</sub> =2V |
| PD Dark Current                   | I <sub>DARK</sub>               | -    | -    | 0.1  | μA    | V <sub>RPD</sub> =5V                          |
| PD Capacitance                    | C <sub>t</sub>                  | -    | 6    | 15   | pF    | V <sub>RPD</sub> =5V, f=1MHz                  |

Units in mm.



## LD Pin Options

| Model         | PIN Assignment (Bottom View) |
|---------------|------------------------------|
| C-15-002-E-AD |                              |
| C-15-002-E-BD |                              |