

## C-13-001-X-SXXL/M/H



### Features

- Laser diode with multiple quantum well structure
- Uncooled operation at -40 to +85°C
- Built-in InGaAs monitor photodiode
- Hermetically sealed active component

### Packaging

- FC/ ST/ SC receptacle package with 2-hole flange
- Uncooled, fiber pigtailed with optional FC/ ST/ SC connector

### Application

- Designed for fiber optic networks

### Absolute Maximum Ratings (T<sub>c</sub>=25°C)

| Parameter             | Symbol           | Value      | Unit |
|-----------------------|------------------|------------|------|
| Fiber Output Power    |                  |            |      |
| L                     | P <sub>f</sub>   | 0.4        | mW   |
| M                     |                  | 0.9        |      |
| H                     |                  | 1.6        |      |
| LD Reverse Voltage    | V <sub>rid</sub> | 2          | V    |
| PD Reverse Voltage    | V <sub>rpd</sub> | 10         | V    |
| PD Forward Current    | I <sub>fpd</sub> | 2          | mA   |
| Operating Temperature | T <sub>opr</sub> | -40 to +85 | °C   |
| Storage Temperature   | T <sub>stg</sub> | -40 to +85 | °C   |

### Optical and Electrical Characteristics (T<sub>c</sub> = 25°C)

| Parameter            | Symbol                           | Min  | Typ  | Max  | Unit | Test Condition   |
|----------------------|----------------------------------|------|------|------|------|--|
| Threshold Current    | I <sub>th</sub>                  | -    | 12   | 15   | mA   | CW   |
| Fiber Output Power:  |                                  |      |      |      |      |  |
| L                    | P <sub>f</sub>                   | 0.2  | -    | -    | mW   | CW, I <sub>th</sub> +20mA, kink free                           |
| M                    |                                  | 0.5  | -    | -    |      |  |
| H                    |                                  | 1    | -    | -    |      |  |
| Peak Wavelength      | λ                                | 1290 | 1310 | 1330 | nm   | CW, P <sub>f</sub> = P <sub>f</sub> (Min)                      |
| Spectrum Width       | Δλ                               | -    | 2    | 5    | nm   | CW, P <sub>f</sub> = P <sub>f</sub> (Min)                      |
| Forward Voltage      | V <sub>F</sub>                   | -    | 1.2  | 1.6  | V    | CW, P <sub>f</sub> = P <sub>f</sub> (Min)                      |
| Rise Time, Fall Time | t <sub>r</sub> , t <sub>f</sub>  | -    | -    | 0.3  | ns   | I <sub>bias</sub> = I <sub>th</sub> , 10 to 90%                |
| Tracking Error       | ΔP <sub>f</sub> / P <sub>f</sub> | -    | -    | ±1.0 | dB   | APC, -40 to +85°C  |
| PD Monitor Current   | I <sub>m</sub>                   | 100  | -    | -    | μA   | CW, P <sub>f</sub> =P <sub>f</sub> (Min), 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                                   |

((All optical data refer to a coupled 9/125 μm SM fiber))

### CONNECTOR OPTION

| Model                 | Package    | Fiber | Connector |
|-----------------------|------------|-------|-----------|
| C-13-001-R-SFCL/ M/ H | Receptacle | -     | FC        |
| C-13-001-R-SSTL/ M/ H |            |       | ST        |
| C-13-001-R-SSCL/ M/ H |            |       | SC        |
| C-13-001-P-SFCL/ M/ H | Pigtailed  | SM    | FC        |
| C-13-001-P-SSTL/ M/ H |            |       | ST        |
| C-13-001-P-SSCL/ M/ H |            |       | SC        |
| C-13-001-P-SL/ M/ H   |            |       | (None)    |

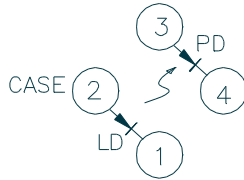
## C-13-001-X-SXXL/M/H

### LD Pin Assignment

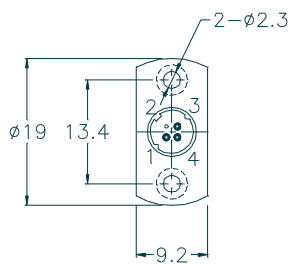
#### LD Modules-receptacle

(Note: Pin assignment can be customized)

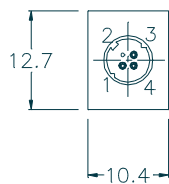
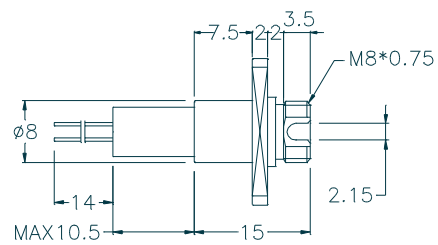
Units in mm.



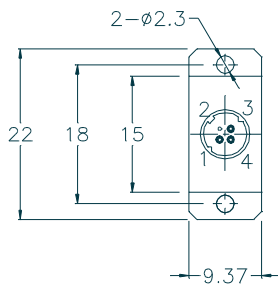
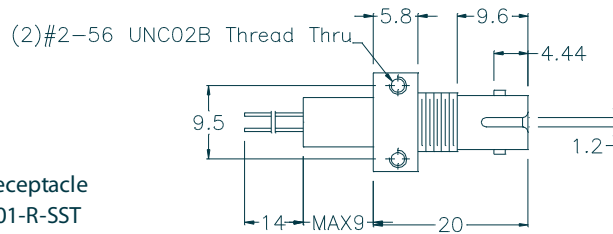
- Pin 1 : Laser Cathode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Monitor Diode Anode
- Pin 4 : Monitor Diode Cathode



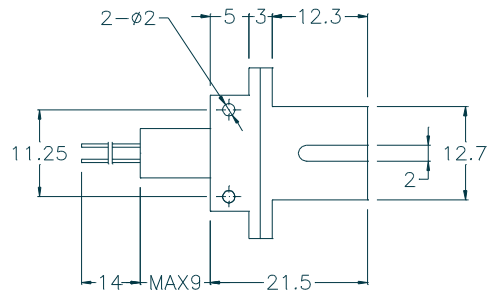
**FC Receptacle**  
C-13-001-R-SFC



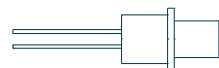
**ST Receptacle**  
C-13-001-R-SST



**SC Receptacle**  
C-13-001-R-SSC



**Customer Specified**

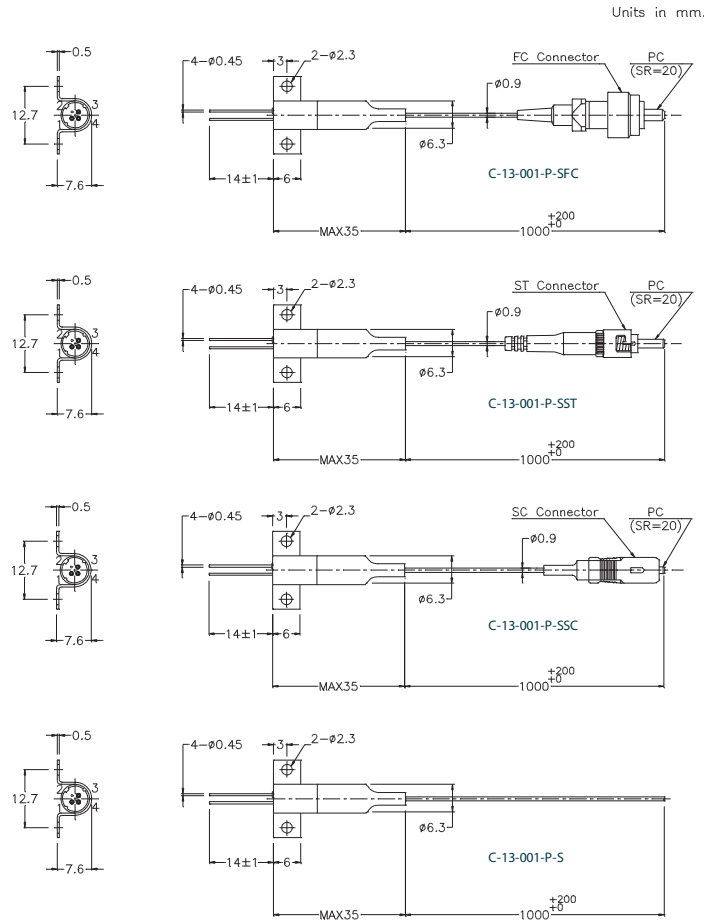


## C-13-001-X-SXXL/M/H

### LD Modules-pigttailed

#### Packaging Dimensions

Units in mm



### Warnings

**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 procedures.

**Laser Safety:** Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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