

1310nm

C-13-001-R-SFCL/M/H  
C-13-001-P-SFCL/M/H

# 1310nm Laser Diode Modules

## Features

- Laser diode with multi-quantum-well structure
- Uncooled operation at  $-40\sim+85^{\circ}\text{C}$
- 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

- Design for fiber optic networks



### Note:

1. Pin assignment can be customized.
2. Specifications subject to change without notice.

### 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.

## Absolute Maximum Ratings( $T_c=25^{\circ}\text{C}$ )

| Parameter                                          | Symbol    | Value                | Unit               |
|----------------------------------------------------|-----------|----------------------|--------------------|
| Fiber Output Power<br>Receptacle / Pigtailed L/M/H | $P_f$     | 0.4(L)/0.9(M)/1.6(H) | mW                 |
| LD Reverse Voltage                                 | $V_{RLD}$ | 2                    | V                  |
| PD Reverse Voltage                                 | $V_{RPD}$ | 10                   | V                  |
| PD Forward Current                                 | $I_{FPD}$ | 2.0                  | mA                 |
| Operating Temperature                              | $T_{opr}$ | $-40\sim+85$         | $^{\circ}\text{C}$ |
| Storage Temperature                                | $T_{stg}$ | $-40\sim+85$         | $^{\circ}\text{C}$ |

(All optical data refer to a coupled 9/125 $\mu\text{m}$  SM fiber)

## Optical and Electrical Characteristics( $T_c=25^{\circ}\text{C}$ )

| Parameter                         | Symbol           | Min.            | Typ. | Max.      | Unit          | Test condition                                     |
|-----------------------------------|------------------|-----------------|------|-----------|---------------|----------------------------------------------------|
| Threshold Current                 | $I_{th}$         | -               | 12   | 15        | mA            | CW                                                 |
| Fiber Output Power<br>L<br>M<br>H | $P_f$            | 0.2<br>0.5<br>1 | -    | -         | mW            | CW, $I_{th}+20\text{mA}$ ,<br>kink free            |
| Peak Wavelength                   | $\lambda$        | 1290            | 1310 | 1330      | nm            | CW, $P_f=P_f(\text{Min})$                          |
| Spectrum Width                    | $\Delta\lambda$  | -               | 2    | 5         | nm            | CW, $P_f=P_f(\text{Min})$                          |
| Forward Voltage                   | $V_F$            | -               | 1.2  | 1.6       | V             | CW, $P_f=P_f(\text{Min})$                          |
| Rise/Fall Time                    | $t_r / t_f$      | -               | -    | 0.5       | ns            | $I_{bias}=I_{th}$ , 10~90%                         |
| Tracking Error                    | $\Delta P_f/P_f$ | -               | -    | $\pm 1.0$ | dB            | APC, $-40\sim+85^{\circ}\text{C}$                  |
| PD Monitor Current                | $I_m$            | 100             | -    | -         | $\mu\text{A}$ | CW,<br>$P_f=P_f(\text{Min})$ , $V_{RPD}=2\text{V}$ |
| PD Dark Current                   | $I_{DARK}$       | -               | -    | 0.1       | $\mu\text{A}$ | $V_{RPD}=5\text{V}$                                |
| PD Capacitance                    | $C_t$            | -               | 6    | 15        | pF            | $V_{RPD}=5\text{V}$ ,                              |

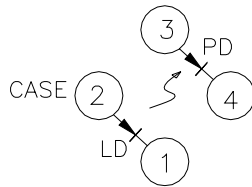
## Connector Option

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

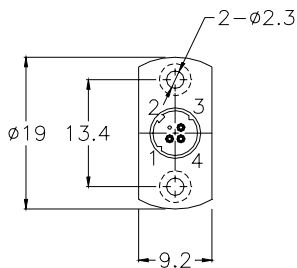
# LD Modules-*receptacle*

## LD Pin Assignment

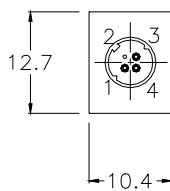
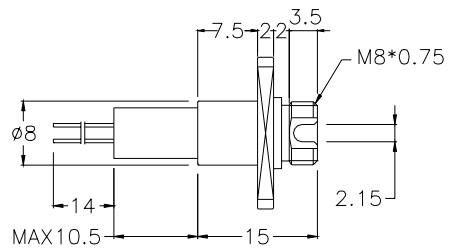
Units in mm.



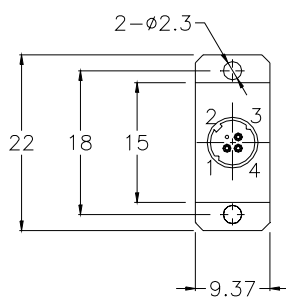
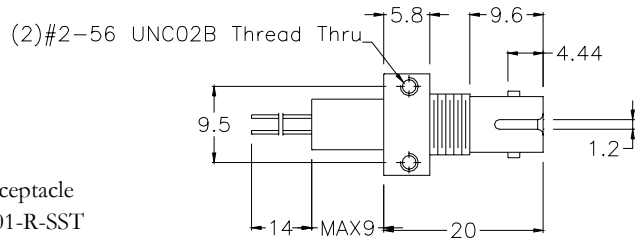
- Pin 1 : Laser Cathode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Monitor Diode Anode
- Pin 4 : Monitor Diode Cathode



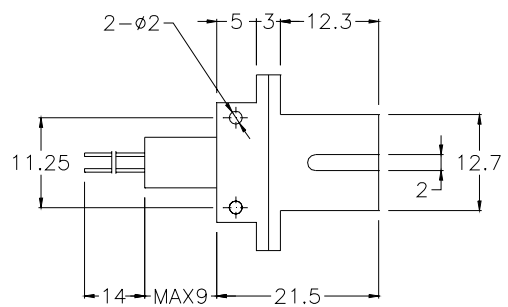
FC Receptacle  
C-13-001-R-SFC



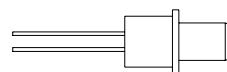
ST Receptacle  
C-13-001-R-SST



SC Receptacle  
C-13-001-R-SSC



Customer Specified



# LD Modules-pigtailed

Units in mm.

