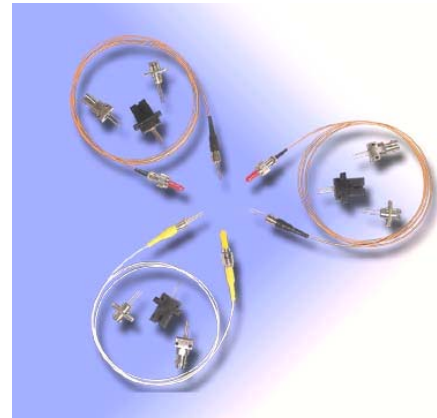


2.5Gbps 1310nm DFB Laser Diode Module

Features

- Center wavelength 1310nm
- Low threshold current
- High speed $t_r/t_f < 0.12\text{ns}$
- Built-in InGaAs monitor detector
- Four-lead package
- Wide operating temperature -40°C to 85°C
- Hermetically sealed TO-18 package in pigtailed or receptacle housing with FC, ST or SC connector



Applications

- Fiber In The Loop
- ATM, SONET/SDH
- Motorway and railway networks
- Intra and interoffice links
- Subscriber loops

Specifications

Optical And Electrical Characteristics (T=25+/-3 °C unless specified otherwise)

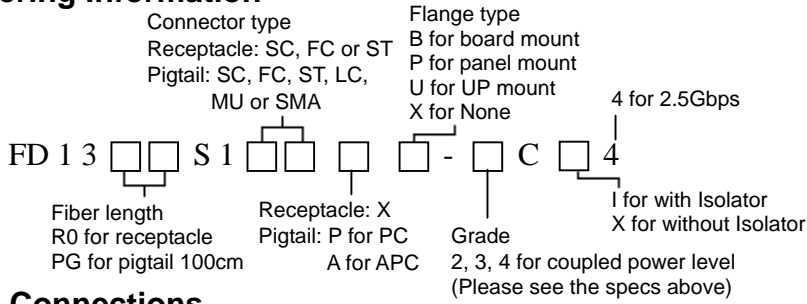
| Parameter | Symbol | Test Conditions | Min | Typical | Max | Units |
|--------------------------------|-------------|---|------|---------|----------|---------------|
| Peak Wavelength | λ_c | Po, To=-20~85°C | 1290 | 1310 | 1330 | nm |
| Threshold current | I_{th} | Po Po, Tc=85°C | - | 6 30 | 20 40 | mA |
| Operating voltage | V_{op} | Po | - | 1.1 | 1.8 | V |
| Optical output power | P_o | $I_{th}+20\text{mA}$ | | | | |
| -2 | | | 0.4 | - | - | mW |
| -3 | | | 0.7 | - | - | mW |
| -4 | | | 1.2 | - | - | mW |
| Side Mode Suppression Ratio | SMSR | Po, To=-20~+85°C | 30 | 40 | | dB |
| Rise time/Fall time | tr/tf | 2.5Gbps, 10~90% | - | 100 | 120 | ps |
| Tracking error | TE | Po, To=-20~+85°C | -1.0 | - | 1.0 | dB |
| Monitor Current (PD) | I_m | Po, $V_{RD}=1\text{V}$, $R_L=10\Omega$ | 0.05 | 0.5 | - | mA |
| Dark Current (PD) | I_d | $V_{RD}=5\text{V}$ | - | - | 0.1 | μA |
| Capacitance (PD) | Ct | $V_{RD}=5\text{V}$, f=1MHz | - | 8 | 10 | pF |
| Minimum Isolation (w/isolator) | | To= 0~+60°C | 40 | - | - | dB |

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Max. | Unit |
|------------------------------------|-----------|------|------|------|
| Optical Output Power | P_o | | 3 | mW |
| Operating Current (LD) | I_{op} | - | 150 | mA |
| Reverse Voltage (LD) | V_{RL} | - | 2 | V |
| Reverse Voltage (PD) | V_{RD} | - | 20 | V |
| Forward Current (PD) | I_{FD} | - | 2 | mA |
| Case Temperature | T_o | -20 | +85 | °C |
| Storage Temperature | T_{stg} | -40 | +100 | °C |
| Lead Soldering Temperature (10sec) | T_L | - | 260 | °C |

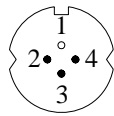
2.5Gbps 1310nm DFB Laser Diode Module

Ordering Information



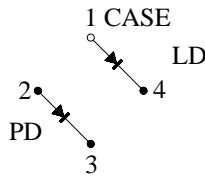
Pin Connections

BOTTOM VIEW

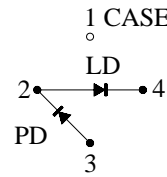


UNIT : MM

C TYPE PIN CONNECTIONS

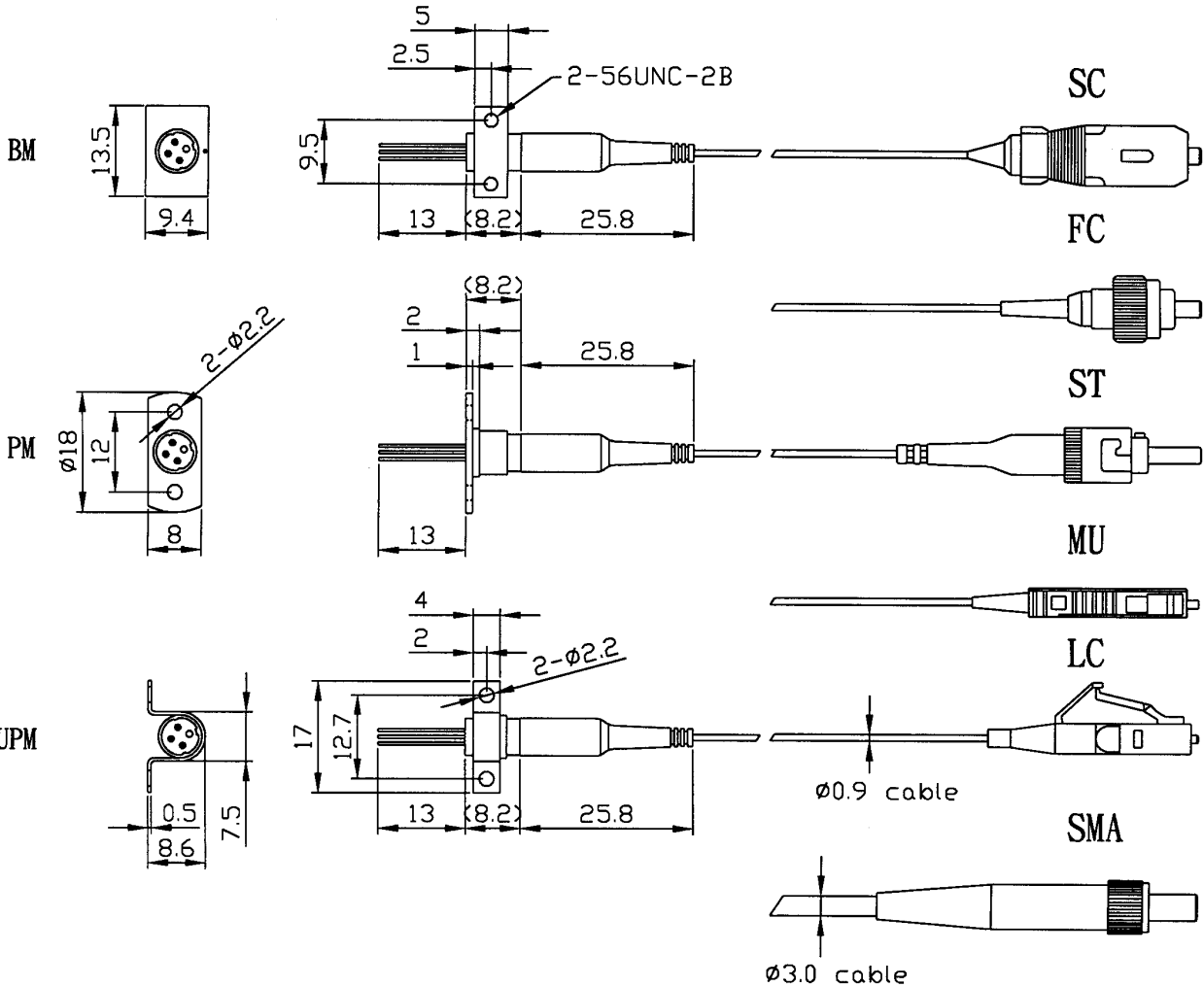


D TYPE PIN CONNECTIONS



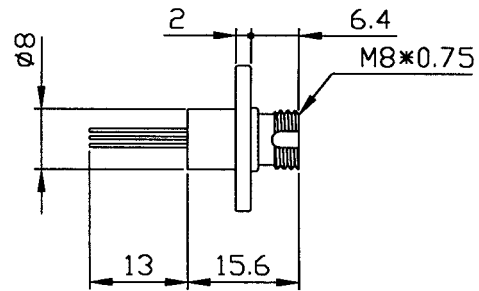
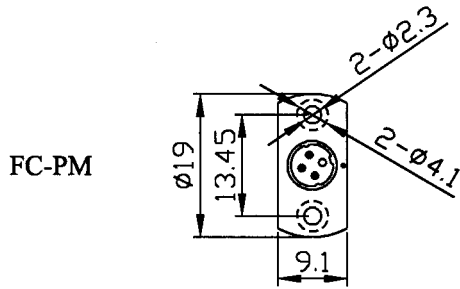
Dimension

Pigtail Type

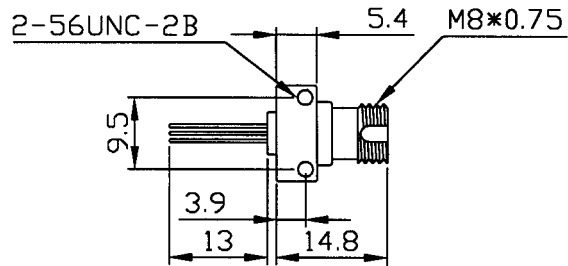
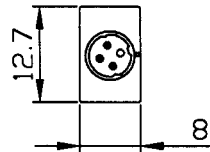


2.5Gbps 1310nm DFB Laser Diode Module

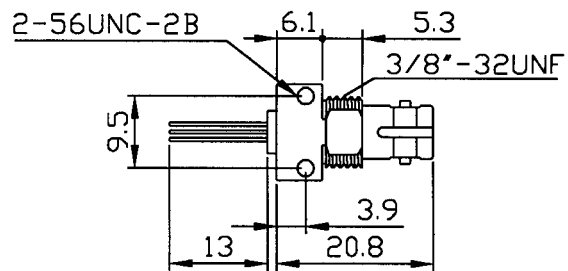
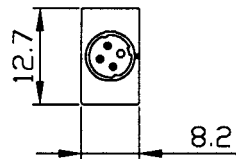
Receptacle Type



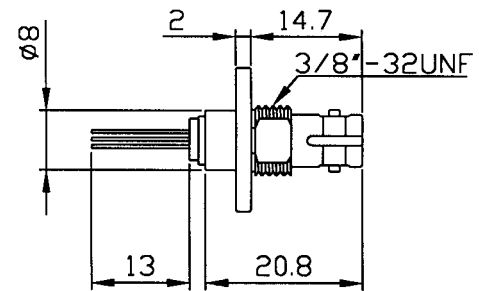
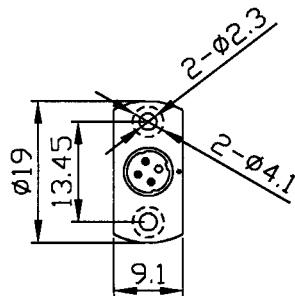
FC-BM



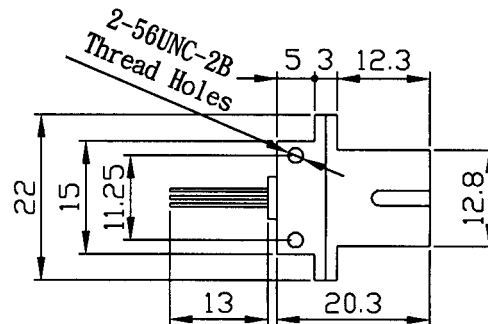
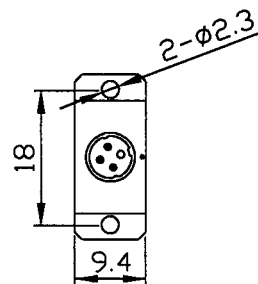
ST-BM



ST-PM



SC

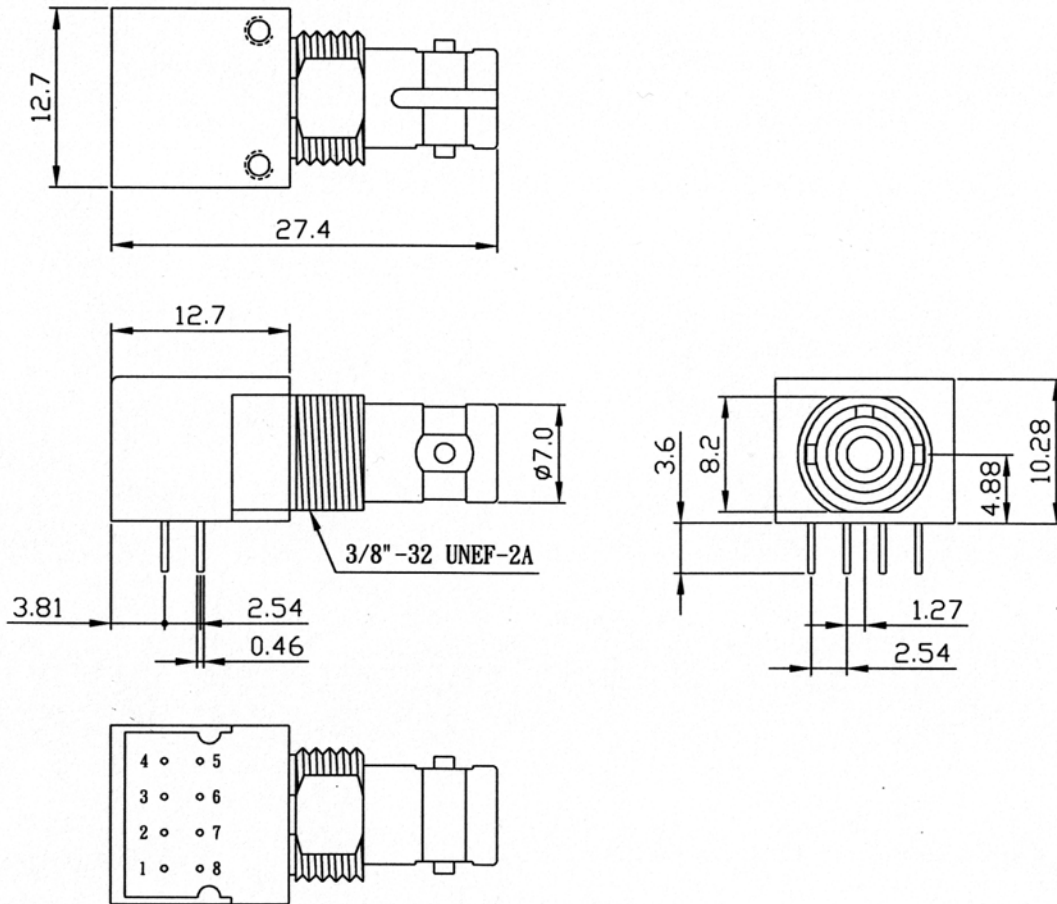


2.5Gbps 1310nm DFB Laser Diode Module

2.5Gbps 1310nm DFB Laser Diode Module

Sugar Cube

Dimension (ST Receptacle) Unit mm



Pin Connections (Type A)

| PIN No. | FUNCTION |
|---------|-------------|
| 1 | NC |
| 2 | ANODE |
| 3 | CATHODE |
| 4 | NC |
| 5 | NC |
| 6 | ANODE or NC |
| 7 | ANODE or NC |
| 8 | NC |

Pin Connections (Type B)

| PIN No. | FUNCTION |
|---------|------------------------|
| 1 | NC |
| 2 | NC |
| 3 | LD Cathode (LD-) |
| 4 | NC |
| 5 | NC |
| 6 | LD Anode (LD+), PD- |
| 7 | Monitor PD Anode (PD+) |
| 8 | NC |

2.5Gbps 1310nm DFB Laser Diode Module

1310 nm DFB LD
Fiber-coupled Power vs. Drive Current (-4 grade)

