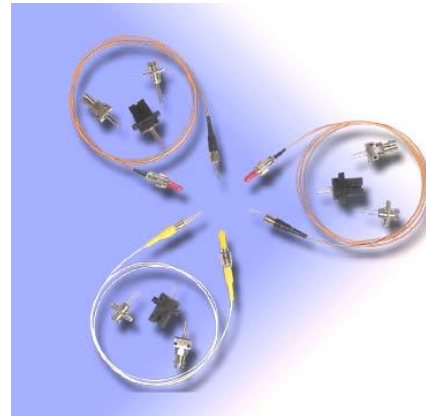


1.25Gbps 1310nm DFB Laser Diode Module

Features

- Center wavelength 1310nm
- Low threshold current
- High speed $t_r/t_f < 0.4\text{ns}$
- Built-in InGaAs monitor detector
- Four-lead package, no TEC
- Wide operating temperature -20°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
- Trunk supervision

Specifications

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

Parameter	Symbol	Test Conditions	Min	Typical	Max	Units
Peak Wavelength	λ_c	$P_o, T_o = -20 \sim 85^\circ\text{C}$	1290	1310	1330	nm
Spectral Width (-20dB)		P_o	-	0.1	1	nm
Threshold Current	I_{th}	25°C 85°C	-	7 30	12 40	mA
Operating Voltage	V_{op}	P_o	-	1.1	1.6	V
Optical Output Power	P_o	$I_{th} + 20\text{mA}$				
-1			0.1	-	-	mW
-2			0.4	-	-	mW
-3			0.7	-	-	mW
-4			1.2	-	-	mW
Side Mode Suppression Ratio	SMSR	$P_o, T_o = -20 \sim +85^\circ\text{C}$	35	40		dB
Rise/Fall Time	t_r/t_f	2.5Gbps, 10~90ps	-	100	120	ps
Tracking Error	TE	$P_o, T_o = -20 \sim +85^\circ\text{C}$	-1.0	-	1.0	dB
Monitor Current (PD)	I_m	$V_{RD} = 1\text{V}, R_L = 10\Omega$	0.1	0.3	-	mA
Dark Current (PD)	I_d	$V_{RD} = 5\text{V}$	-	-	1.0	μA
Capacitance (PD)	C_t	$V_{RD} = 5\text{V}, f = 1\text{MHz}$	-	10	20	pF

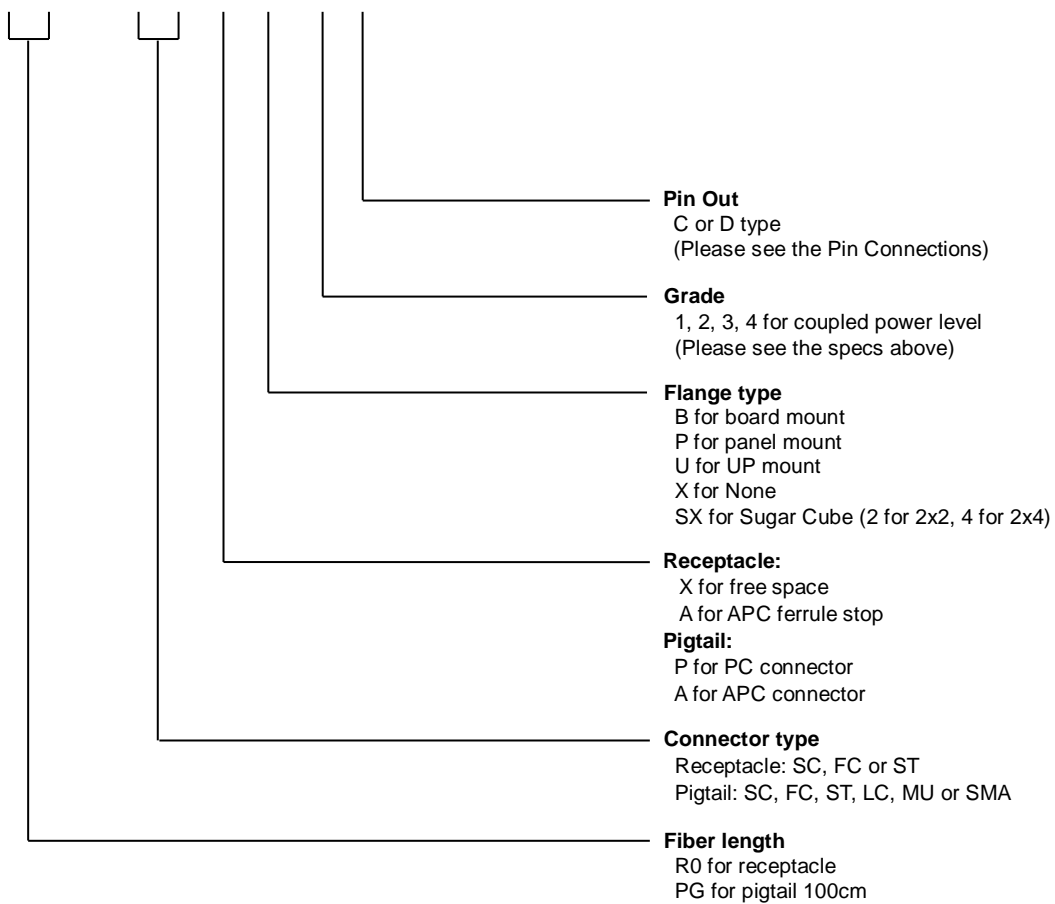
Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Optical Output Power	P_o		10	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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40	+100	$^\circ\text{C}$
Lead Soldering Temperature (10sec)	T_L	-	260	$^\circ\text{C}$

1.25Gbps 1310nm DFB Laser Diode Module

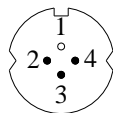
Ordering Information

FD13□□S1□□□□-□□



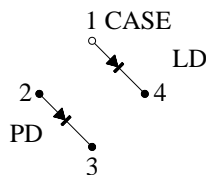
Pin Connections

BOTTOM VIEW

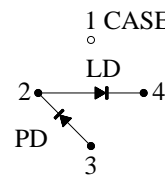


UNIT : MM

C TYPE
PIN CONNECTIONS

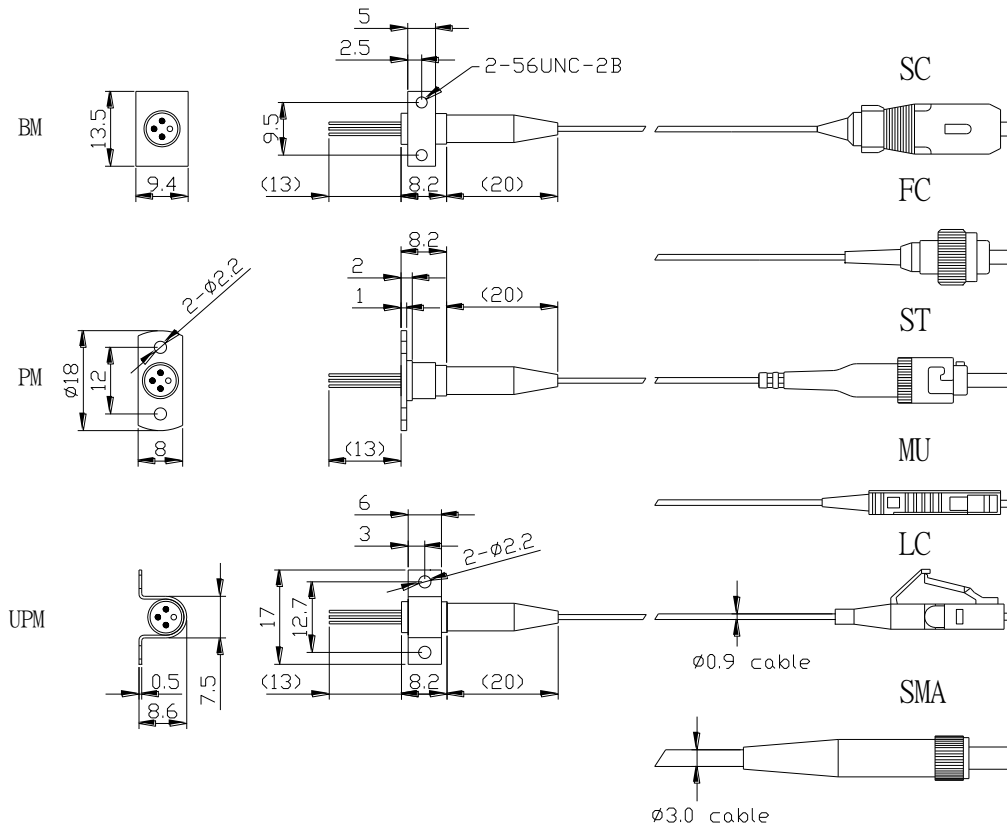


D TYPE
PIN CONNECTIONS



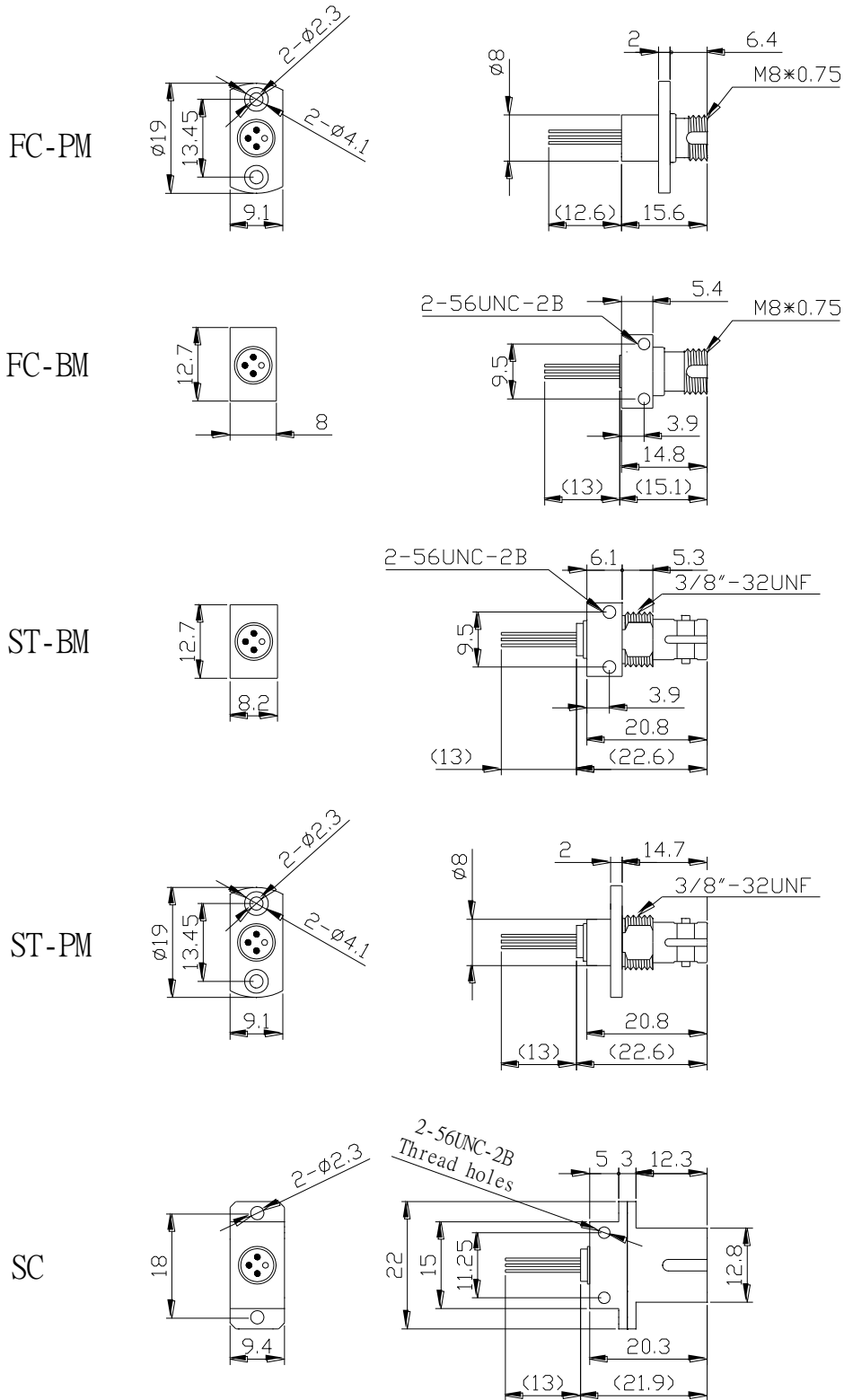
1.25Gbps 1310nm DFB Laser Diode Module

Dimension Pigtail Type



1.25Gbps 1310nm DFB Laser Diode Module

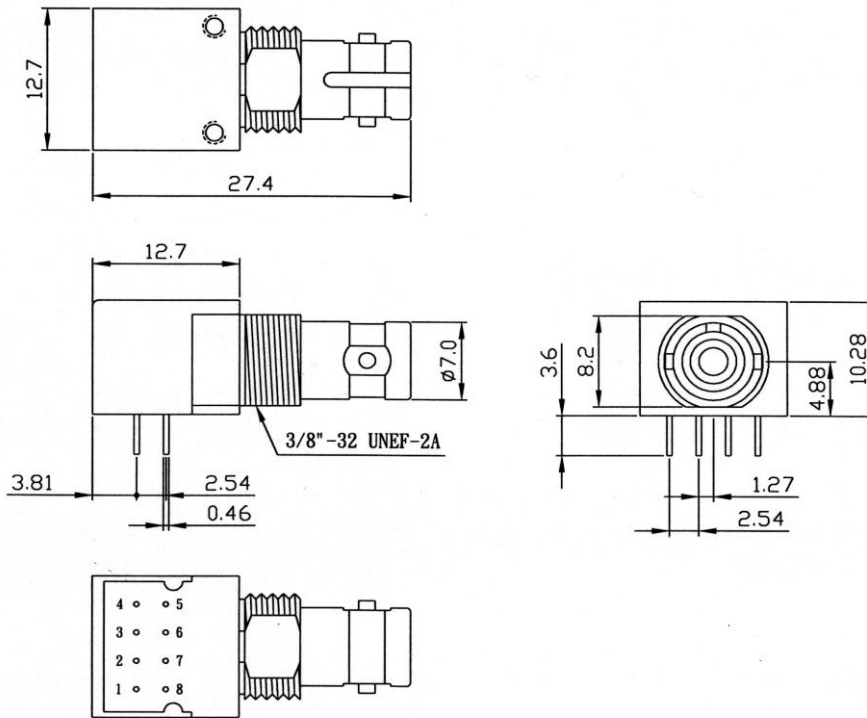
Receptacle Type



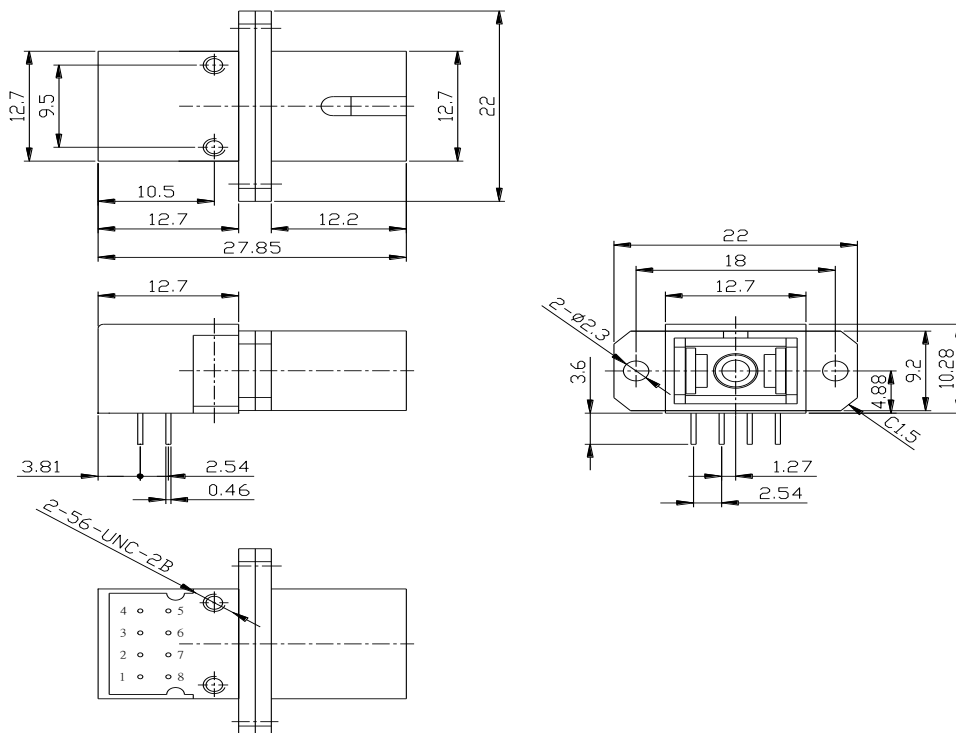
1.25Gbps 1310nm DFB Laser Diode Module

Sugar Cube (ST)

Unit : mm

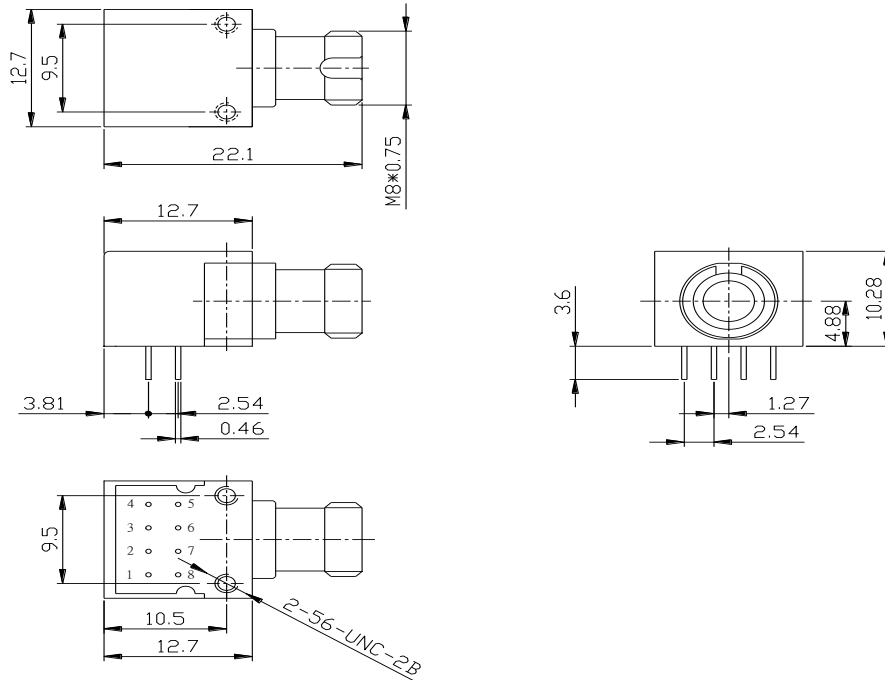


Sugar Cube (SC)



1.25Gbps 1310nm DFB Laser Diode Module

Sugar Cube (FC)



2x4 Pin Connections :

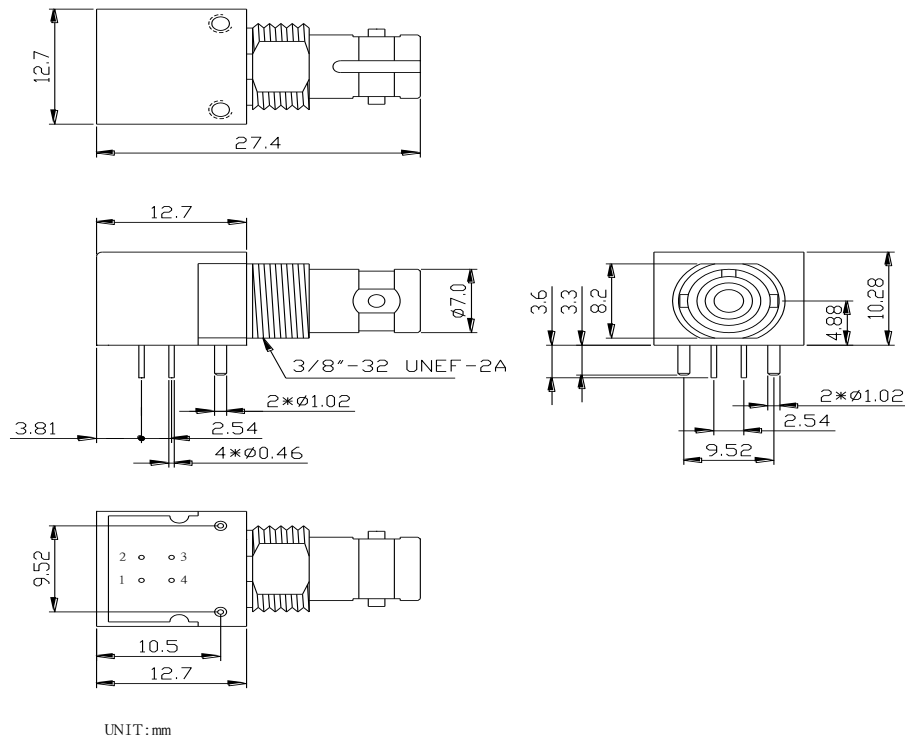
Pin Connections (Type A)

PIN No.	FUNCTION
1	NC
2	LD ANODE
3	LD CATHODE
4	NC
5	NC
6	LD ANODE
7	LD ANODE
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

1.25Gbps 1310nm DFB Laser Diode Module



2x2 Pin Connections :

PIN	FUNCTION
1	ANODE
2	CATHODE
3	ANODE
4	ANODE

1.25Gbps 1310nm DFB Laser Diode Module

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

