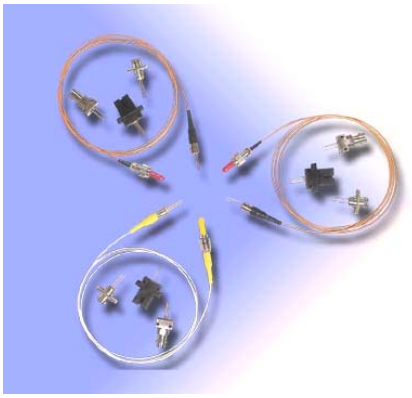
1490nm FP Laser Diode SM Module

Features



- Center wavelength 1490nm
- Low threshold current
- High speed t_r/t_f < 0.7ns
- Built-in InGaAs monitor detector
- Four-lead package
- 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
- Test instruments

Specifications

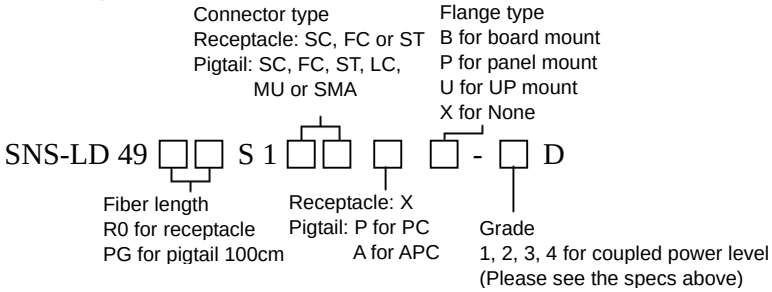
Optical And Electrical Characteristics (T=25+/-3°C unless specified otherwise)

Parameter	Symbol	Test Conditions	Min	Typical	Max	Units
Center Wavelength	λ	25 °C	1480	1490	1500	nm
Spectral Width	$\Delta\lambda$	$P_{0\ =5mw}$(RMS)	-	1.6	2.5	nm
Threshold Current	I_{th}	25 °C -40 to 85 °C		12 24	18 35	mA
Operating Voltage	V_{op}	P_0	-	1.1	1.6	V
Rise/Fall Time	t_r / t_f	10-90%	-		0.2	ns
Optical Output Power	P_0	I_{th}+30mA				
-1			0.1	0.25	-	mW
-2			0.4	0.55	-	mW
-3			0.7	0.9	-	mW
-4			1.2	-	-	mW
Monitor Current (PD)	I_m	P_0, V_{RD} =1V	15		75	mW
Dark Current (PD)	I_d	V_{RD}=5V	-	-	200	nA
Return Loss (w/isolator)		To= 0~+60 °C	40	-	-	dB
Tracking Error	E_t	-40 to 85 °C		±1.0		dB

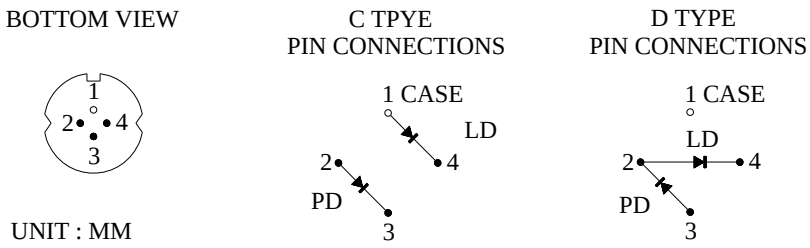
Absolute Maximum Ratings (T=25 °C)

Parameter	Symbol	Min.	Max.	Unit
Forward Current (LD)	I_{op}	-	120	mA
Reverse Bias (LD)	V_{RL}	-	2	V
Reverse Bias (PD)	V_{RD}	-	10	V
Operating Case Temperature	Tc	-20	+85	°C
Storage Temperature	T_{stg}	-40	+100	°C

Ordering Information

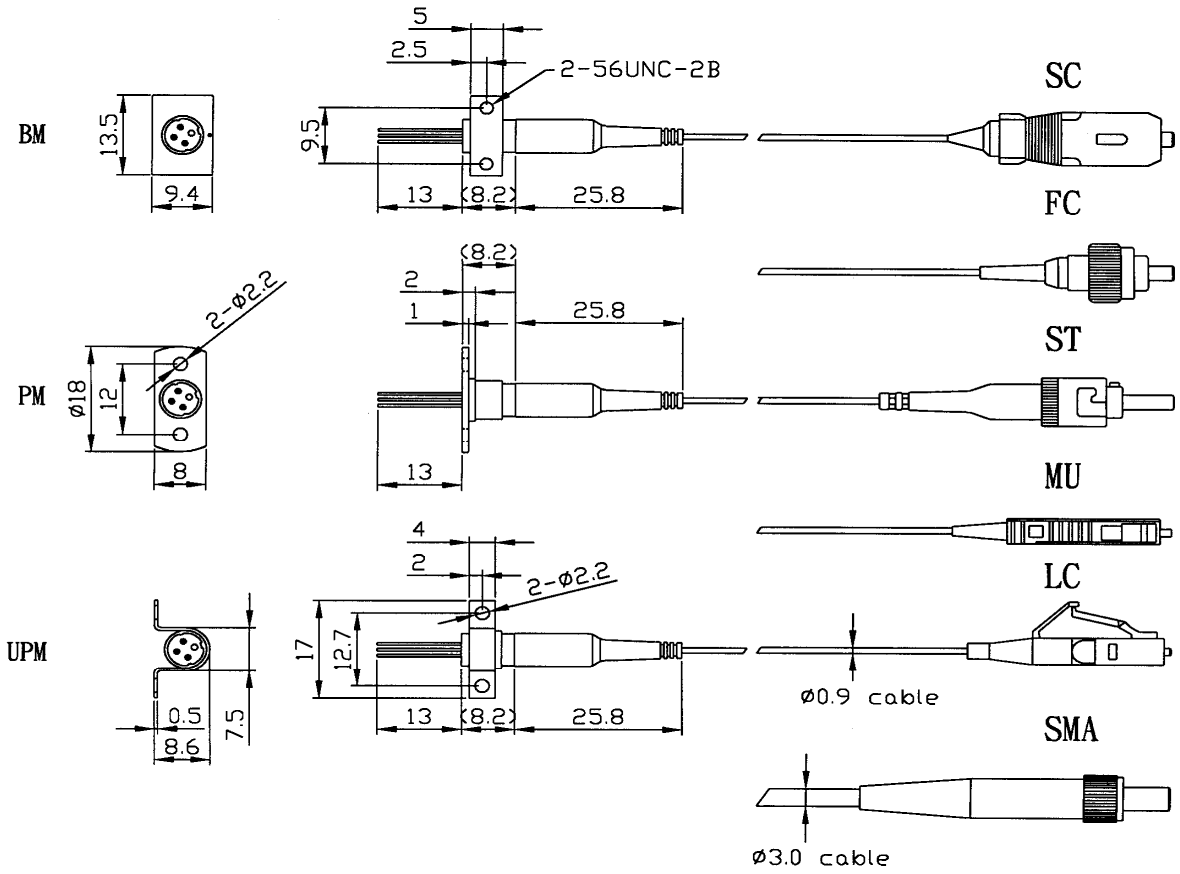


Pin Connections



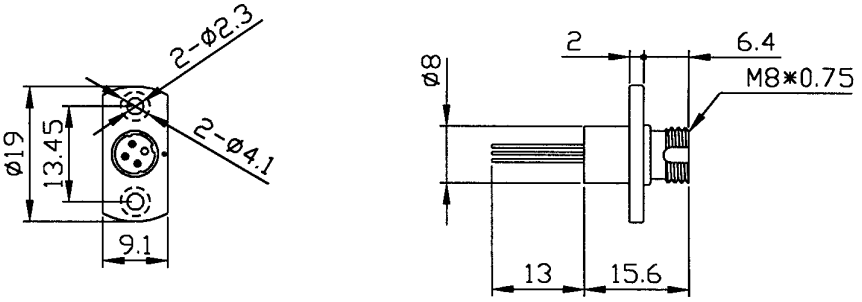
Dimension

Pigtail Type

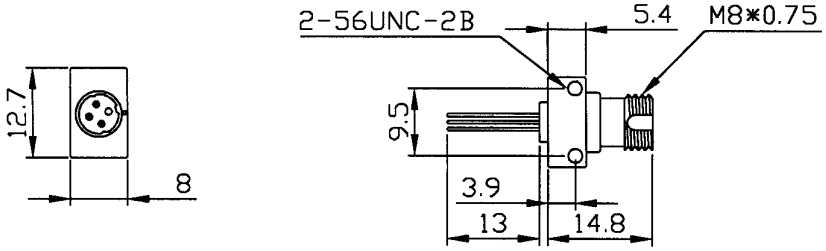


Receptacle Type

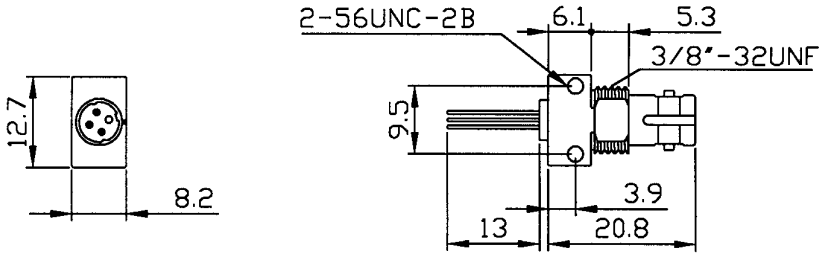
FC-PM



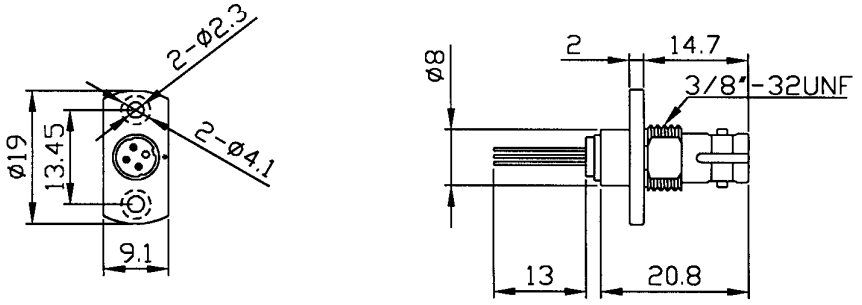
FC-BM



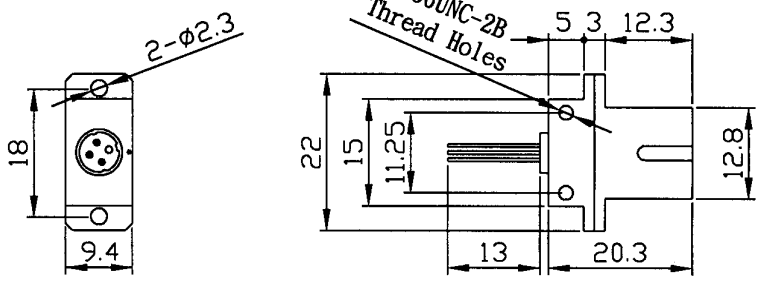
ST-BM



ST-PM

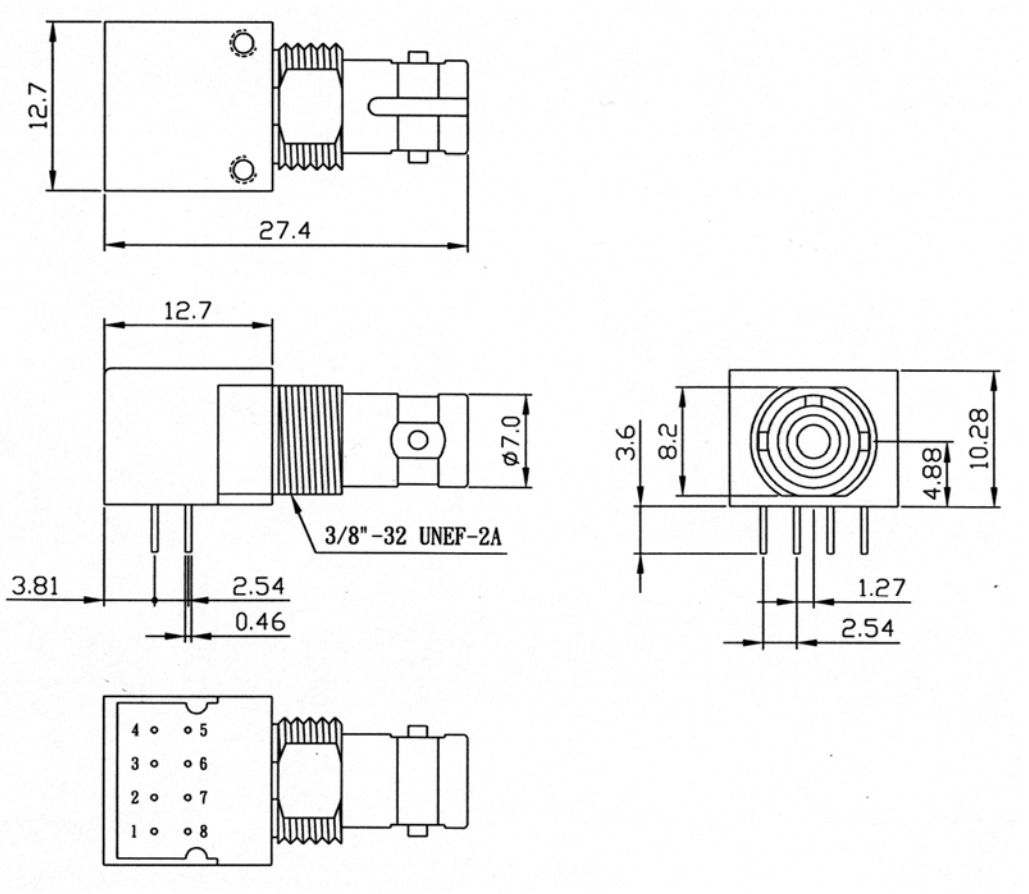


SC



Sugar Cube

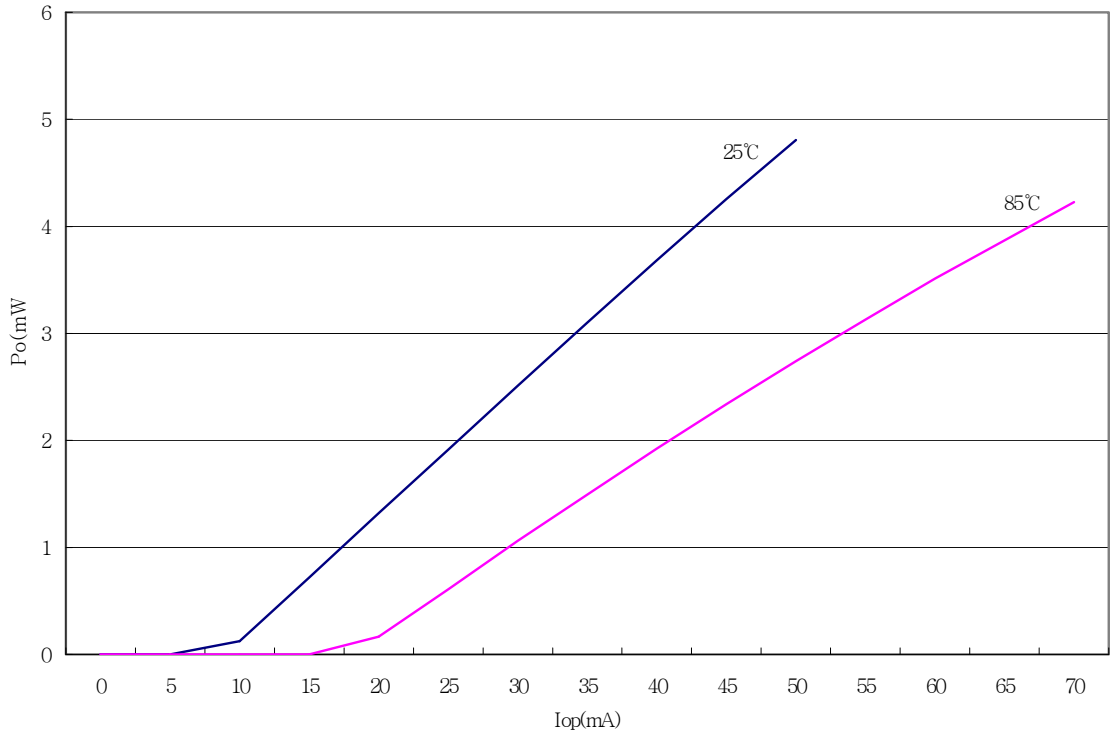
Dimension (ST Receptacle) Unit mm



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

1490 nm FP LD
Fiber-coupled Power vs. Drive Current