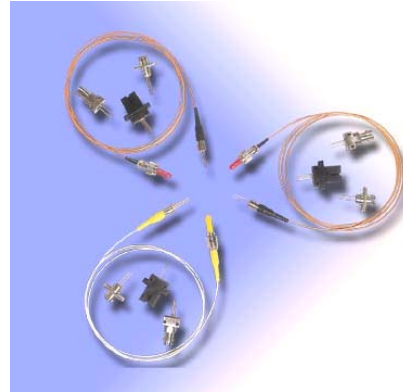




1310nm FP Laser Diode SM Module (APC 12)

Features

- Center wavelength 1310nm
- Low threshold current
- High speed $t_r/t_f < 0.7\text{ns}$
- 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



1310nm FP Laser Diode SM Module

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 -40 to 85°C	1290 1260	1310 -	1330 1360	nm
Spectral Width	$\Delta\lambda$	P_0 (RMS, -20dB)	-	1	2	nm
Threshold Current	I_{th}	25°C -40 to 85°C	3 1	5 -	15 40	mA
Operating Voltage	V_{op}	P_0	-	1.1	1.5	V
Rise/Fall Time	t_r / t_f	10-90%	-	0.3	0.7	ns
Optical Output Power	P_0	$I_{th}+20\text{mA}$				
-1			0.1	0.25	-	mW
-2			0.4	0.55	-	mW
-3			0.7	0.9	-	mW
-4			1.2	-	-	mW
Differential Efficiency		P_0				
-1	-		0.01	-	-	mW/mA
-2	-		0.02	-	-	mW/mA
-3	-		0.04	-	-	mW/mA
-4	-		0.06	-	-	mW/mA
Monitor Current (PD)	I_m	$P_0, V_{RD}=1\text{V}$	0.1	0.7	-	mA
Dark Current (PD)	I_d	$V_{RD}=10\text{V}$	-	-	0.1	μA
Tracking Error	E_t	-40 to 85°C	-	± 1.0	-	dB

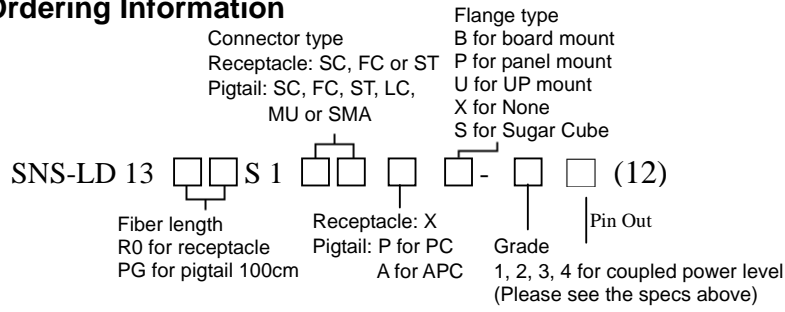
Absolute Maximum Ratings (T=25°C)

Parameter	Symbol	Min.	Max.	Unit
Forward Current (LD)	I_{op}	-	85	mA
Reverse Voltage (LD)	V_{RL}	-	2	V
Forward Current (PD)	I_{FD}	-	2	mA
Reverse Voltage (PD)	V_{RD}	-	20	V
Operating Temperature	T_O	-40	+85	°C
Storage Temperature	T_{sta}	-40	+125	°C
Lead Soldering Temperature (10 sec)	T_L	-	260	°C



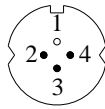
1310nm FP Laser Diode SM Module (APC 12)

Ordering Information



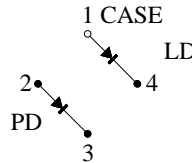
Pin Connections

BOTTOM VIEW

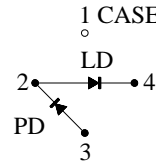


UNIT : MM

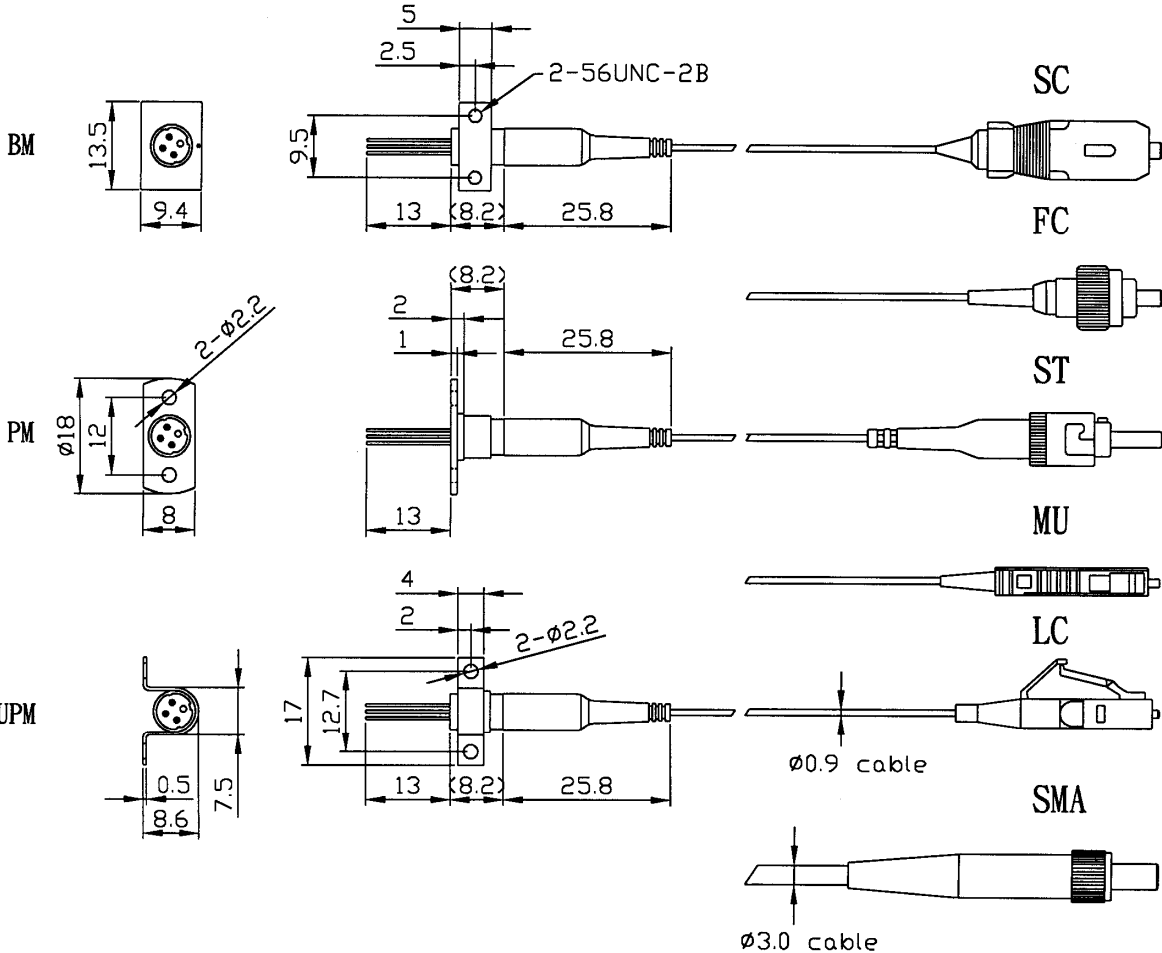
C TYPE PIN CONNECTIONS



D TYPE PIN CONNECTIONS

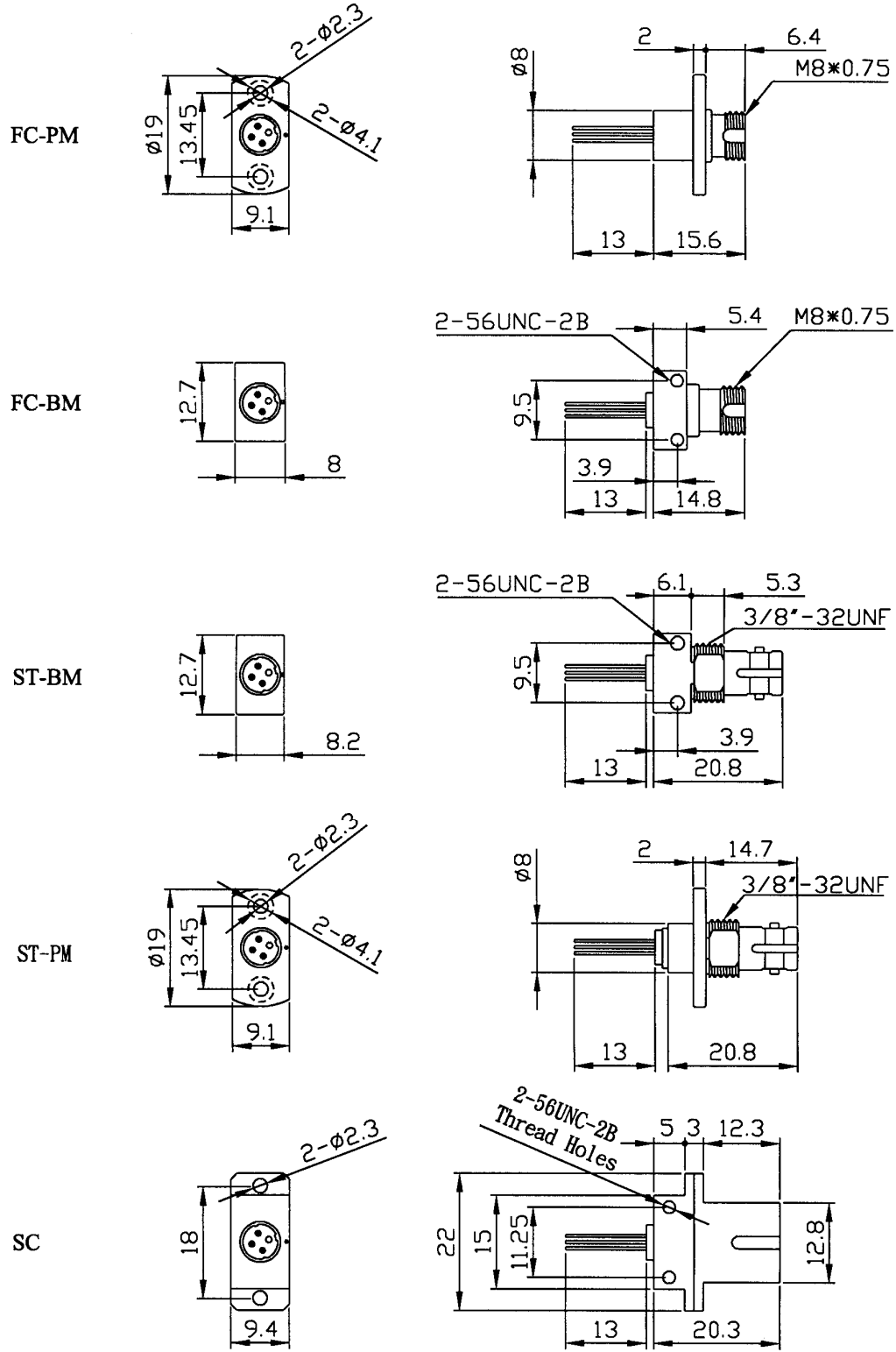


Dimension Pigtail Type



1310nm FP Laser Diode SM Module (APC 12)

Receptacle Type

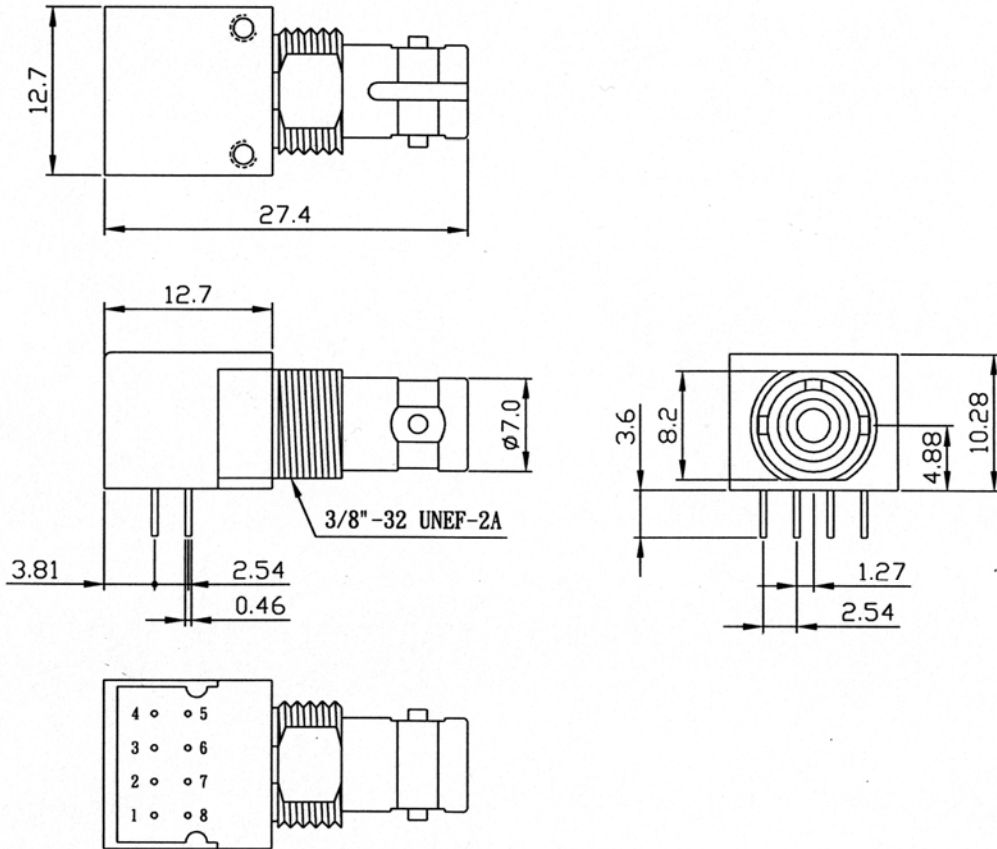


1310nm FP Laser Diode SM Module

1310nm FP Laser Diode SM Module (APC 12)

Sugar Cube

Dimension (ST Receptacle) Unit mm



Pin Connections (Type A)

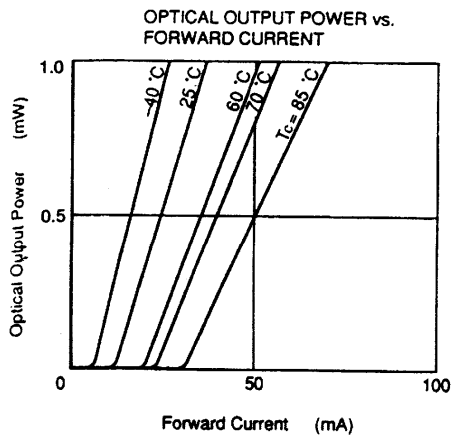
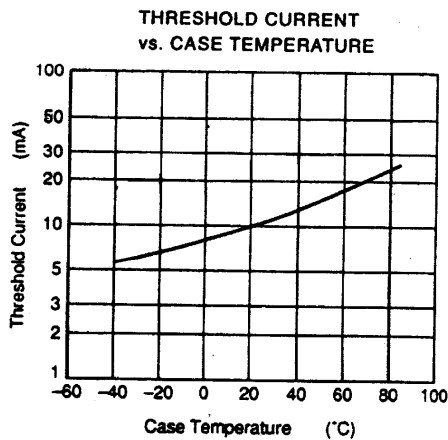
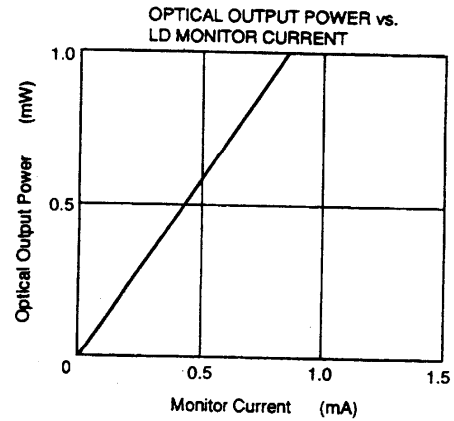
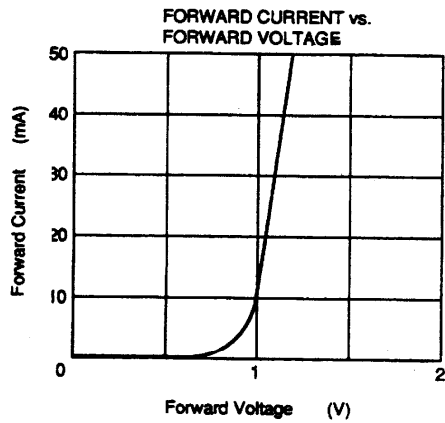
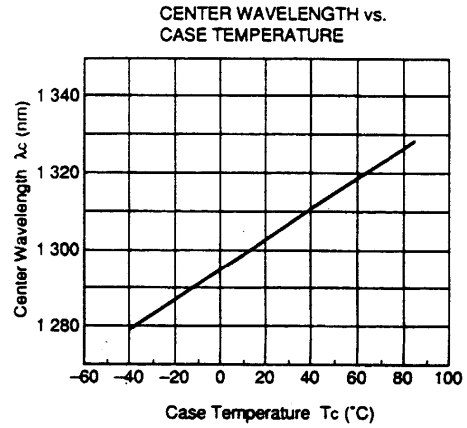
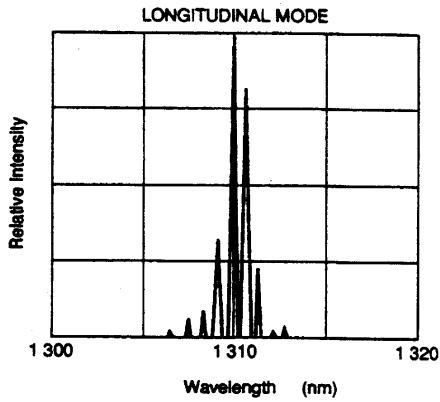
PIN No.	FUNCTION
1	NC
2	ANODE
3	CATHODE
4	NC
5	NC
6	ANODE or NC
7	ANODE or NC
8	NC

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

1310nm FP Laser Diode SM Module (APC 12)

Typical Characteristics (25°C)



1310nm FP Laser Diode SM Module (APC 12)

1310nm FPLD
Fiber-coupled Power vs. Drive Current

