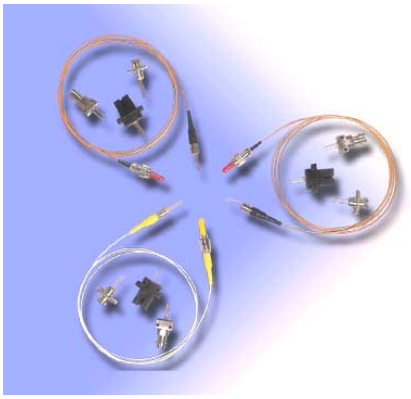
InGaAs PIN Photodiode Module

Features

- High Responsivity
- High speed, typical 2 GHz
- Low dark current, < 1nA
- Low capacitance, typical 0.7pF
- Operating temperature range -40°C to 85°C
- Hermetically sealed TO-18 package in pigtailed or receptacle housing with FC, ST, SC, LC, MU or SMA connector



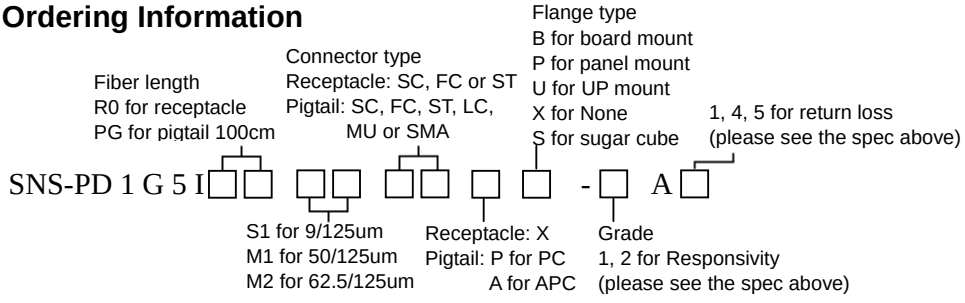
Specifications (T=25°C, -5V)

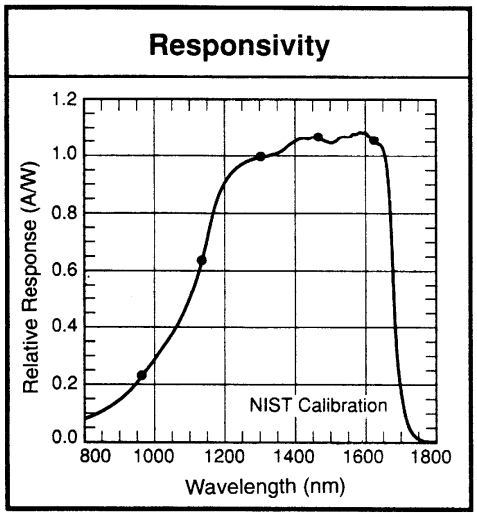
Parameter		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Responsivity		R					
9/125 um fiber	-1 -2		Laser source of 10 uw(λ=1310nm)	0.7 0.8	0.8 0.9	- -	A/W
50/125 um fiber	-1 -2		LED source of 10 uw(λ=1310nm)	0.65 0.75	0.75 0.85	- -	A/W
62.5/125 um fiber	-1 -2		LED source of 10 uw(λ=1310nm)	0.6 0.7	0.7 0.8	- -	A/W
Spectral Range			-	1250	-	1650	nm
Dark Current		Id	V_R=2V, 0 to 1MHz	-	-	1	nA
Capacitance		Ct	V_R=2V, 1MHz	-	0.7	0.8	pF
Rise/fall Time		tr/tf	V_R=2V, 20% to 80%	-	<1	-	ns
Bandwidth		B		-	1.5	-	GHz
Return Loss							
-1(Receptacle)				14	-	-	dB
-4(Pigtail)				40	-	-	dB
-5(Pigtail)				50	-	-	dB

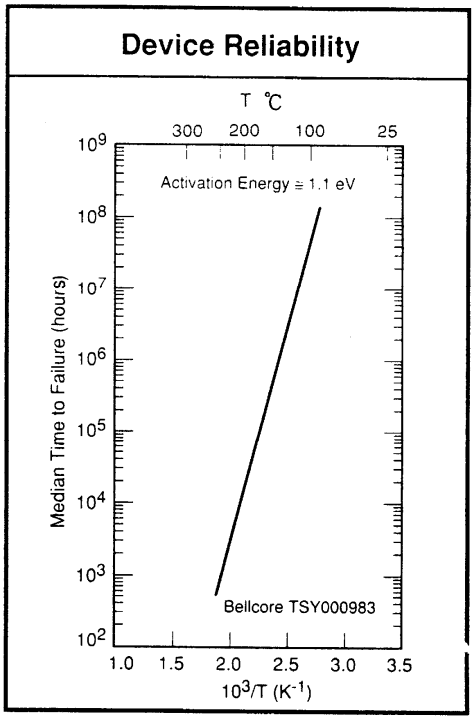
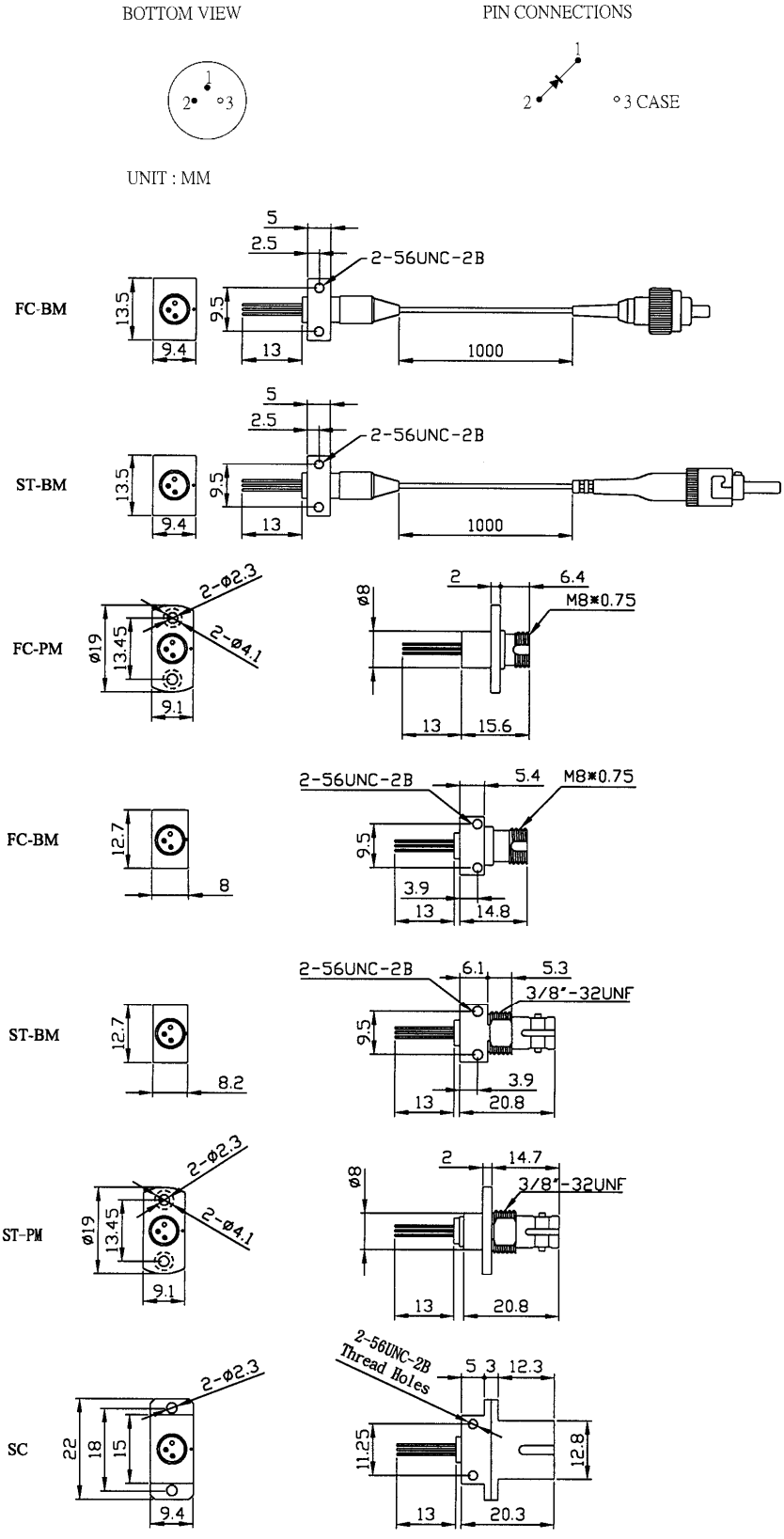
Absolute Maximum Rating

	Symbol	Min.	Max.	Unit
Operating Temperature	To	-40	+85	°C
Storage Temperature	T_{stg}	-40	+125	°C
Forward Current	I_F	-	5	mA
Reverse Voltage	V_R	-	30	V
Reverse Current	I_R	-	500	uA
Lead Soldering Temperature (10 sec)	T_L	-	260	°C

Ordering Information




Responsivity
Relative Response (A/W)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
800
1000
1200
1400
1600
1800
Wavelength (nm)
NIST Calibration


Device Reliability
T ℃
300
200
100
25
Activation Energy ≅ 1.1 eV
Median Time to Failure (hours)
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
Bellcore TSY000983
1.0
1.5
2.0
2.5
3.0
3.5
$10^3/T\ (K^{-1})$

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