

InGaAs APD Module (Coaxial coupling)

Features

- Low Capacitance
- Low Return Loss
- Small Dark Current
- High Speed
- High Responsivity InGaAs APD

Application

- OTDR
- Monitoring and Meter
- Optical Instruments
- Sonet OC-48 / SDH STM -16 Application



Absolute Maximum Ratings (Tc=25°C .unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit	Test Condition
APD Forward Current	I_{FP}	-	10	mA	CW
APD Reverse Current	I_R		0.5	mA	CW
Relative Humidity (noncondensing)	RH		85	%	-
Operating Temperature	T_{OP}	-40	+85	°C	-
Storage Temperature	T_{stg}	-40	+85	°C	-
Soldering Temperature/Time	-		260/10	°C/S	-

Specifications (electrical & optical characteristics) T= 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Wavelength Range	λ	1000	-	1650	nm	-
Temperature Coefficient of Reverse Breakdown Voltage	δ		0.2		% / °C	*1
Voltage	V_{BR}	50	-	100	V	$I_D=10\mu A$
Dark Current	I_d	-	0.3	1	nA	$V_R=V_{BR}-1V$
Responsivity	R	0.80 @ 1310nm			A / W	M=1
		0.95 @ 1550nm				
		0.80 @ 1650nm				
Capacitance	C_t	-	0.35	-	pF	$f = 1\text{ MHz}, V_R=V_{BR}-1V$
Multiplied Dark Current	I_{dm}		1	5	nA	M=2 to 10
Cut-off Frequency	F_c	2.5	-	-	GHz	M=10
Optical Return Loss	ORL	30	-	-	dB	SMF

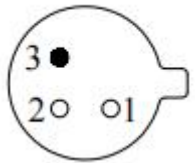
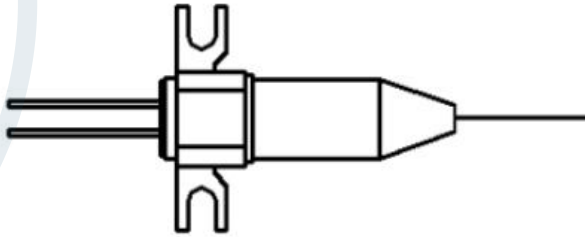


Multiplication Factor	M	40	60		M	$\lambda = 1310\text{nm}, I_{po} = 1.0 \mu\text{A},$ $V_r = V (@ I_d = 1 \mu\text{A})$
Excess Noise Factor	X		0.7			$\lambda = 1310\text{nm}, 1550\text{nm}, I_{po} = 1.0 \mu\text{A},$ $M=10, f=35\text{MHz}, B=1\text{MHz}$
	F		5			

*1

$$\delta = \frac{V_{BR}(25^\circ\text{C} + \Delta T^\circ\text{C}) - V_{BR}(25^\circ\text{C})}{\Delta T^\circ\text{C} \cdot V_{BR}(25^\circ\text{C})}$$

Pin Assignment



Pin	Function
1	PD +
2	PD -
3	Case

Order Information

GTA5016

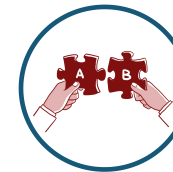
(InGaAs APD Module,with flange)

GTA5016N

(InGaAs APD Module,without flange)



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