Integrated Tap Photodiode (TAPD)

Rev 11C

Description

The Integrated Tap Photodiode (TAPD) integrates the functionality of an optical coupler and a photodiode for optical network's power detection. It applies for channel power monitoring in DWDM system, in-line optical network switching protection monitoring (OLP), reconfigurable optical add/drop multiplexers (ROADM), and gain/attenuation monitoring in EDFAs and networks's power detection, etc.

Key Features

- Accurate Tap Ratio
- High Responsivity
- Low Dark Current

Applications

- DWDM System
- Optical Sensing System

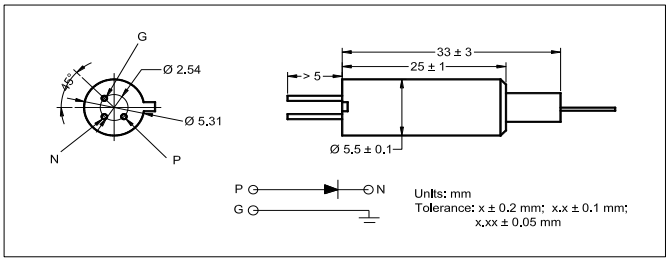
Specifications

Parameter		Unit	Value	
Center Wavelength (λc)		nm	1310	1550
Operating Wavelength Range (λop)		nm	λc ± 50	
Max. Insertion Loss	1%	dB	0.4	
	2%	dB	0.5	
	5%	dB	0.6	
	10%	dB	0.9	
Wavelength Flatness		dB	≤ 0.2	
Max. Polarization Dependent Loss		dB	0.05	
Min. Return Loss		dB	45	
Responsivity	1%	mA/W	6 - 14	7 - 15
	2%	mA/W	12 - 23	14 - 25
	5%	mA/W	30 - 60	35 - 65
	10%	mA/W	60 - 110	70 - 120
Max. Responsivity Temperature Dependence (λc)		dB	0.3	
Max. Responsivity Polarization Dependence		dB	0.1	
Dark Current (@ 70 ℃, - 5 V bias)	0.5 GHz Bandwidth	nA	8	
	2.0 GHz Bandwidth	nA	2	
Max. Power on Photodetector		mW	10	
Fiber Type		-	SMF-28 Fiber	
Operating Temperature		℃	0 to + 70	
Storage Temperature		℃	- 40 to + 85	
Soldering Temperature (over 2 mm from head, less than 5s)		℃	≤ 260	

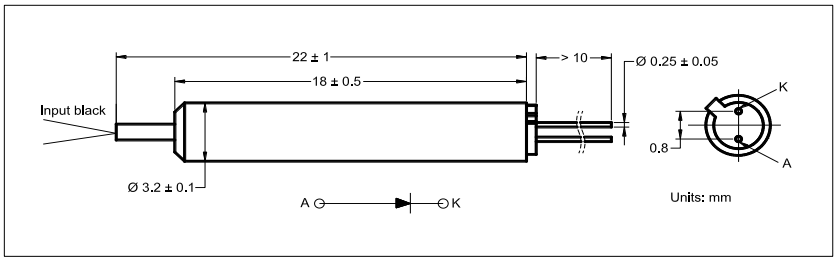
[1] IL is 0.3 dB higher, RL is 5 dB lower for each connector added.

Package Dimensions

TO-46 Package



Mini Size Package



Ordering Information

TAPD-①①-②②-③③-④-⑤-⑥-⑦

①①: Center Wavelength
55 - 1550 nm
31 - 1310 nm

②②: Tap Ratio
01 - 1%
02 - 2%
05 - 5%
10 - 10%

③③: Bandwidth
05 - 0.5 GHz
20 - 2.0 GHz

④: Connector Type
1 - FC/UPC
2 - FC/APC
3 - SC/UPC
4 - SC/APC
N - None
S - Specify

⑤: Fiber Jacket
B - 250 μm Bare Fiber

⑥: Fiber Length
1 - 1.0 m
S - Specify

⑦: Package Type
1 - TO-46 Package
2 - Mini Size Package