

# Mini Integrated Power Monitor

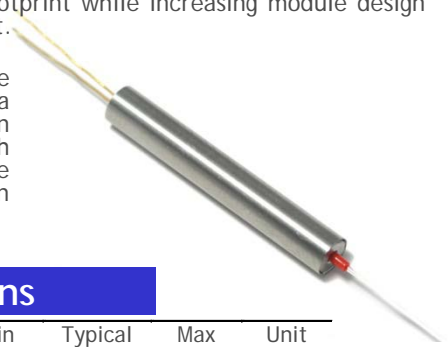
(Directional and Unidirectional)

(patent pending)

## Product Description

The Tap Optical Power Monitor is a hybrid fiber optical passive component that integrates a thin-film tap of flat spectral response with a high sensitivity PIN photodiode for power monitoring applications. The Power Monitor minimizes component assembly costs and module footprint while increasing module design efficiency by facilitating fiber Management.

The Power Monitor combines the functionality of an optical coupler and a photodiode while delivering low insertion loss and low dark current with high temperature stability over a wide wavelength range. Our directional version works well from 1260nm to 1620nm band.



## Performance Specifications

TM Series Power Monitor	Min	Typical	Max	Unit
Wavelength	1260		1620	nm
Tap Ratio	1	3	5	%
Insertion Loss	0.45	0.6	0.70	dB
Responsivity <sup>1</sup>	8	25	45	mA/W
Input Power <sup>2</sup>	-45		23	dBm
Wavelength Dependent Loss		0.002	0.003	dB/nm
Responsivity Flatness (1520-1620nm)		±0.2		dB
Return Loss	45	50		dB
Polarization Mode Dispersion			0.05	ps
Polarization Dependent Loss		0.03	0.06	dB
Polarization Dependent Responsivity		0.02	0.1	dB
Dark Current at 23°C		0.1	0.9	nA
Directivity <sup>3</sup>		None or >25		dB
Capacitance		0.2	0.6	pF
Reverse Voltage			20	V
Response Bandwidth		10		MHz
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Reliability		Telcordia 1209 and 1221		
Fiber Type		SMF28, or Panda PM		
Package Dimension		φ3.5×L15 or φ3.5×L23 mm		

### Notes:

Parameters are specified for the signal wavelength range, all polarization states, and operating temperature range without connector unless otherwise stated.

1. The net responsivity is defined as the ratio of the PD current output and optical power measured at output fiber
2. The maximum optical power is the maximum value of the power at input port within the PD linearity range specified.
3. Directivity defines the responsivity contrast between the case that light power comes from input fiber port and the case that light power comes from output fiber port. From 1260 to 1620nm.

## Features

- Integrated
- Low Loss Device
- Custom Tap Ratios Available
- Compact Design

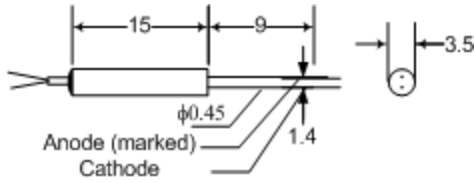
## Applications

- Channel Monitoring
- Power Monitoring in Optical Interface Modules
- Gain Monitoring for Amplifier
- DWDM System Monitoring

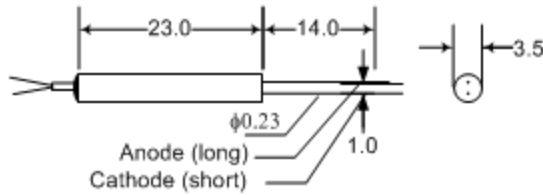


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## Mechanical Footprint Dimensions (Unit:mm)



None directivity package



Directional package

## Ordering Information

TOPM-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Tap Ratio	Wavelength	Directivity	Fiber Type	Fiber Length	Connector	
	1%=01 3%=03 5%=05 Special=00	1310=3 1550=5 13/15=8 1260—1620=9 Special=0	No=1 Yes=2	SMF-28=1 Panda PM=2 Special=0	Bare fiber=1 900um Loose Tube=3 Special=0	0.25m=1 0.5m=2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Special=0