HERMETIC TAP DETECTOR
SINGLEMODE

DiCon's Hermetic Tap Detector (HTD) combines the functionality of a thin film coupler and a photodetector into a single compact component for monitoring optical signals, with the added benefit of a hermetic seal for a more robust and reliable solution for rugged environments.

The HTD uses a thin film filter to tap off a percentage of the input signal only and directs it to the photodiode.

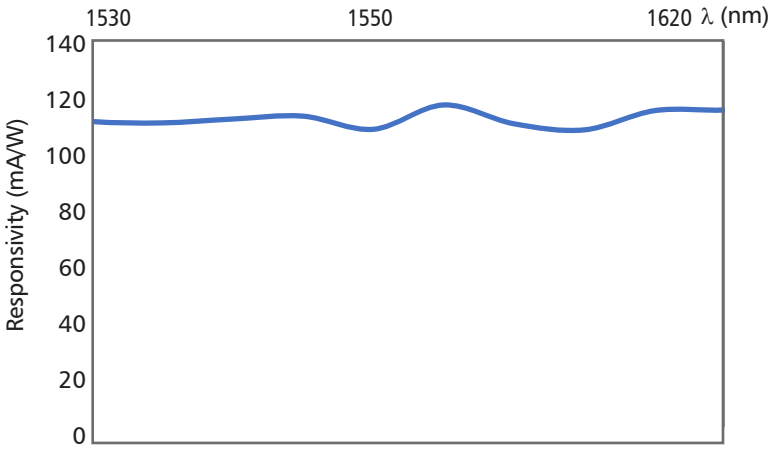
FEATURES

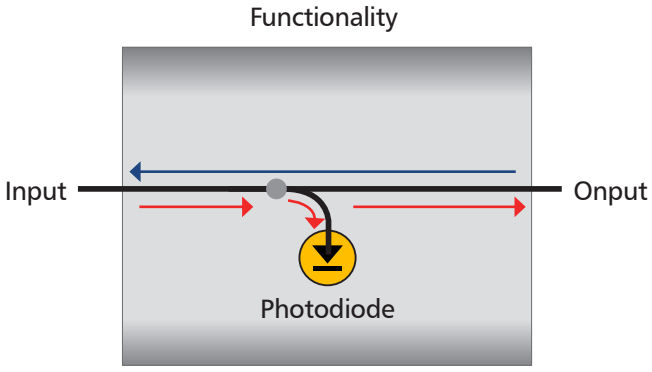
- High Directivity of 27 dB min, 33 dB Available
- Hermetically Sealed for Long Term Reliability
- Compact Size: 12.8 mm Long x 2.5 mm Diameter
- Flat Spectral Response

APPLICATIONS

- Optical Power Monitoring
- WDM System Channel Monitoring
- Commercial & Defense Networks

Example Spectral Response with 10% Tap Ratio





DiCon FIBEROPTICS

HERMETIC TAP DETECTOR - SINGLEMODE

OPTICAL SPECIFICATIONS

Specifications without connectors at approx. 23°C.

PARAMETER		Specification
Pass Band Wavelengths		O, E, S, C, L, U Bands
Insertion Loss, Single Band (Dual Band IL adds 0.2 dB)	1%	0.5 dB max.
	2%	0.6 dB max.
	3%	0.7 dB max.
	5%	0.8 dB max.
	10%	1.0 dB max.
Measureable Input Power	1%	-25 to 27 dBm
	2%	-28 to 27 dBm
	3%	-30 to 25 dBm
	5%	-32 to 23 dBm
	10%	-35 to 20 dBm
Directivity[1]		27 dB min.
Back Reflection		-45 dB max.
Wavelength Flatness, over ±20 nm range from CWL (Dual Band adds 0.1 dB)		0.1 dB max.
Polarization Dependent Loss (PDL)		0.05 dB typ. // 0.1 dB max
Temperature Dependent Loss (TDL)		0.15 dB max. relative 23 °C
Optical Power		500 mW max.
Operating Temperature		-5 to 70 °C
Storage Temperature		-40 to 85 °C
Fiber Type		9/125 um Singlemode

1. Directivity of 33 dB minium is avaible upon request.

PHOTODIODE SPECIFICATIONS

Specifications without connectors at approx. 23°C.

PARAMETER		Specification
Reverse Voltage (Vr)		20 V max.
Dark Current		1 nA max. at T = 23 °C (Vr = 5 V)
Shunt Resistance		40 MΩ min.
Capacitance		5 pF max. (Vr = 5V)
Tap Responsivity	1%	7 to 20 mA/W
	2%	10 to 30 mA/W
	3%	20 to 40 mA/W
	5%	40 to 60 mA/W
	10%	80 to 120 mA/W
Wavelength Dependent Responsivity (WDR) (±20 nm range from CWL, Dual band adds 0.1 dB)		0.03 dB typ. // 0.05 dB max
Polarization Dependent Responsivity (PDR)		0.05 dB typ. // 0.1 dB max
Temperature Dependent Responsivity (TDR)		0.1 dB max. relative to 23 °C
Linearity		± 3% @ Vr = 5 V
Bandwidth		250 MHz

ORDERING INFORMATION

HTD - □ - □ - □ - □ - □ - □

Product Code

HTD	Hermetic Tap Detector

Tap Ratio

1	1%
2	2%
3	3%
5	5%
10	10%

Wavelength Range

O	1260 nm - 1360 nm
E	1360 nm - 1460 nm
S	1460 nm - 1530 nm
C	1530 nm - 1570 nm
L	1570 nm - 1625 nm
U	1625 nm - 1675 nm

Multiple wavelength ranges can be supported. Use "/" to add multiple ranges. For example: For 1260-1360 nm & 1530-1570 nm use O/C, for 1260 to 1675 nm use O/E/S/C/L/U.

Connector Type

FC	FC/UPC
FC/APC	FC/APC
LC	LC/UPC
LC/APC	LC/APC
SC	SC/UPC
SC/APC	SC/APC
N	None

Fiber and Jacket Type

9/BF	9/125 um Singlemode, Bare Fiber

Pigtail Length

1	1 Meter
X	Specify X Meter

Pin Bending

S	Straight Pins
B	Bent Pins

MECHANICAL SPECIFICATIONS

Dimensions in mm