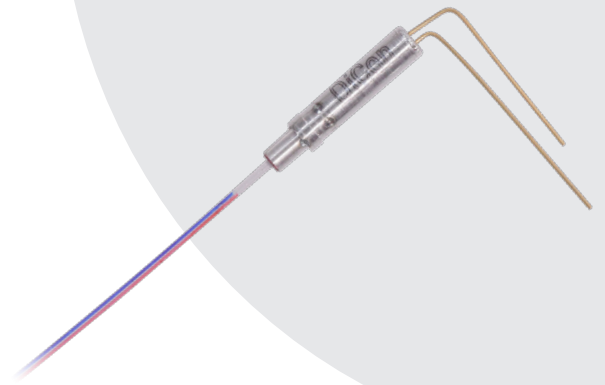


HERMETIC TAP DETECTOR SINGLEMODE

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.



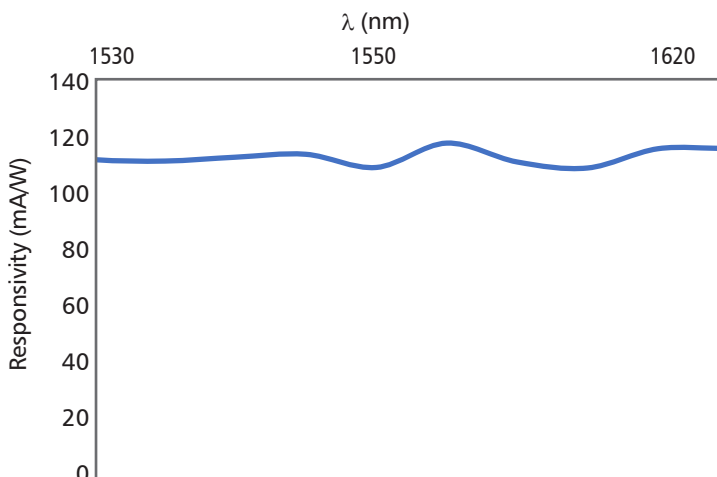
FEATURES

- 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

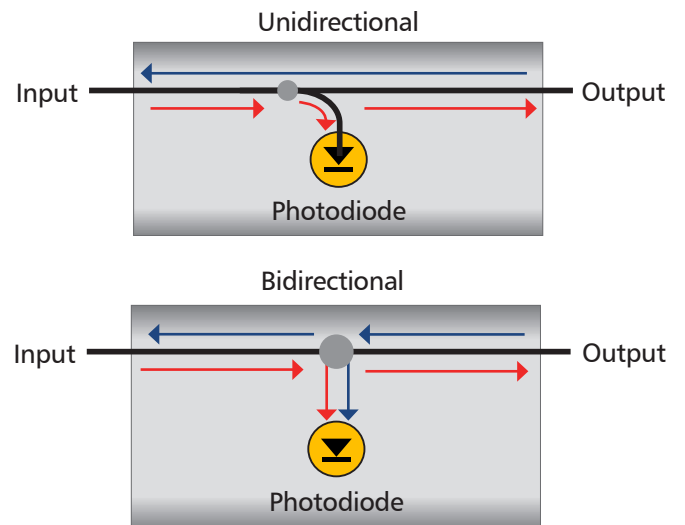
APPLICATIONS

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

Example Spectral Response with 10% Tap Ratio



Functionality Type



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 ^{1,2}	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) (Dual band adds 0.05 dB)	0.05 dB typ. // 0.1 dB max	
Temperature Dependent Loss (TDL)	0.3 dB max.	
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 spec is for unidirectional type.
2. Bidirectional type directivity 0.2 dB max.

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 0.2 dB)	0.3 dB max	
Polarization Dependent Responsivity (PDR)	0.2 dB typ. // 0.3 dB max	
Temperature Dependent Responsivity (TDR)	0.4 dB max.	
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%

Functionality Type

U Unidirectional
B Bidirectional

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

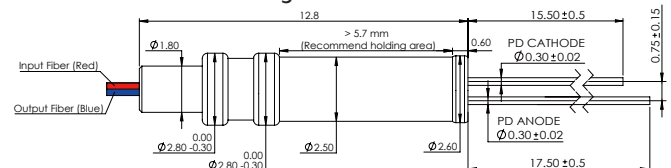
1 1 Meter
X Specify X Meter

Pin Bending

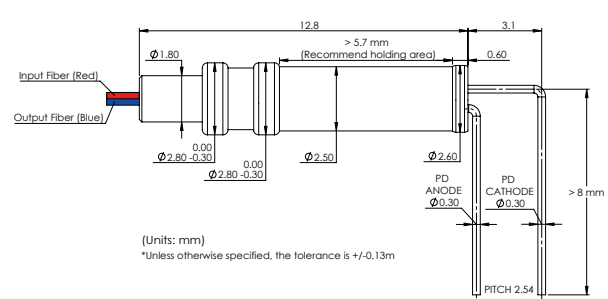
S Straight Pins
B Bent Pins

MECHANICAL SPECIFICATIONS

Straight Pins



Bent Pins



(Units: mm)
*Unless otherwise specified, the tolerance is +/-0.13mm