

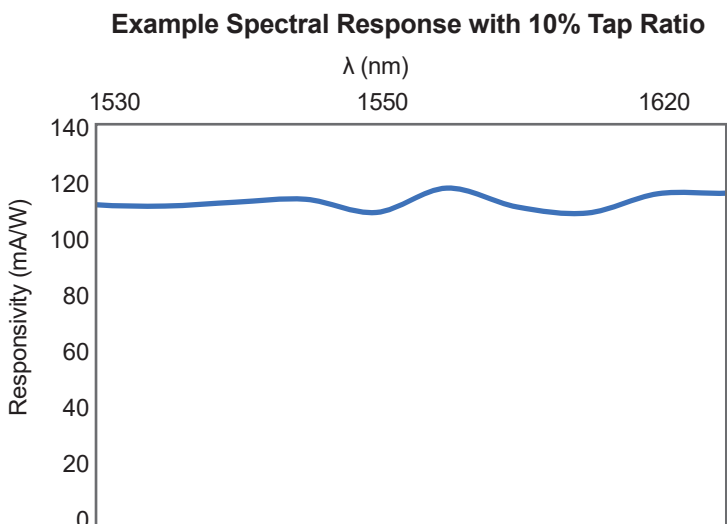
HERMETIC TAP DETECTOR SINGLEMODE

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.

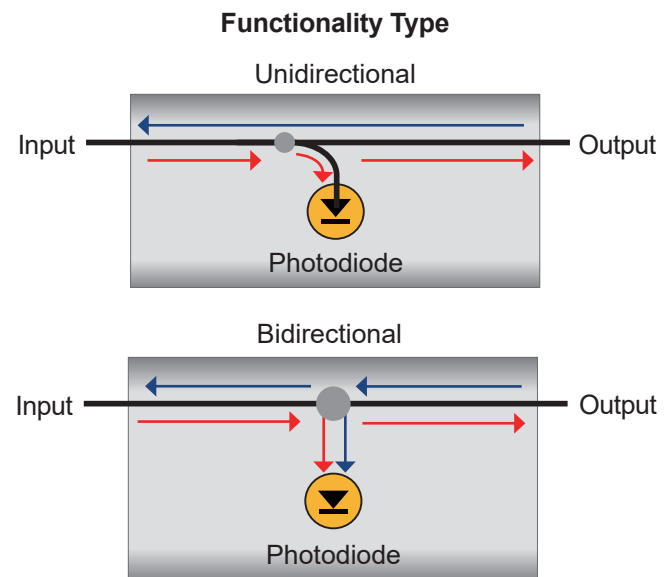
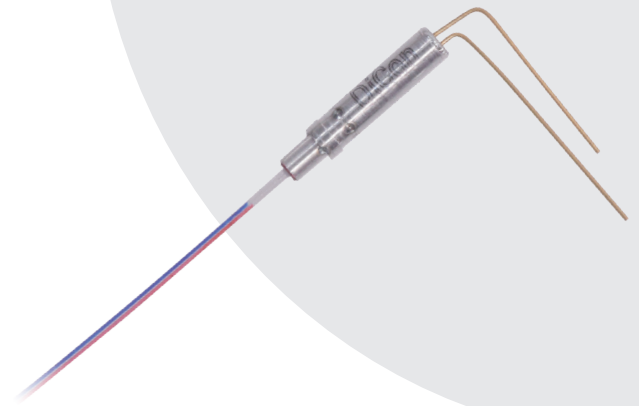
FEATURES

- High Directivity of 27 dB min (Unidirectional)
- 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



HERMETIC TAP DETECTOR - SINGLEMODE

OPTICAL SPECIFICATIONS^{1,2}

PARAMETER		RATING
Pass Band Wavelengths		O, E, S, C, L, U Bands
Insertion Loss, Single Band ³ (dB)	1%	0.2 typ. // 0.4 max.
	2%	0.3 typ. // 0.5 max.
	3%	0.3 typ. // 0.5 max.
	5%	0.4 typ. // 0.6 max.
	10%	0.65 typ. // 0.8 max.
Directivity (dB)	Unidirectional	30 typ. // 27 min.
	Bidirectional	0.1 typ. // 0.2 max.
Back Reflection (dB)		-45 max.
Wavelength Flatness, over ±20 nm range from CWL (dB)	Single Band	0.025 typ. // 0.1 max.
	Dual Band	0.1 typ. // 0.2 max.
	Full Bands	0.15 typ. // 0.4 max.
Polarization Dependent Loss (PDL) (dB)		0.03 typ. // 0.1 max.
Temperature Dependent Loss (TDL) (dB)		0.3 max.
Optical Power (mW)		500 max.
Operating Temperature (°C)		-5 to 70
Storage Temperature (°C)		-40 to 85
Fiber Type		9/125 um Singlemode

PHOTODIODE SPECIFICATIONS^{1,2}

PARAMETER		RATING
Breakdown Voltage (Vb)		20 min. (Ir = 1uA)
Dark Current (nA)		1 max. at T = 23 °C (Vr = 5 V)
Shunt Resistance (MΩ)		40 min. (V = 10mV)
Capacitance (pF)		5 max. (Vr = 5V, f = 1 MHz)
Tap Responsivity (mA/W)	1%	7 to 20
	2%	10 to 30
	3%	20 to 40
	5%	40 to 60
	10%	80 to 120
Wavelength Dependent Responsivity (WDR) (±20 nm range from CWL) (dB)	Single Band	0.15 typ. // 0.3 max.
	Dual Band	0.3 typ. // 0.5 max.
	Full Bands	0.8 typ. // 1.25max.
Polarization Dependent Responsivity (PDR) (dB)		0.07 typ. // 0.15 max
Temperature Dependent Responsivity (TDR) (dB)		0.4 max.
Linearity		± 3% @ Vr = 5 V
Bandwidth (MHz)		250

- Specifications are without connector loss.
- All measurements taken at CWL at approx. 23°C.
- IL adds 0.2 dB for multi-bands. IL adds 0.2 dB for one pair connector loss.

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

