Fiber Pressure Sensor
(OEFPS-200, 300)

A new fiber Bragg grating pressure sensor is now available at **O/E LAND INC**. The FBG pressure sensors are based on a patent pending technology and profits from our advanced fiber Bragg gratings fabrication expertise.

Fiber pressure sensors are used to measure pressure in air, gas, water, liquid or other mediums. An optional temperature sensor can be built in with pressure sensor for monitoring both pressure and temperature at the same time. The FBG is not in physical contact with the medium in which the pressure should be measured.
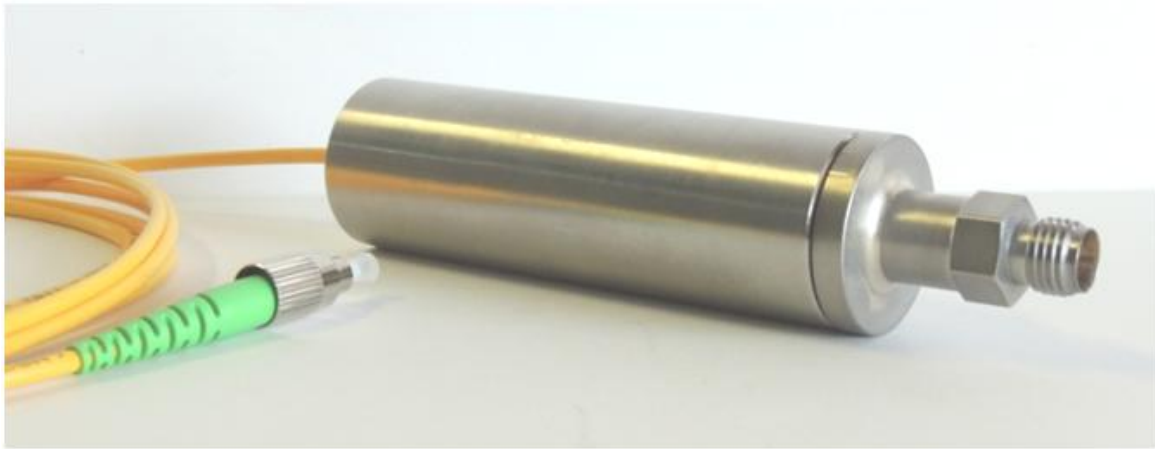

Figure 1: Fibre Pressure Sensor OEFPS-200 and 300.

Specifications:

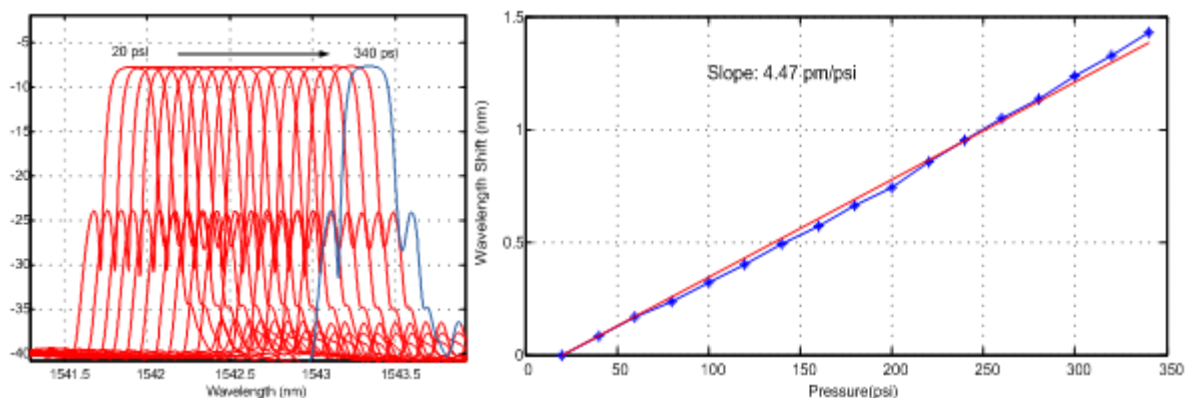|	OEFPS-200A	OEFPS-200B	OEFPS-300A	OEFPS-300B
Center wavelength (nm)	1310, 1550			
FWHM (nm)	0.2 ± 0.1			
Reflectivity (%)	> 75			
Pressure range (psi)	< 100		< 300, 500, 1000	
Sensitivity (pm/psi)	400 for <10 psi, 40 for <100 psi		5 for <500 psi, 3.5 for <1000 psi	
Temperature sensor	None	Built-in	None	Built-in
Size (mm)	φ 30x100			
Fibre cable	3 mm or armoured cable			
Operating Temperature (°C)	< 80 for 3mm cable <150 for armoured cable			
Pressure connector	Standard ¼" Male Connector			

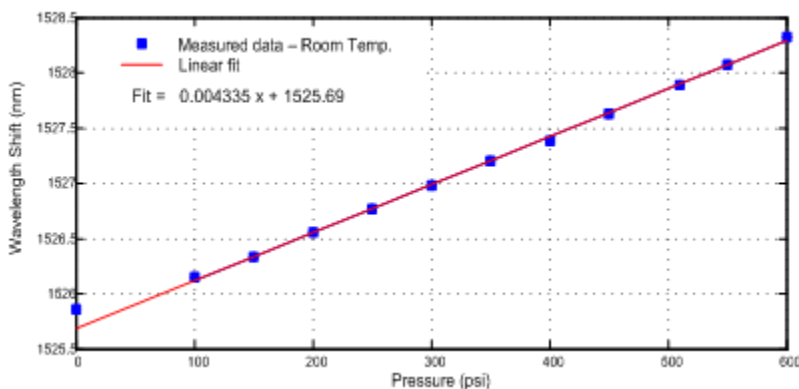*Note: All specifications are subject to change without notice.*

Applications:

- Industry control
- Pipeline pressure measurements
- Dangerous chemical vessel pressure monitor
- Liquid level measurement

Measured Data

The measured results for the sensors with 300 and 600 psi pressure ranges are shown here. In both cases, the shift in the central wavelength is linear and almost the same sensitivity is obtained. However, for higher pressure ranges (e.g. 1000 psi), we have to reduce the sensitivity to avoid breaking the fiber.

The wavelength shift as a function of applied pressure for 300 psi pressure range.

The wavelength shift as a function of applied pressure for 600 psi pressure range.

Please feel free to contact us at (514) 334-4588 or at sales@o-eland.com for more information on this product.