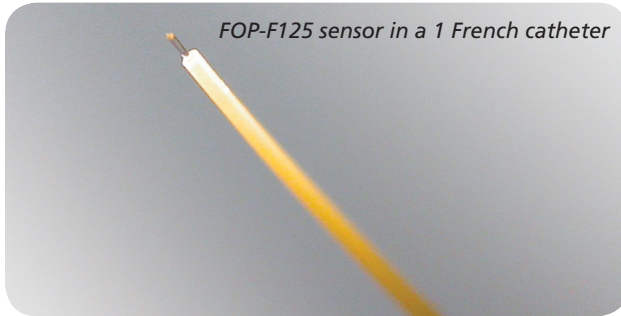


# PRODUCT DATASHEET

## FOP-F125 Pressure Sensor



The FOP-F125 is the world's smallest pressure sensor. It has been especially designed and tested to fulfill the highest of medical performance requirements. Its applications range from human body fluid pressure measurements – for intervention in hospital critical care units – to animal testing in high EMI environments. This product is designed to target high volume application where it will be customized to suit OEM-specific needs.

With a diameter of only 125  $\mu\text{m}$ , the FOP-F125 is the smallest pressure sensor commercially available. This ultra-miniature sensor is manufactured directly at the tip of the optical fiber using patent pending technologies suitable for mass production. This all-glass sensor assembled without the use of any adhesive is fully biocompatible and is suitable for integration in medical devices and in minimally invasive instrumented catheters.

The size and mounting flexibility of the FOP-F125 provide the capability to embed the sensor within almost any configuration of invasive diagnostic or therapeutic devices. The front-looking FOP-F125 allows in-situ measurements at locations unreachable to standard pressure sensors and eliminates the artefacts due to tissue contact that may be encountered with laterally mounted sensors.

The FOP-F125 high measurement resolution and precision, combined with a fast reading rate, are important characteristics when attempting to detect very quick and subtle pressure variations. It allows a clear definition of complex pressure waveforms, such as human arterial blood pressure variations generated by heart valve closure. Its long term reliability and low drift value make it the best sensor available for implantable equipment, such as intra-cranial, intravascular and intrauterine pressure monitoring devices.

The optical nature of the FOP-F125, makes the sensor immune to electromagnetic field or radiofrequency interferences regularly encountered in operating rooms or MRI devices. The FOP-F125 fast response is also useful in determining pressure curve characteristics at faster paces, such as the ones encountered in small laboratory animals.

### Key Features

- Ultraminiature sensor for in-situ pressure measurements
- Adhesive-free assembly: all-glass
- High performance and reliability
- High accuracy and repeatability
- Very low drift
- EM/RF/MW interference complete immunity
- Fast response time
- Sterilizable

### Applications

- Medical
  - Cardiology
  - Neurology
  - Anaesthesiology
  - Pneumology
  - Gastroenterology
  - Urology
  - Gynecology
  - Ophthalmology
  - Electrosurgery
  - Thermal therapy
  - Preclinical studies
  - MRI and other RFI environments
- OEM products
  - Custom design for embedment in diagnostic or therapeutic medical devices
  - Automated manufacturing
  - High volume – low cost available sensors
  - Computerized product testing in assembly line

## Specifications

Sensor diameter <sup>1</sup>	125 $\mu$ m
Pressure range <sup>2</sup>	$\pm$ 300 mmHg
Accuracy [-25 to 125 mmHg]	$\pm$ 5 mmHg
Accuracy [-300 to +300 mmHg]	$\pm$ 8 mmHg
Resolution	<0.4 mmHg
Sensitivity thermal effect	0.1% / $^{\circ}$ C
Zero thermal effect	0.4 mmHg / $^{\circ}$ C
Proof pressure	600 mmHg
Operating temperature	10 – 50 $^{\circ}$ C

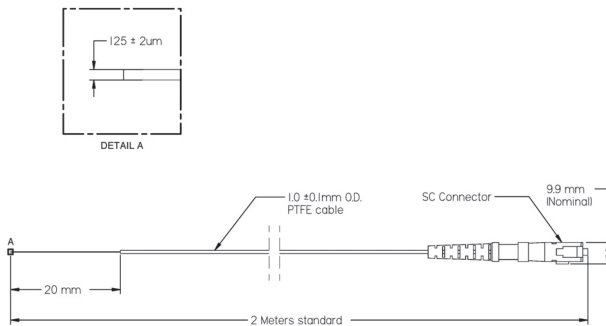
1. Tolerances of  $\pm$ 2  $\mu$ m
2. Relative to atmospheric pressure

### Disclaimer

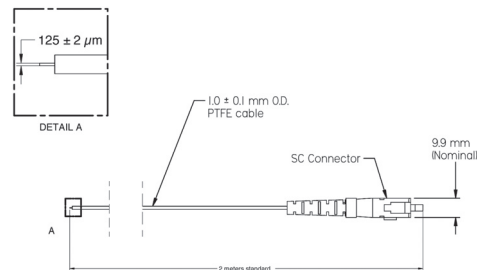
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## FOP-F125 Dimensions

### FOP-F125-BA Model



### FOP-F125-PK Model



Drawing Numbers SCH-00820 – SCH-00821

PRELIMINARY