

**Vibration Impact and Pressure Sensors Inc.** is a premier supplier of sensors and sensor systems excelling in quality and value. As a technical leader with an emphasis on performance and innovation, VIP Sensors strives for nothing less than total customer satisfaction.

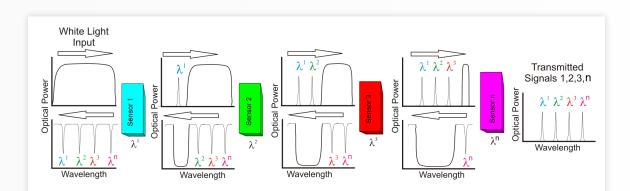
VIP Sensors offers a broad range of off-the-shelf catalog products available for immediate delivery. This is supplemented with cost-effective, timely services such as sensor calibration, modifications of sensors, of cable assemblies and of mounting hardware to satisfy unique customer applications. In addition, VIP Sensors specializes in customer funded research and development of sensor and systems.

### RESEARCH AND DEVELOPMENT FIBER OPTIC SENSOR ARRAYS

Our patented Fiber Optic Sensor Array consists of multiple optical sensors operating at unique wavelength ranges, interconnected serially by a single optic fiber. A high intensity broadband light source excites all the sensors in the array. Each optical sensor, built to work at a unique range of the optical spectrum, shifts (modulates) its fringe wavelength peak in proportion to the measurand and lets pass all other wavelength signals. The light at the end of the fiber segment contains the information of all the sensors at different preset wavelength slots in a wave division multiplexing (WDM) fashion.

The optical sensors, extrinsic Fabry Perot MEMS etalons, are miniature devices that exhibit superior performance regarding accuracy, dynamic range and noise. They are essentially flat, light weight, fully passive (no electrical power), and fully EMI/RFI immune

VIP Sensors' fiber optic technology is applicable to different types of sensors such as optical accelerometers, microphones, hydrophones, pressure sensors, etc.





#### Fiber Optic Vector Sensor (FOVS)

VIP Sensors' Fiber Optic Vector Sensor (FOVS) consists of a triaxial accelerometer and a hydrophone. The accelerometers provide the sound direction while the hydrophone measures its amplitude. The FOVS design is conducive to form large arrays interconnected by a single common optic fiber. It allows the formation of more reliable and higher performance, thin-line towed sonar arrays capable of left/right bearing resolution and depression/elevation angle determination in littoral and deep water operations.

#### **Key Features**

- Miniature Size 5/8 " Ø x 3.5" L
- Network Array Configurable
- Passive Sensor: No Power Consumption
- Neutrally Buoyant
- High Dynamic Range: 80 dB
- Very Low Noise: 10 dB Lower than Sea State Zero
- Broad Frequency Bandwidth
- Immune to RFI/EMI Noise
- Hydrostatic Pressure: 2500 PSIG

#### Fiber Optic Pressure Sensor Array

VIP Sensors' Fiber Optic Pressure Sensor Arrays are designed to measure air flow pressure at multiple points on the surface of aircraft for Flight Load and Wind Tunnel Test applications.

The miniature optical pressure sensors are highly accurate silicon MEMS devices, operating at different wavelength ranges in a Wave Division Multiplexing fashion. Multiple segments of four optical pressure sensors are interconnected in a parallel array and time multiplexed by a remotely located interrogation system.

#### **Key Features**

- Full Scale: 15 PSIA
- High Dynamic Range: 86 dB
- Accuracy: 0.05% of FS
- Miniature Size : 0.11" OD x 0.11" High
- Inherent Self ID
- · Passive Sensor: No Power Consumption
- Broad Bandwidth: DC to 10,000 Hz
- RFI/EMI Immune











# MISSION

VIP Sensors' mission is "to be a premier supplier of sensors and sensor systems excelling in Performance, Quality and Customer Satisfaction. VIP Sensors will be perceived as a technical leader with an Emphasis on Performance and Innovation."

### CORE COMPETENCIES

VIP Sensors' core competencies are in the design and manufacturing of Piezoelectric, Optical, and Micro-Electro-Mechanical Systems (MEMS) based sensors to measure acceleration pressure and shock. We also provide the electronic instruments needed to condition and process the sensor signals.

### **BUSINESS STRATEGY**

VIP Sensors achieves its business objectives by executing its 3-tier business strategy: by providing a comprehensive line of standard products, by introducing innovative new products to the marketplace, and by capturing research and development programs.

#### **Standard Products and Services**

VIP Sensors provides our customers with a broad range of off-the-shelf catalog products emphasizing Quality, Timely Delivery and Value. This is supplemented with support services such as sensor calibration.

### **Innovative Products**

New product development activities enable VIP Sensors to continuously add innovative products to its standard catalog product list.

### Funded Research and Development

VIP Sensors actively pursues funding provided by various US government agencies and commercial customers to develop innovative sensor solutions using the latest technologies. This also allows the company to be poised to respond to customer needs for custom products designs.

# **CONTACT INFORMATION**

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