



## OPTICAL SENSING INTERROGATOR SM125

### Description of Equipment

- The Optical Sensing Interrogator SM125 is a compact, field proven, industrial grade static optical sensor interrogation module designed for reliable, long term field operation. The SM125 is built upon the Micron Optics x25 optical interrogator core with a high power, low noise swept wavelength laser, which is realized with the Micron Optics patented fiber Fabry-Perot tunable filter technology.



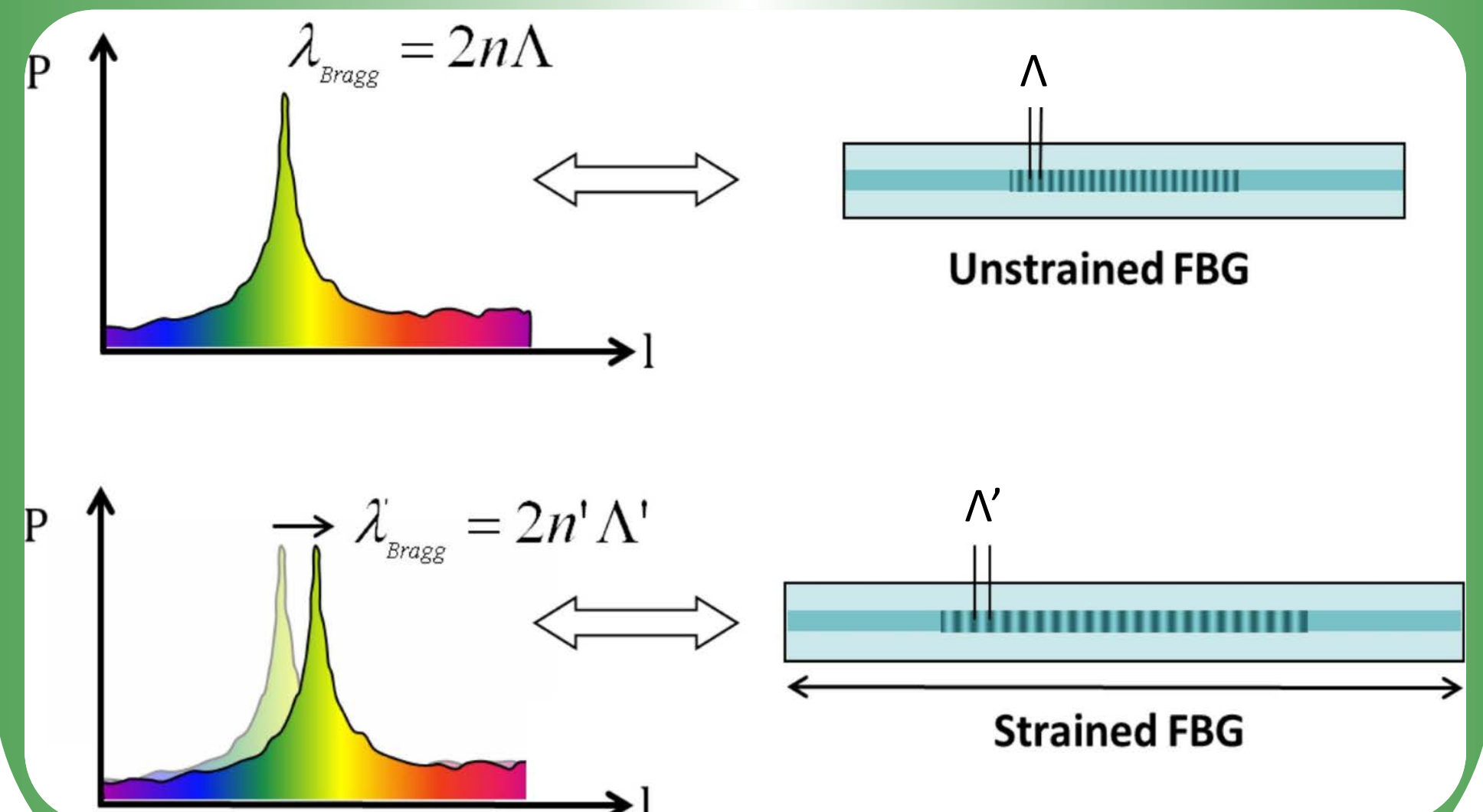
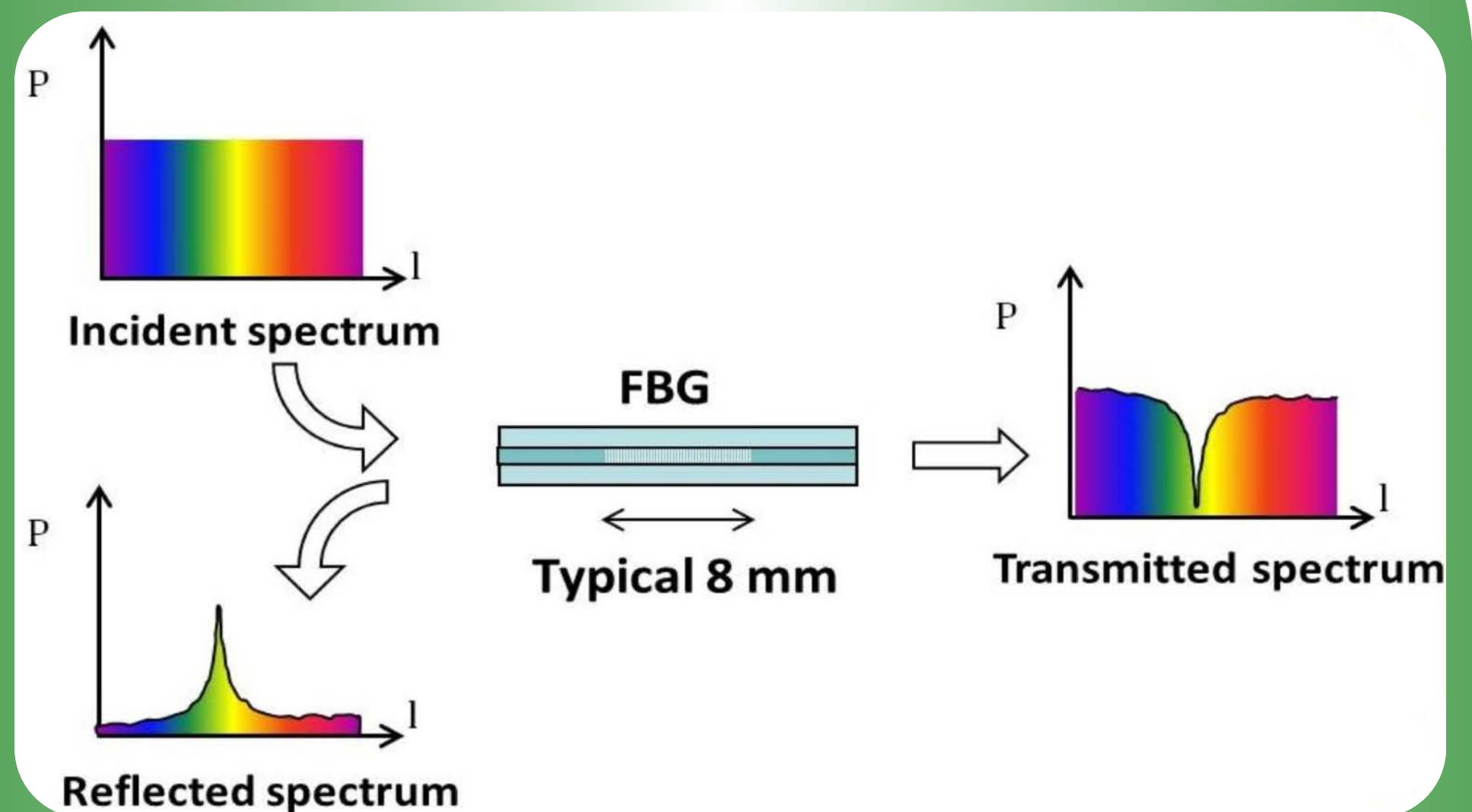
### Key Features

- High accuracy absolute measurements of strain, temperature, displacement, pressure and other static sensors.
- On-board NIST traceable wavelength reference.
- Wide wavelength swept laser supporting dozens of sensors per channel.
- Multiplexing for structural monitoring in large area or over long distance.

### Applications

- Full spectrum measurements of fiber Bragg grating (FBG), extrinsic Fabry-Perot, long period fiber grating (LPFG), and other optical sensor components.
- Continuous long-term health monitoring of bridges, buildings, dams, nuclear reactors, tunnels, aircraft, ships, and trains.
- Development of fiber optic sensors and transducers.

### Working Principles



### Specifications

Number of Optical Channels	4
Wavelength Range	1510~1590 nm
Wavelength Repeatability	0.5 pm at 1 Hz, 0.2 pm at 0.1 Hz
Typical FBG Sensor Capacity	80
Full Spectrum Measurement	Included
Internal Peak Detection Mode	Included
Optical Connectors	FC-APC (E2000 available)
Operating Temperature; Humidity	0° to 50° C; 0 to 80%, non-condensing
Storage Temperature; Humidity	-20° to 70° C; 0 to 95%, non-condensing
Input Voltage	7-36 VDC (100~240 VAC, 47~63 Hz)
Power Consumption at 12V	20 W (Typical), 30 W (Maximum)