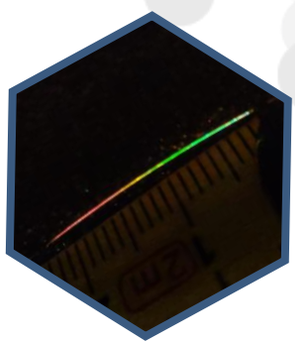
SHUTE Sensing Solutions A/S was founded in 2015 at the Department of Photonics Engineering at the Technical University of Denmark (DTU). SHUTE has developed a novel and unique microstructured polymer optical fiber (mPOF) sensor system, which enables real-time monitoring of **s**train/stress, **hu**midity, **te**mperature and vibrations in points along a hair-thin optical fiber. Hence the name SHUTE.

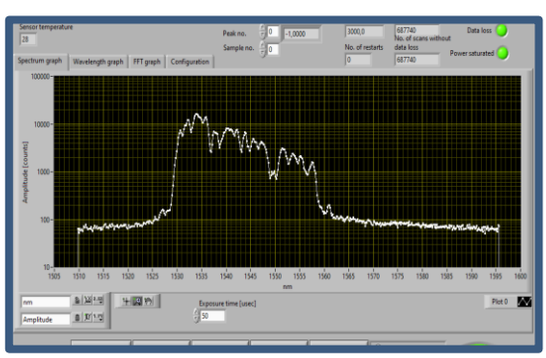
SHUTE mPOF Chirped Fiber Bragg Grating (CFBG) Sensor

SHUTE has developed a commercial mPOF sensor system, which precisely monitors the above-mentioned parameters in specific FBG sensor points. Now a further development in technology allows us to also offer longer sensor points. We can produce different lengths of CFBGs from a few millimetres up to 100mm, optimal for distributed sensing. The SHUTE mPOF CFBG strain sensor works with a C-band interrogator.

The sensor comes with a silica patch cable for added operating length.



- PMMA polymer optical fiber, singlemode
- Optional optical fiber connectors



This left plot shows the characterization of a PMMA fiber CFBG sensor (no Housing).

SHUTE sensors have been tested together with partners for detonation velocity measurements. The unique mechanical properties of a mPOF, compared to silica optical fibers, gives new valuable information, which also can be used for shock wave sensing

SHUTE mPOF Chirped Fiber Bragg Grating (CFBG) Sensor

- Singlemode
- Microstructured
- Compatible with C-band interrogators
- Center wavelength: 1545 +/- 10nm
- Chirped Fiber Bragg Gratings 20mm to 100mm long
- Physical dimensions sensor: Customizable diameter, e.g., Ø: 130 microns

For more information visit www.shute.dk or feel free to call us on +45 2338 6728 to discuss how SHUTE technology can assist you in optimizing your sensing needs.