



OVERVIEW

Our PEEK coated optical fiber provides superior strength and protection throughout extended temperature ranges. With an upper working temperature of 300 °C (572 °F),* our PEEK coated optical fiber easily tolerates the harshest environments. Chemical and steam environments do not affect PEEK's performance as an optical coating. Likewise, PEEK is radiation resistant making it well suited for applications in the nuclear industry.

PEEK possesses one of the highest strength-to-weight ratios of any thermoplastic making it especially beneficial for the aerospace industry. PEEK's ability to tolerate multiple sterilization methods and cycles have made it highly popular in the medical industry. PEEK protection extends the life of the optical fiber. Zeus has optimized our coating process to stabilize PEEK during extreme temperature fluctuations. This stabilization allows the optical fiber to retain the benefits of PEEK without attenuation inducing compression during temperature changes.



PEEK coated optical fiber helps to protect data flow and reduce attenuation.

**Not recommended for dielectric applications in temperatures exceeding 260 °C (500 °F).*



CONTINUOUS SERVICE TEMP



CHEMICAL RESISTANCE



ABRASION RESISTANCE

APPLICATIONS

- Downhole sensors
- Pressure / strain sensing
- Temperature sensor
- Force sensors
- Artificial lift monitoring and optimization
- Structural health monitoring – pipeline, composites

CAPABILITIES AND SIZING

- Single-mode (SM) / multi-mode (MM) polyimide and HTA fiber
- SM / MM: polyimide / carbon layer
- SM / MM polyimide radiation resistant
- Coating Wall Thickness 50 μm - 373 μm
- Final OD range 200 μm - 955 μm

KEY PROPERTIES

- Minimal attenuation throughout a broad temperature range
- Wide working temperature range: -70 °C to 300 °C (-94 °F to 572 °F)
- High strength-to-weight ratio
- Radiation resistant
- Excellent resistance to wear and impact
- High torsional stability

