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Erbium Doped Fiber-AstroGain™

Space grade Erbium doped fibers

Fibercore's AstroGain™ Erbium doped fibers are designed for use in space applications, including amplifiers for inter-satellite communications and light sources for earth monitoring missions. The fiber is available in two variants, AG980H and AG980L. AG980H has a unique trivalent core matrix optimized for high continuous operating time, as might be required in Fiber Optic Gyroscopes (FOGs). The AG980L has been designed for lower duty cycle operation where intermittent use is expected, as might be required in earth monitoring missions. These fibers build on Fibercore's World class Erbium Doped Fiber (EDF) expertise to deliver new technology to challenging environments.

Supported by Fibercore's **GainMaster™** simulation software

Advantages:

- Optimized trivalent core matrix for space operation
- High efficiency designs for maximum electrical-to-optical power conversion
- High reliability mechanical design

Typical applications:

- Amplifiers for inter-satellite communications
- Light sources for earth observation missions
- Light sources and amplifiers for large scale sensing missions

Product Variants:

- **AG980H** Designed for continuous mission use in space environments
- **AG980L** Designed for intermittent mission use in space environments

Related Products:

- Erbium Doped Fiber IsoGain™
- Erbium Doped Fiber MetroGain™
- GainMaster™ Simulation Tool
- PM Gyro Fiber (HB-G)

Specifications

	AG980H	AG980L
Cut-Off Wavelength (nm)	870 – 970	
Numerical Aperture	0.21 – 0.24	
Mode Field Diameter (µm)	5.4 – 6.9 @1550nm	
Absorption (dB/m)	5.0 – 7.1 @1531nm	
Proof Test (%)	2 (200 kpsi)	
Attenuation (dB/km)	≤10 @1200nm	
Polarization Mode Dispersion (ps/m)	≤0.005	
Cladding Diameter (µm)	125 ± 1	
Core Concentricity (µm)	≤0.3	
Coating Diameter (µm)	245 ± 15	
Coating Type	Dual Acrylate	

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