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Bismuth-doped Quartz Fiber

Product Description

Based on the unique bismuth element coordination atom modulation technology and valence reduction technology, the silicate based optical fiber with high gain factor is prepared. The fiber can be used as a gain medium for fiber amplifiers or fiber lasers in O, E, S, L+ and U bands, and is widely used in optical communications, natural environment monitoring and scientific research.

Features

- High absorption coefficient
- Highly accurate geometry control
- Low hydroxyl content
- High gain coefficient

Applications

- Optical communications, natural environment monitoring and scientific research
- Fiber amplifiers and lasers
- Tunable light sources

Specifications

Optical Specifications

Part Number	BPF-6/125	BGF-8/125	HiBGF-6/125
Operating wavelength (nm)	O+E band	E+S band	L+~U band
Gain coefficient (dB/m)	0.12@1325nm (pumping power=785 mW)	1.07@1430nm (pumping power=524 mW)	0.48@1750nm (pumping power=936 mW)
3dB range (μm)	1.30-1.35	1.41-1.45	1.71-1.77
Core pumping absorption (dB/m)	0.55±0.05(1240 nm)	1.65±0.05(1320 nm)	1.65±0.05(1550 nm)
Core attenuation (dB/km)	≤20 (1550nm)	≤200 (1150 nm)	≤450 (1200 nm)

Geometric and Mechanical Specifications

Core diameter (μm)	7.0±1.0	8.0±1.0	6.0±1.0
Cladding diameter (μm)	125.0±2.0	125.0±2.0	125.0±2.0
Coating diameter (μm)	245.0±10.0	245.0±10.0	245.0±10.0
Concentricity (μm)	≤1.0	≤1.0	≤1.0
Prooftest level (kpsi)	≥100	≥100	≥100