L-Band Erbium Doped Fibers

Nufern high performance L-Band Erbium-doped fibers are designed for use in L-band amplifiers and compact ASE sources. The 80 µm version is a reduced-cladding fiber ideal for small form-factor devices. All Nufern erbium-doped fibers are fabricated with a proprietary doping technology and have highly consistent and reproducible spectroscopy, ensuring intra-lot and lot-to-lot uniformity. These fibers are extensively characterized and accompanied by lot specific data.

Typical Applications

- L-band amplifiers
- Compact ASE sources
- Small form factor packages

Features & Benefits

- Highly consistent and reproducible spectroscopy — no need to batch matching GFFs
- Excellent core concentricity — low splice loss
- Detailed lot-specific characterization data — compatible with modeling programs

Optical Specifications	**EDFL-980-HP**	**EDFL-980-HP-80**	**EDFL-1480-HP**
Operating Wavelength	1565 – 1625 nm	1565 – 1625 nm	1565 – 1625 nm
Core NA	0.250	0.250	0.250
Mode Field Diameter	5.5 ± 0.5 µm @ 1550 nm	5.5 ± 0.5 µm @ 1550 nm	5.3 ± 0.5 µm @ 1550 nm
Cutoff	920 ± 50 nm	920 ± 50 nm	1420 ± 50 nm
Core Attenuation	≤ 15.0 dB/km @ 1200 nm	≤ 15.0 dB/km @ 1200 nm	≤ 15.0 dB/km @ 1200 nm
Core Absorption	25.0 ± 2.0 dB/m near 1530 nm 18.5 ± 11.5 dB/m near 980 nm	25.0 ± 2.0 dB/m near 1530 nm 18.5 ± 11.5 dB/m near 980 nm	15.0 ± 3.0 dB/m at 980 nm 30.0 ± 3.0 dB/m near 1530 nm
Geometrical & Mechanical Specifications			
Cladding Diameter	125.0 ± 1.0 µm	80.0 ± 1.0 µm	125.0 ± 1.0 µm
Core Diameter	2.8 µm	2.8 µm	4.5 µm
Coating Diameter	245.0 ± 10.0 µm	165.0 ± 10.0 µm	245.0 ± 10.0 µm
Coating Concentricity	< 5.0 µm	< 5.0 µm	< 5.0 µm
Core/Clad Offset	≤ 0.30 µm	≤ 0.30 µm	≤ 0.30 µm
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C
Prooftest Level	≥ 200 kpsi (1.4 GN/m²)	≥ 200 kpsi (1.4 GN/m²)	≥ 200 kpsi (1.4 GN/m²)

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Nufern products are manufactured under an ISO 9001:2008 certified quality management system.

RoHS

Standard specifications and design parameters are listed above. Specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.

NU0047- 11/07/2013