

C-Band Erbium Doped Fibers



Nufern's high performance C-Band Erbium-Doped 980-HP Fibers are designed for use in single and multi-channel C-band amplifiers and ASE sources. The 80 μm version is suitable for small form-factor amplifiers and metro amps. The "HI" version is designed to achieve the highest possible optical efficiencies in applications where available pump power is limited. All Nufern erbium-doped fibers are fabricated with a proprietary technology and have highly consistent and reproducible spectroscopy

Typical Applications

- Single and multi-channel C-band amplifiers
- ASE sources
- Small form factor amps
- Metro amps

Features & Benefits

- Highly consistent and reproducible spectroscopy — high manufacturing yields when matching to a GFF
- Excellent core concentricity — low splice loss to single-mode fibers
- High aluminum concentration — inherent gain flatness

Optical Specifications

	EDFC-980-HP	EDFC-980-HP-80
Operating Wavelength	1530 – 1565 nm	1530 – 1565 nm
Core NA	0.230	0.230
Mode Field Diameter	$5.8 \pm 0.5 \mu\text{m}$ @ 1550 nm	$5.8 \pm 0.5 \mu\text{m}$ @ 1550 nm
Cutoff	$920 \pm 50 \text{ nm}$	$920 \pm 50 \text{ nm}$
Core Attenuation	$\leq 10.0 \text{ dB/km}$ @ 1200 nm	$\leq 15.0 \text{ dB/km}$ @ 1200 nm
Saturation Power	0.18 mW @ 1530 nm	0.180 mW @ 1530 nm
Core Absorption	$6.00 \pm 1.00 \text{ dB/m}$ near 1530 nm $6.50 \pm 3.50 \text{ dB/m}$ near 980 nm	$6.50 \pm 3.50 \text{ dB/m}$ at 980 nm $6.00 \pm 1.00 \text{ dB/m}$ near 1530 nm

Geometrical & Mechanical Specifications

	EDFC-980-HP	EDFC-980-HP-80
Cladding Diameter	$125.0 \pm 1.0 \mu\text{m}$	$80.0 \pm 1.0 \mu\text{m}$
Core Diameter	$3.2 \mu\text{m}$	$3.2 \mu\text{m}$
Coating Diameter	$245.0 \pm 10.0 \mu\text{m}$	$165.0 \pm 10.0 \mu\text{m}$
Coating Concentricity	$< 5.0 \mu\text{m}$	$< 5.0 \mu\text{m}$
Core/Clad Offset	$\leq 0.30 \mu\text{m}$	$\leq 0.30 \mu\text{m}$
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C
Proof Test Level	$\geq 200 \text{ kpsi}$ (1.4 GN/m ²)	$\geq 200 \text{ kpsi}$ (1.4 GN/m ²)



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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.