

# C-Band Erbium Doped Fiber Single-Mode Fiber

Nufern's high performance C-Band Erbium-Doped 980-HP Fibers (EDFC-980-HP and EDFC-980C-HP-80) are designed for use in single and multi-channel C-band amplifiers and ASE sources. The 80  $\mu\text{m}$  version is suitable for small form-factor amplifiers and metro amps. Both types can be powered with 980 nm or 1480 nm pumps. 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

|                                      |                            |
|--------------------------------------|----------------------------|
| Operating Wavelength (nominal)       | C-Band                     |
| Mode Field Diameter @ 1550 nm        | $5.8 \pm 0.5 \mu\text{m}$  |
| Peak Absorption near 1530 nm         | $6.0 \pm 1.0 \text{ dB/m}$ |
| Peak Absorption near 980 nm          | $\geq 3 \text{ dB/m}$      |
| Loss @ 1200 nm                       | $\leq 10 \text{ dB/km}$    |
| Second Mode Cut-Off                  | $920 \pm 50 \text{ nm}$    |
| Saturation Power @ 1530 nm (nominal) | 0.18 mW                    |
| Numerical Aperture (nominal)         | 0.23                       |

### EDFC-980-HP

|                                      |                            |
|--------------------------------------|----------------------------|
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| Numerical Aperture (nominal)         | 0.23                       |

### EDFC-980-HP-80

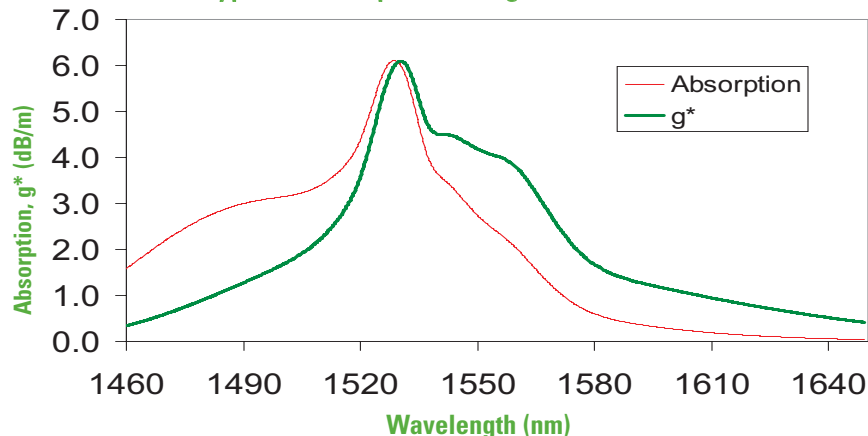
|                                      |                            |
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| Numerical Aperture (nominal)         | 0.23                       |

### Geometrical & Mechanical Specifications

|                         |   |
|-------------------------|---|
| Clad Diameter           | $125.0 \pm 1.0 \mu\text{m}$                 |
| Coating Diameter        | $245 \pm 10 \mu\text{m}$                    |
| Core-Clad Concentricity | $< 0.3 \mu\text{m}$                         |
| Coating/Clad Offset     | $\leq 5 \mu\text{m}$                        |
| Coating Material        | UV Cured, Dual Acrylate                     |
| Operating Temperature   | - 40 to +85° C                              |
| Proof Test Level        | $\geq 200 \text{ kpsi (1.4 GN/m}^2\text{)}$ |

|                         |   |
|-------------------------|---|
| Clad Diameter           | $80.0 \pm 1.0 \mu\text{m}$                  |
| Coating Diameter        | $165 \pm 10 \mu\text{m}$                    |
| Core-Clad Concentricity | $< 0.3 \mu\text{m}$                         |
| Coating/Clad Offset     | $\leq 5 \mu\text{m}$                        |
| Coating Material        | UV Cured, Dual Acrylate                     |
| Operating Temperature   | - 40 to +85° C                              |
| Proof Test Level        | $\geq 200 \text{ kpsi (1.4 GN/m}^2\text{)}$ |

Typical Absorption and  $g^*$  for EDFC-980-HP



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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.

