



# 1310/1550 nm Reduced Clad and Bend Insensitive Select Cut-Off Single-Mode Fibers

Nufern's 1310/1550 nm high-performance select cut-off single-mode fibers are optimized for use by component manufacturers in the telecommunications wavelengths. These application-specific fibers were developed for small form factor components. Nufern's fibers offer exceptional uniformity and core/clad concentricity, very tight second mode cut-off tolerances, and tight bend radius specifications for applications in miniaturized fiber optic packages. These high-performance specifications result in superior strength, increased component reliability, improved production yields and reduced component manufacturer costs.

## Typical Applications

- Small form factor components
- Couplers
- Optical switches

## Features & Benefits

- Exceptional uniformity and core/clad concentricity — low, consistent splice loss
- Tight mechanical and optical tolerances — high component manufacturing yields
- Higher proof test levels and 80 µm diameter — critical for long-term reliability in tight bend applications

## Optical Specifications

	1310-HP-80	1310M-HP	1310M-HP-80
Operating Wavelength	1310 – 1620 nm	1310 – 1620 nm	1310 – 1620 nm
Core NA	0.115	0.160	0.160
Mode Field Diameter	9.3 ± 0.5 µm @ 1310 nm 10.5 ± 0.7 µm @ 1550 nm	6.7 ± 0.5 µm @ 1310 nm 7.6 ± 0.6 µm @ 1550 nm	6.7 ± 0.5 µm @ 1310 nm 7.6 ± 0.6 µm @ 1550 nm
Cutoff	1250 ± 50 nm	1250 ± 50 nm	1250 ± 50 nm
Core Attenuation	≤ 0.75 dB/km @ 1310 nm ≤ 0.50 dB/km @ 1550 nm	≤ 0.75 dB/km @ 1310 nm ≤ 0.50 dB/km @ 1550 nm	≤ 0.75 dB/km @ 1310 nm ≤ 0.50 dB/km @ 1550 nm

## Geometrical & Mechanical Specifications

	1310-HP-80	1310M-HP	1310M-HP-80
Cladding Diameter	80.0 ± 1.0 µm	125.0 ± 1.0 µm	80.0 ± 1.0 µm
Core Diameter	8.2 µm	6.0 µm	6.0 µm
Coating Diameter	165.0 ± 10.0 µm	245.0 ± 15.0 µm	165.0 ± 10.0 µm
Coating Concentricity	< 5.0 µm	< 5.0 µm	< 5.0 µm
Core/Clad Offset	≤ 0.50 µm	≤ 0.50 µm	≤ 0.50 µm
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature Range	-55 to 85 °C	-55 to 85 °C	-55 to 85 °C
Short Term Bend Radius	≥ 4 mm	≥ 6 mm	≥ 4 mm
Long Term Bend Radius	≥ 9 mm	≥ 13 mm	≥ 9 mm
Proof Test Level	≥ 200 kpsi (1.4 GN/m <sup>2</sup> )	≥ 200 kpsi (1.4 GN/m <sup>2</sup> )	≥ 200 kpsi (1.4 GN/m <sup>2</sup> )



7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 • E-mail info@nufern.com • www.nufern.com • Nufern products are manufactured under an ISO 9001:2008 certified quality management system.



Custom developed fiber (FUD) 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.