

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 μ m 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 | 0.110 | 0.160 | 0.160 |
| Mode Field Diameter | 9.3 \pm 0.5 μ m @ 1310 nm | 6.7 \pm 0.5 μ m @ 1310 nm | 6.7 \pm 0.5 μ m @ 1310 nm |
| Cutoff | 1250 \pm 50 nm | 1250 \pm 50 nm | 1250 \pm 50 nm |
| Core Attenuation | \leq 0.75 dB/km @ 1310 nm \leq 0.50 dB/km @ 1550 nm | \leq 0.75 dB/km @ 1310 nm \leq 0.50 dB/km @ 1550 nm | \leq 0.75 dB/km @ 1310 nm \leq 0.50 dB/km @ 1550 nm |

Geometrical & Mechanical Specifications

| | 1310-HP-80 | 1310M-HP | 1310M-HP-80 |
|-----------------------------|--|--|--|
| Cladding Diameter | 80.0 \pm 1.0 μ m | 125.0 \pm 1.0 μ m | 80.0 \pm 1.0 μ m |
| Core Diameter | 8.5 μ m | 6.0 μ m | 6.0 μ m |
| Coating Diameter | 165.0 \pm 10.0 μ m | 245.0 \pm 15.0 μ m | 165.0 \pm 10.0 μ m |
| Coating Concentricity | < 5.0 μ m | < 5.0 μ m | < 5.0 μ m |
| Core/Clad Offset | \leq 0.50 μ m | \leq 0.50 μ m | \leq 0.50 μ m |
| 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 | \geq 4 mm | \geq 6 mm | \geq 4 mm |
| Long Term Bend Radius | \geq 9 mm | \geq 13 mm | \geq 9 mm |
| Proof Test Level | \geq 200 kpsi (1.4 GN/m ²) | \geq 200 kpsi (1.4 GN/m ²) | \geq 200 kpsi (1.4 GN/m ²) |



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.



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.