In the race to satisfy the global demand for bandwidth, Corning® LEAF® optical fiber is the clear winner as the world’s most widely deployed non-zero dispersion-shifted fiber (NZDSF). Optimized for long-haul and metro networks, LEAF fiber is a technically advanced product that provides high capacity, broad system flexibility, and superior performance. Additionally LEAF fiber is the industry leader in polarization mode dispersion (PMD) specifications and has the lowest attenuation of any NZDSF on the market today, enabling networks to evolve from the current 10G and 40G and 100G systems of the future.

**Optical Specifications**

**Maximum Attenuation**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>Maximum Value (dB/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1383</td>
<td>≤ 0.4</td>
</tr>
<tr>
<td>1410</td>
<td>≤ 0.32</td>
</tr>
<tr>
<td>1450</td>
<td>≤ 0.26</td>
</tr>
<tr>
<td>1550</td>
<td>≤ 0.19</td>
</tr>
<tr>
<td>1625</td>
<td>≤ 0.21</td>
</tr>
</tbody>
</table>

**Mode-Field Diameter**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>MFD (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1550</td>
<td>9.6 ± 0.4</td>
</tr>
</tbody>
</table>

**Dispersion**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>Dispersion Value [ps/(nm-km)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1530</td>
<td>2.0–5.5</td>
</tr>
<tr>
<td>1565</td>
<td>4.5–6.0</td>
</tr>
<tr>
<td>1625</td>
<td>5.8–11.2</td>
</tr>
</tbody>
</table>

**Polarization Mode Dispersion (PMD)**

<table>
<thead>
<tr>
<th>Value (ps/√km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMD Link Design Value</td>
</tr>
<tr>
<td>Maximum Individual Fiber PMD</td>
</tr>
</tbody>
</table>

*Complies with IEC 60794-3: 2001, Section 5.5, Method 1, \(m = 20, Q = 0.01\%)\), September 2001.

The PMD link design value is a term used to describe the PMD of concatenated lengths of fiber (also known as PMD\(_Q\)). This value represents a statistical upper limit for total link PMD. Individual PMD values may change when fiber is cabled.

**Standards Compliance**

- ITU-T G.655 (Tables A, B, C, D)
- IEC Specifications 60793-2-50 Type B4
- TIA/EIA 492-EA00
- Telcordia’s GR-20
**Dimensional Specifications**

**Glass Geometry**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Curl</td>
<td>≥ 4.0 m radius of curvature</td>
</tr>
<tr>
<td>Cladding Diameter</td>
<td>125.0 ± 0.7 µm</td>
</tr>
<tr>
<td>Core-Clad Concentricity</td>
<td>≤ 0.5 µm</td>
</tr>
<tr>
<td>Cladding Non-Circularity</td>
<td>≤ 0.7%</td>
</tr>
</tbody>
</table>

**Coating Geometry**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coating Diameter</td>
<td>242 ± 5 µm</td>
</tr>
<tr>
<td>Coating-Cladding Concentricity</td>
<td>&lt; 12 µm</td>
</tr>
</tbody>
</table>

**Environmental Specifications**

<table>
<thead>
<tr>
<th>Environmental Test</th>
<th>Test Condition</th>
<th>Induced Attenuation 1550 nm and 1625 nm (dB/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Dependence</td>
<td>-60°C to +85°C*</td>
<td>≤ 0.05</td>
</tr>
<tr>
<td>Temperature Humidity Cycling</td>
<td>-10°C to +85°C up to 98% RH</td>
<td>≤ 0.05</td>
</tr>
<tr>
<td>Water Immersion</td>
<td>23°C ± 2°C</td>
<td>≤ 0.05</td>
</tr>
<tr>
<td>Heat Aging</td>
<td>85°C ± 2°C</td>
<td>≤ 0.05</td>
</tr>
<tr>
<td>Damp Heat</td>
<td>85°C at 85% RH</td>
<td>≤ 0.05</td>
</tr>
</tbody>
</table>

*Reference temperature = +23°C
Operating Temperature Range: -60°C to +85°C

**Mechanical Specifications**

**Proof Test**

The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.69 GPa).*

*Higher proof test levels available

**Length**

Fiber lengths available up to 25.2 km/spool.

**Performance Characterizations**

Characterized parameters are typical values.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical Aperture</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>NA is measured at the one percent power level of a one-dimensional far-field scan at 1550 nm.</td>
</tr>
<tr>
<td>Effective Area (Aeff)</td>
<td>1550 nm: 72 µm²</td>
</tr>
<tr>
<td></td>
<td>1550 nm: 1.4693</td>
</tr>
<tr>
<td>Effective Group Index of Refraction (Neff)</td>
<td>1550 nm: 1.4693</td>
</tr>
<tr>
<td>Fatigue Resistance Parameter (Nd)</td>
<td>20</td>
</tr>
<tr>
<td>Coating Strip Force</td>
<td>Dry: 0.6 lbs. (3N)</td>
</tr>
<tr>
<td></td>
<td>Wet, 14-day room temperature: 0.6 lbs. (3N)</td>
</tr>
<tr>
<td>Rayleigh Backscatter Coefficient</td>
<td>1550 nm: -81 dB</td>
</tr>
<tr>
<td>(for 1 ns Pulse Width)</td>
<td>1625 nm: -82 dB</td>
</tr>
<tr>
<td>Chromatic Dispersion</td>
<td>1550 nm at 4 ps/(nm•km)</td>
</tr>
<tr>
<td></td>
<td>1625 nm at 10 ps/(nm•km)</td>
</tr>
</tbody>
</table>

**Formulas**

**Dispersion**

\[
\text{Dispersion} = \frac{D(\lambda) - D(\lambda_{1565})}{\lambda_{1565}} \leq 1565
\]

\[
\text{Dispersion} = \frac{D(\lambda_{1625}) - D(\lambda_{1565})}{\lambda_{1565}} \leq 1625
\]

\[
\lambda = \text{Operating Wavelength from 1565 nm} - 1565
\]

\[
\lambda = \text{Operating Wavelength from 1625 nm} - 1625
\]

**Cladding Non-Circularity**

\[
\text{Cladding Non-Circularity} = \left(1 - \frac{\text{Min. Cladding Diameter}}{\text{Max. Cladding Diameter}}\right) \times 100
\]

**Spectral Attenuation (Typical Fiber)**

![Spectral Attenuation Graph](image-url)