Overview


Features and Benefits

Low bending losses
- Low bending 1550 nm loss at 15 mm bend radius; 10 turn loss ≤ 0.05 dB. ITU G.657.A1 specifies 0.25 dB.
- Specified down to a 10 mm bend radius; 1 turn loss ≤ 0.50 dB @ 1550 nm. ITU G.657.A1 specifies 0.75 dB.
- Allows a smaller bend radius with small diameter cables such as patch cords and distribution cables.
- Mitigates losses caused by improper installations.
- Allow the use of smaller splice trays or closures.
- Provides lower bending losses at higher wavelengths such as 1625 nm which future proofs the network.
- Improves long-term attenuation stability by reducing losses related to temperature cycling and mid-span buffer-tube storage.

Full industry standards compliance
- Fully compliant with Telcordia GR20 & GR409.
- Fully compliant with all ICEA fiber cable standards including ICEA 640, 696, & 596.
- Compliant with RUS 7 CFR 1755.900 fiber requirements.

Full backward ITU G.652.D SMF compatibility
- Compatible with equipment designed for G.652 fibers; fully transparent from a transmission perspective.
- Splice compatible with ITU G.652 SMF using standard single mode fiber machine settings.
- Full 1260-1625 nm low water peak compliance.

BendBright™ A1+
Bend Insensitive
Single Mode Fiber - North America
**Optical Parameters**

- Mode Field Diameter @ 1310 nm: 9.2 ± 0.4 μm
- Mode Field Diameter @ 1550 nm: 10.4 ± 0.5 μm
- Cabled Cut-Off Wavelength: ≤ 1260 nm
- Zero Dispersion Wavelength (λ): 1304 nm to 1324 nm
- Chromatic Dispersion:
  - 1550 nm: ≤ 18.0 ps/(nm·km)
  - 1625 nm: ≤ 22.0 ps/(nm·km)
- Zero Dispersion Slope: ≤ 0.092 ps/(nm²·km)
- Point Discontinuity (1310 & 1550 nm): ≤ 0.05 dB

**Polarization Mode Dispersion (PMD)**

- Max. Value in Uncabled Fiber: ≤ 0.1 ps/km²
- Link Design Value: ≤ 0.04 ps/km²

**Attenuation with Bending**

<table>
<thead>
<tr>
<th>Mandrel Radius (mm)</th>
<th>Number of Turns</th>
<th>Wavelength (nm)</th>
<th>Attenuation (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1</td>
<td>1550</td>
<td>≤ 0.50</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>1625</td>
<td>≤ 1.5</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td>1550</td>
<td>≤ 0.05</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td>1625</td>
<td>≤ 0.30</td>
</tr>
<tr>
<td>25</td>
<td>100</td>
<td>1310, 1550, 1625</td>
<td>≤ 0.01</td>
</tr>
</tbody>
</table>

**Environmental Performance**

- Temperature Cycling (-60°C to +85°C): ≤ 0.05 dB/km
- Temperature Humidity Cycling (-10°C to +85°C, up to 98% RH): ≤ 0.05 dB/km
- Water Immersion (23°C ± 2°C): ≤ 0.05 dB/km
- Accelerated Heat Aging (85°C ± 2°C): ≤ 0.05 dB/km
- Damp Heat (85°C, 85% RH): ≤ 0.05 dB/km

**Dimensional Parameters**

- Outer Coating Diameter: 242 ± 7 μm
- Coating/Cladding Concentricity Error: ≤ 12 μm
- Cladding Diameter: 125.0 ± 0.7 μm
- Cladding Non-Circularity: ≤ 0.7%
- Core-Clad Concentricity: ≤ 0.5 μm
- Fiber Curl: ≥ 4.0 m radius

**Mechanical Performance**

- Minimum Proof Test: 100 Kpsi (0.7 GPa); 1% strain equivalent

**Performance Characterization**

- Effective Group Index of Refraction:
  - @ 1310 nm: 1.467
  - @ 1550 nm: 1.468
- Fatigue Resistance Parameter (n_d): 20
- Rayleigh Backscatter Coefficient (1 ns = pulse width):
  - @ 1310 nm: -77 dB
  - @ 1550 nm: -82 dB
- Core Diameter: 8.2 μm

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**Prysmian Group**

A Brand of Prysmian Group

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