AllWave® FLEX ZWP Ocean Optical Fiber
Optimized Bend Performance for Ocean Applications

Features and Benefits
- Improved bend performance up to 1625 nm: added loss <0.5 dB (1625 nm) and <0.2 dB (1550 nm) at 10 mm radius
- Bend-optimized design without risking fiber strength and long-term reliability
- Tight geometry for very low splice loss
- Fully compatible with single-mode fiber international standard G.654C
- Patented manufacturing technology that permanently removes the water peak defect for low optical loss across the entire spectrum from 1260 to 1625 nm

Overview
AllWave® FLEX Single-Mode Ocean Fiber is the first Zero Water Peak (ZWP) fiber to offer outstanding bend performance for ocean applications. It is an excellent choice for ocean riser applications or for cable designs that require a highly bend-resistant fiber. AllWave FLEX Ocean Fiber meets the requirements of G.654C.

Product Description
AllWave FLEX ZWP Ocean Fiber maintains very low bending loss while ensuring long-term fiber strength and reliability. It can be coiled into a 20 mm diameter loop with a <0.5 dB incurred loss at 1625 nm and <0.2 dB incurred loss at 1550 nm - five times better bending performance than conventional single-mode and leading low water peak (LWP) fibers.

The fiber enables more compact designs and protects the network against excessive loss resulting from inadvertent fiber bends. It is less susceptible to physical disturbances from cable flexing, pulling, and crushing. The optimized bend characteristics of AllWave FLEX ZWP Ocean Fiber improve cable performance in demanding high-stress and low-temperature environments by providing double the microbend protection of conventional single-mode fiber.

Engineered Fiber Sets
OFS has the capability to color and splice ocean fibers to meet stringent cable requirements. Fibers are selected to meet customer specifications for numbers of fibers, colors, lengths, and transmission properties. They are then assembled into sets. Final measurements guarantee customer specified performance for all fibers in the set.
AllWave® FLEX ZWP Ocean Optical Fiber

Product Specifications

Transmission Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attenuation @ 1550 nm (typical)</td>
<td>0.189 dB/km</td>
</tr>
<tr>
<td>Attenuation @ 1550 nm</td>
<td>≤ 0.20 dB/km</td>
</tr>
<tr>
<td>Dispersion Slope @ 1550 nm (typical)</td>
<td>≤ 0.060 ps/(nm²·km)</td>
</tr>
<tr>
<td>Dispersion @ 1550 nm (typical)</td>
<td>16.9 ps/nm-km</td>
</tr>
<tr>
<td>Mode Field Diameter @ 1550 ‡</td>
<td>10.0 ± 0.5 µm</td>
</tr>
<tr>
<td>Effective Area (typical)</td>
<td>76 µm²</td>
</tr>
<tr>
<td>Cable Cutoff Wavelength</td>
<td>≤ 1260 nm</td>
</tr>
<tr>
<td>PMD @ 1550 nm (typical)</td>
<td>≤ 0.02 ps/√km</td>
</tr>
</tbody>
</table>

Effective Group Index of Refraction

Effective Group Index of Refraction @ 1550 nm: 1.468

Point Discontinuities @ 1550 nm

Point Discontinuities: 0.05 dB max

Geometrical Characteristics

Clad Diameter

Clad Diameter: 125 ± 0.7 µm

Core/Clad Concentricity Error

Core/Clad Concentricity Error: ≤ 0.5 µm

Clad Non-circularity

Clad Non-circularity: ≤ 1.0 %

Coating Diameter, uncolored

Coating Diameter, uncolored: 235 to 250 µm

Coating/Clad Concentricity Error (typical)

Coating/Clad Concentricity Error: 3 µm

Coating/Clad Concentricity Error

Coating/Clad Concentricity Error: ≤ 12 µm

Coating Diameter, colored

Coating Diameter, colored: 254 ± 8 µm

Mechanical and Other

Tensile Proof Test (min)

Tensile Proof Test: 200 kpsi (1.4 Gpa)

Dynamic Fatigue Parameter (nd)

Dynamic Fatigue Parameter: > 20

Static Fatigue Parameter (na)

Static Fatigue Parameter: > 20

Coating Type

Coating Type: D-Lux® Series Coatings

Coating Strip Force (Mechanical)

Coating Strip Force (Mechanical): 1.3 N (0.3 lb-ft) min, 8.9 N (2.0 lb-ft) max

Coating Adhesion

Coating Adhesion: 6.2 N (1.4 lb-ft) min, 13 N (3.0 lb-ft) max

Colors

Colors: Customer specified

Matching Sets

Matching Sets: Customer may order sets (groups) of fiber with matching length and mix.