AllWave® Low Loss Fiber - Zero Water Peak
The industry’s lowest loss in a Zero Water Peak single-mode fiber for outstanding full-spectrum performance

Features and Benefits

• ≤ 0.18 dB/km loss at 1550 nm and low loss across the entire 1260 nm – 1625 nm wavelength spectrum
• 50% increase in usable spectrum enables 16-channel CWDM and DWDM support
• Industry’s tightest geometric control for ultra-low splice loss and improved connector performance
• Ultra-low fiber PMD for speed and distance upgrades

Overview
Designed for the most demanding applications, AllWave Low Loss Zero Water Peak (ZWP) Fiber offers the properties of industry-leading AllWave Fiber along with improved attenuation across the full 1260 nm to 1625 nm spectrum. This fiber is created using a patented manufacturing process that significantly reduces the water peak defect to help ensure low, stable performance in the 1400 nm band and over the cable’s lifetime.

Product Description
Compliant to the latest ITU-T G.652.D requirements, AllWave Low Loss ZWP Fiber offers dramatically better performance across the board over conventional single-mode fibers. This fiber’s superior specifications include low full-spectrum loss, macrobend performance superior to the G.652.D standard and low polarization mode dispersion (PMD).

AllWave Low Loss ZWP Fiber combines these features with complete compatibility with the embedded single-mode fiber base for an outstanding fiber choice that offers excellent network design flexibility and helps maximize return on investment.

Applications
AllWave Low Loss ZWP Fiber provides outstanding performance and design freedom for fiber management systems throughout the network including:
• Long Haul
• Metro
• Access
For additional information please contact your sales representative. You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5556 outside the USA.

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**Physical Characteristics**

- **Clad Diameter**: 125.0 ± 0.7 μm
- **Clad Non-Circularity**: ≤ 0.7 %
- **Core/Clad Concentricity Error (Offset)**: ≤ 0.5 μm, < 0.2 μm typically
- **Coating Diameter (Uncolored)**: 237 – 247 μm
- **Coating-Clad Concentricity Error (Offset)**: ≤ 12 μm
- **Tensile Proof Test**: 100 kpsi (0.69 GPa)
- **Coating Strip Force Range**: 1.0 N ≤ CSF ≤ 8.9 N
- **Standard Reel Lengths**: 50.4 km (31.3 miles)

**Optical Characteristics**

- **Attenuation**:
  - at 1310 nm: ≤ 0.32 dB/km
  - at 1385 nm: ≤ 0.31 dB/km
  - at 1490 nm: ≤ 0.21 dB/km
  - at 1550 nm: ≤ 0.18 dB/km
  - at 1625 nm: ≤ 0.20 dB/km

- **Attenuation vs. Wavelength**:
  - Range (nm) vs. Reference (nm) λ vs. α
  - 1285 – 1330 vs. 1310: λ = 0.03
  - 1360 – 1480 vs. 1385: λ = 0.04
  - 1525 – 1575 vs. 1550: λ = 0.02
  - 1460 – 1625 vs. 1550: λ = 0.04

- **Attenuation Uniformity / Point Discontinuities**:
  - at 1310 nm and 1550 nm: ≤ 0.05 dB

- **Macrobending Attenuation**:
  - The maximum attenuation with bending does not exceed the specified values under the following deployment conditions:

    | Deployment Condition | Wavelength | Induced Attenuation |
    |----------------------|------------|---------------------|
    | 1 turn, 32 mm (1.2 inch) diameter | 1550 nm | ≤ 0.03 dB |
    | 10 turns, 50 mm (2 inch) diameter | 1310 nm | ≤ 0.03 dB |
    | 100 turns, 60 mm (2.4 inch) diameter | 1550 nm | ≤ 0.03 dB |

- **Chromatic Dispersion**:
  - Zero Dispersion Wavelength (λ<sub>CC</sub>): 1302 - 1322 nm
  - Zero Dispersion Slope (S<sub>CC</sub>): ≤ 0.090 ps/nm²-km
  - Typical Dispersion Slope: 0.087 ps/nm²-km

- **Cut-off Wavelength (λ<sub>CC</sub>):** ≤ 1260 nm

- **Group Refractive Index**:
  - at 1310 nm: 1.467
  - at 1550 nm: 1.468

- **Mode Field Diameter**:
  - at 1310 nm: 9.2 ± 0.4 μm
  - at 1550 nm: 10.4 ± 0.5 μm

- **Polarization Mode Dispersion (PMD)**:
  - Fiber PMD Link Design Value (LDV): < 0.04 ps/√km
  - Maximum Individual Fiber: < 0.1 ps/√km
  - Typical Fiber LMC PMD: < 0.02 ps/√km

**Environmental Characteristics**

- **Temperature Cycling (-60 + 85 °C):** ≤ 0.05 dB/km
- **High Temperature Aging (85 ± 2 °C):** ≤ 0.05 dB/km
- **Temperature & Humidity Cycling (at -10 °C to +85 °C and 95% RH):** ≤ 0.05 dB/km
- **Water Immersion (23 ± 2 °C):** ≤ 0.05 dB/km
- **Dynamic Fatigue Stress Corrosion Parameter (nd):** ≥ 20