AllWave® One Fiber - Zero Water Peak
Full Spectrum, Bend Optimized, Low Loss, One Fiber

Features and Benefits
• Full spectrum, low-loss, bend optimized fiber
• Very low loss across the 1260 nm – 1625 nm wavelength spectrum for longer reach and improved reliability
• Industry’s tightest geometric control for ultra-low splice loss and improved connector performance
• High purity silica for long-term attenuation stability and mechanical reliability
• Ultra-low PMD for speed and distance upgrades

Applications
AllWave One Fiber provides outstanding cable performance for the entire optical network including:
• FTTX
• Local access
• Mobile backhaul
• Metro access
• Metro edge
• Campus backbones
• Long haul

Overview
AllWave One Zero Water Peak (ZWP) Single-Mode Optical Fiber combines three benefits in one fiber to help improve network performance over conventional single-mode fibers. This fiber goes beyond award-winning AllWave Fiber with a 15% lower loss specification at 1550 nm, a 40% smaller minimum bend radius, a 67% lower bend loss and a 33% improved Polarization Mode Dispersion (PMD) link design value.

Product Description
AllWave One Fiber performs reliably in demanding networks with specifications superior to both ITU-T 6.652.D and G.657.A1. With an attenuation ≤ 0.33 dB/km at 1310 nm and 0.18 dB/km at 1550 nm, this fiber provides extra margin and/or extended reach for demanding applications.

AllWave One Fiber bends to the needs to challenging Outside Plant (OSP) networks. With a minimum bend radius of 10 mm and 80% lower bend loss than conventional G.652.D fiber, this fiber helps to increase the reliability and reach of applications in the bend-sensitive 1460 nm – 1625 nm bands. AllWave One Fiber has the same 9.2 µm mode field diameter and is completely backward compatible with the installed base of conventional single-mode fibers for seamless splicing and faster testing.
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 1-770-798-5555 outside the USA.

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**Product Specifications**

### 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**: Maximum
  - at 1310 nm: ≤ 0.33 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
- **Range vs. Wavelength**
  - Reference (nm) λ | α
  - 1285 – 1330: 1310 | 0.03
  - 1360 – 1480: 1385 | 0.04
  - 1525 – 1575: 1550 | 0.02
  - 1460 – 1625: 1550 | 0.04

1 The attenuation in a given wavelength range does not exceed the attenuation of the reference wavelength (λ) by more than the value α.

- **Attenuation Uniformity / Point Discontinuities**: ≤ 0.05 dB
- **Chromatic Dispersion**: 
  - Zero Dispersion Wavelength (λ₀): 1302 - 1322 nm
  - Zero Dispersion Slope (S₀): ≤ 0.090 ps/nm
  - Typical Dispersion Slope: 0.087 ps/nm
- **Cut-off Wavelength (λᵢ₀)**: ≤ 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 (typical)

### Environmental Characteristics (at 1310, 1550 & 1625 nm)

- **Temperature Cycling** (-60 + 85 °C): ≤ 0.05 dB/km
- **High Temperature Aging** (85 ± 2 °C): ≤ 0.05 dB/km
- **Temperature & Humidity Cycling** (-10 °C to +85 °C and 85 to ~98% RH): ≤ 0.05 dB/km
- **Water Immersion** (23 ± 2 °C): ≤ 0.05 dB/km
- **Dynamic Fatigue Stress Corrosion Parameter** (nᵐ): ≥ 20