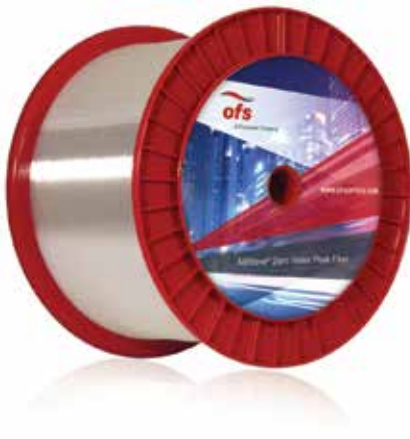




A Furukawa Company

AllWave[®] Fiber - Zero Water Peak

The industry's first zero water peak single-mode fiber for reliable full-spectrum performance



Applications

AllWave ZWP Fiber provides outstanding performance and design freedom for fiber management systems in:

- Metro access
- Metro edge
- Local access
- FTTX
- Campus backbones
- Long haul

Features and Benefits

- 50% increase in usable optical spectrum enables 16-channel CWDM and DWDM support
- Minimizes attenuation across the full wavelength spectrum and provides low, stable loss in the 1400 nm band
- Ultra-low PMD allows speed and distance upgrades
- Macrobend performance superior to the G.652.D standard
- Long-term attenuation reliability by using high purity synthetic silica

Overview

Award-winning AllWave Zero Water Peak (ZWP) Single-Mode Fiber provides low optical loss across the entire wavelength spectrum from 1260 nm to 1625 nm. A patented manufacturing process permanently removes the water peak defect for a fiber that offers the lowest loss of all commercial low water peak (LWP) fibers in the industry.

Product Description

Compliant to the latest ITU-T G.652 A - D requirements, AllWave ZWP Fiber offers dramatically improved performance in almost every characteristic over conventional single-mode fiber, including increased available spectrum, low optical loss, superior macrobend performance and ultra-low polarization mode dispersion (PMD). By using the industry's tightest geometric controls and tight mode field control during manufacture, AllWave ZWP Fiber enables consistently low loss splices and improved connectorization performance.

Combined with complete backward compatibility with the embedded G.652 single-mode fiber base, these features provide ultimate network design flexibility and enable cost-effective solutions to help maximize return on investment.

For additional information please contact your sales representative.

You can also visit our website at www.fofsop-tics.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	Typical
at 1310 nm	≤ 0.34 dB/km	≤ 0.33 dB/km
at 1385 nm	≤ 0.31 dB/km	≤ 0.27 dB/km
at 1490 nm	≤ 0.24 dB/km	≤ 0.21 dB/km
at 1550 nm	≤ 0.21 dB/km	≤ 0.19 dB/km
at 1625 nm	≤ 0.24 dB/km	≤ 0.20 dB/km

Attenuation vs. Wavelength¹

Range (nm)	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 at 1310 nm and 1550 nm	≤ 0.05 dB
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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	≤ 0.05 dB
10 turns, 50 mm (2 inch) diameter	1310 nm	≤ 0.05 dB
	1550 nm	≤ 0.05 dB
100 turns, 60 mm (2.4 inch) diameter	1550 nm	≤ 0.05 dB
	1625 nm	≤ 0.05 dB

Chromatic Dispersion

Zero Dispersion Wavelength (λ ₀)	1302 - 1322 nm
Zero Dispersion Slope (S ₀)	≤ 0.090 ps/nm ² -km
Typical Dispersion Slope	0.087 ps/nm ² -km

Cut-off Wavelength (λ _{cc})	≤ 1260 nm
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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)³

Fiber PMD Link Design Value (LDV) ⁴	≤ 0.06 ps/√km
Maximum Individual Fiber	≤ 0.1 ps/√km
Typical Fiber LMC PMD	≤ 0.02 ps/√km

² As measured with low mode coupling (LMC) technique in fiber form, value may change when cabled. Check with your cable manufacturer for specific PMD limits in cable form.

³ The PMD Link Design Value complies with IEC 60794-3, September 2001 (N = 20, Q = 0.01%). Details are described in IEC 61282-3 TR Ed 2, October 2006.

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 (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	(n _d) ≥ 20