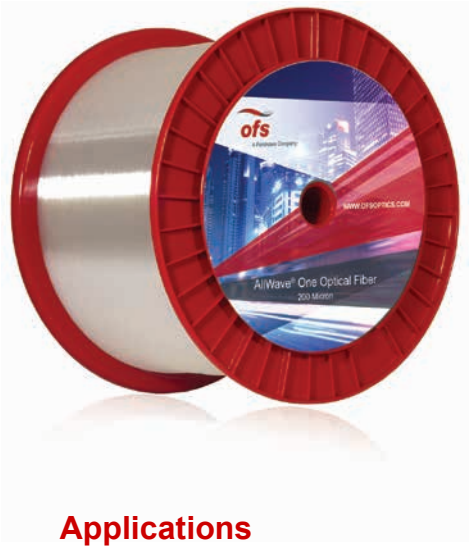
A Furukawa Company

AllWave® + 200 ZWP Single-Mode Optical Fiber

Reliable Bend-Optimized Performance for Smaller Diameter, Higher Density Cable Applications



Features and Benefits

- 36 percent less area than conventional 250 µm coated fiber
- 50% greater usable spectrum than conventional single-mode fiber
- Reduced bend loss across the bend-sensitive 1460-1625 nm S, C and Bands
- Industry's tightest geometric control for ultra-low splice loss and improved connector performance
- High purity synthetic silica for long-term attenuation stability and mechanical reliability
- Ultra-low fiber PMD for speed and distance upgrades

Applications

200 µm AllWave + Optical Fiber is being deployed across the optical network including applications such as:

- High density optical cables
- High count optical cables
- Reduced diameter optical cables
- Microcables

Overview

AllWave+ 200 Zero Water Peak (ZWP) Single-Mode Optical Fiber dramatically improves performance across the 1260 nm – 1625 nm spectrum. This fiber offers all the benefits of AllWave+ Optical Fiber with the added advantage of a 200 micron coating dimension for the fiber enables smaller diameter cables.

Product Description

A combination ITU-T G.652.D and G.657.A1 compliant fiber, This fiber offers all of the performance advantages and 30-year reliability of our standard AllWave + Optical Fiber with the added benefit of a smaller overall diameter. OFS has provided high quality coating materials since the advent of commercial fibers and maximizes the reliability of through the use of synthetic glass and our highly protective D-Lux® acrylate coating.

AllWave+ 200 Optical Fiber supports a minimum bend radius of 10 mm and lower bend loss than conventional G.652.D single-mode fibers. Further, the fiber has the same 9.2 micron mode field diameter as and is fully backward compatible with the installed base of G.652 single-mode fiber for seamless splicing, testing and faster network turn-up.

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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FURUKAWA ELECTRIC GROUP

RoHS Compliant
EU Directive 2002/95/EC

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Product Specifications

Physical Characteristics		
Clad Diameter	125.0 ± 0.7 µm	
Clad Non-Circularity	≤ 1 %	
Core/Clad Concentricity Error (Offset)	≤ 0.5 µm, ≤ 0.2 µm typically	
Coating Diameter (Uncolored) (Colored)	190 µm ± 10 µm 200 µm ± 10 µm	
Coating-Clad Concentricity Error (Offset)	≤ 12 µm	
Tensile Proof Test (Other proof test levels available on request)	100 kpsi (0.69 GPa)	
Coating Strip Force	Range: ≥ 0.5 N ≤8.9 N	
Standard Reel Lengths	50.4 km	
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	≤ 0.20 dB/km	≤ 0.19 dB/km
at 1625 nm	≤ 0.24 dB/km	≤ 0.20 dB/km
Attenuation vs. Wavelength		
Range (nm)	Reference (nm) λ	α
1285 – 1300	1310	0.03
1360 – 1480	1385	0.04
1525 – 1575	1550	0.02
1460 – 1625	1550	0.04
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	
Macrobending Attenuation:		
The maximum attenuation with bending doe not exceed the specified values under the following deployment conditiions:		
Deployment Condition	Wavelength	Induced Attenuation
1 turn on a 10 mm radius mandrel	1550 nm	≤ 0.75 dB
	1625 nm	≤ 1.5 dB
10 turns on a 15 mm radius mandrel	1550 nm	≤ 0.25 dB
	1625 nm	≤ 1.0 dB
100 turns on 25 & 30 mm radius mandrels	1550 nm	≤ 0.03 dB
	1625 nm	≤ 0.03 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	
Cable Cut-off Wavelength (λ_{CC})	≤ 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)	
Polarization Mode Dispersion (PMD) [1]		
Fiber PMD Link Design Value (LDV) [2]	≤ 0.06 ps/$\sqrt{km}$	
Maximum Individual Fiber	≤ 0.1 ps/$\sqrt{km}$	
Typical Fiber LMC PMD	≤ 0.02 ps/$\sqrt{km}$	

[1] 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.
[2] 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 to +85 °C and 85 to ~98% RH)	≤ 0.05 dB/km
Water Immersion (23 ± 2 °C)	≤ 0.05 dB/km