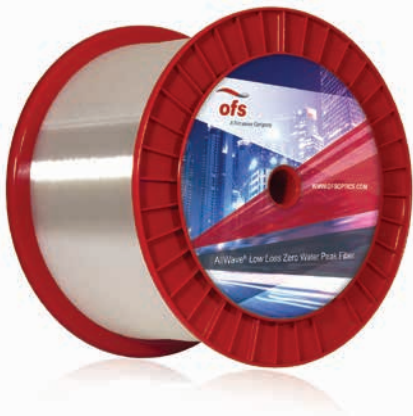




A Furukawa Company

# 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



## Applications

AllWave Low Loss ZWP Fiber provides outstanding performance and design freedom for fiber management systems throughout the network including:

- Long Haul
- Metro
- Access

## Features and Benefits

- $\leq 0.18$  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.

For additional information please contact your sales representative.

You can also visit our website at [www.ofsoptics.com](http://www.ofsoptics.com) or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.

North America  
Telephone: 508-347-8590  
Toll Free: 800-799-7732  
Fax: 508-347-1211  
E-mail: [fibersalesnar@ofsoptics.com](mailto:fibersalesnar@ofsoptics.com)

Asia Pacific  
Telephone: +852 2506 5054  
Fax: +852 2506 0166  
E-mail: [fibersalesap@ofsoptics.com](mailto:fibersalesap@ofsoptics.com)

Caribbean, Latin America  
Telephone: +1-508-347-8590  
Fax: +1-508-347-1211  
E-mail: [fibersalescala@ofsoptics.com](mailto:fibersalescala@ofsoptics.com)

Japan  
Telephone: +81-3-3286-3424  
Fax: +81-3-3286-3708 or 3190  
E-mail: [fibersalesjapan@ofsoptics.com](mailto:fibersalesjapan@ofsoptics.com)

Europe, Middle East, Africa  
Telephone: +45-43 48 3736  
Fax: +45 4348 3444  
E-mail: [ofssalesdk@ofsoptics.com](mailto:ofssalesdk@ofsoptics.com)

China  
Telephone: +86 10 6505 3660  
Fax: +86 10 65059515  
E-mail: [fibersaleschina@ofsoptics.com](mailto:fibersaleschina@ofsoptics.com)



Copyright © 2016 OFS Fitel, LLC.  
All rights reserved, printed in USA.

OFS Marketing Communications  
Doc ID: fiber-153 Date: 03/16

AllWave is a registered trademark of OFS Fitel, LLC.

OFS reserves the right to make changes to the prices and product(s) described in this document at any time without notice. This document is for informational purposes only and is not intended to modify or supplement any OFS warranties or specifications relating to any of its products or services.

## 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	≤ 0.32 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<sup>1</sup>

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

<sup>1</sup> 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 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
	1550 nm	≤ 0.03 dB
100 turns, 60 mm (2.4 inch) diameter	1550 nm	≤ 0.03 dB
	1625 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/nm <sup>2</sup> -km
Typical Dispersion Slope	0.087 ps/nm <sup>2</sup> -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)<sup>3</sup>

Fiber PMD Link Design Value (LDV) <sup>4</sup>	< 0.04 ps/√km
Maximum Individual Fiber	< 0.1 ps/√km
Typical Fiber LMC PMD	< 0.02 ps/√km

<sup>2</sup> 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.

<sup>3</sup> 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	(nd) ≥ 20