A Furukawa Company

62.5/62.5 XL Laser Optimized Optical Fibers

Combines 1 Gigabit Ethernet capabilities and full compatibility with legacy multimode networks

Features and Benefits

- Superior geometric tolerances and very low attenuation
- Enables minimal connection loss and low cabled attenuation
- Quality ensured through Differential Mode Delay (DMD) testing
- Allows for Gigabit Ethernet operation up to 500 meters at 850 nm and up to 1000 m at 1300 nm

Applications

Designed to carry the high bandwidth required by today's network user, OFS' laser optimized fibers maximize the performance of laser-based applications operating at 1 Gb/s transmission speeds. They are also completely compatible with all standard fiber optic network protocols including Fiber Distributed Data Interface (FDDI), Fast Ethernet and 155 Mb/s Asynchronous Transfer Mode (ATM).

In Gigabit Ethernet networks, these laser-certified fibers offer outstanding performance with both conventional edge emitting lasers and Vertical Cavity Surface Emitting Lasers (VCSELs).

Flex-10™ Coating

OFS multimode fibers are made with a world-class draw process and our enhanced Flex-10 coating, designed to minimize induced attenuation that can occur in tight-buffer cable. Easy to strip and install, the coating offers outstanding performance in attenuation-sensitive 1 Gb/s and 10 Gb/s systems.

Product Description

OFS' Laser Optimized 62.5 and 62.5 XL Graded-Index Multimode Optical Fiber provides high performance over longer link lengths for Gigabit Ethernet and other high-speed transmission protocols. Laser Optimized 62.5 Fiber provides transmission distances up to 300 m at 850 nm and up to 550 m at 1300 nm, while our Laser Optimized 62.5 XL Fiber extends transmission distances up to 500 m at 850 nm and up to 1000 m at 1300 nm.

Fully compatible with your installed base of 62.5/125 µm multimode fiber, our Laser Optimized 62.5 and 62.5 XL Fiber allows for seamless upgrades of existing installations to 1 Gigabit per second (Gb/s) capability. Both fibers meet or exceed all performance requirements for Institute of Electrical and Electronics Engineers (IEEE) 802.3 Gigabit Ethernet standards.

Manufacturing and Quality Control

Robust and easy to connectorize, OFS Laser Optimized 62.5 and 62.5 XL Fibers promote ease of installation even under the most stringent conditions. OFS protects the fibers with Flex-10 coating, a dual-layered acrylate coating system that provides the industry's best protection against water, temperature and humidity extremes, yet still strips cleanly and easily.

Our fiber is manufactured at the OFS Multimode Center of Excellence in Sturbridge, Massachusetts using the company's advanced Modified Chemical Vapor Deposition (MCVD) technology. Using the MCVD process, OFS produces a range of multimode fiber products that offer excellent performance for all transmission protocols. The MCVD method enables OFS to precisely control each fiber's index of refraction. Under the restricted launch conditions used in Gigabit Ethernet, this maximizes fiber bandwidth performance at 1 Gb/s speeds.

Like all OFS graded-index multimode fibers, our Laser-Optimized 62.5 and 62.5 XL Fibers are tested and proven to exceed the Telecommunications Industry Association (TIA) Fiber Optic Test Procedures (FOTP) and other industry standards.

62.5/62.5 XL Laser Optimized Optical Fibers

Product Specifications	62.5/62.5 XL Laser Optimized Optical Fibers	
Physical Characteristics		
Core Diameter	62.5 ± 2.5 µm	
Core Non-Circularity	≤ 5 %	
Clad Diameter	125 ± 1 µm	
Clad Non-Circularity	≤ 1 %	
Core/Clad Concentricity Error (Offset)	≤ 1.0 µm	
Coating Diameter	245 ± 10 µm	
Coating Non-Circularity	≤ 5 %	
Coating-Clad Concentricity Error (Offset)	≤ 8 µm	
Tensile Proof Test	100 kpsi (0.69 GPa)	
Coating Strip Force	Range: 0.2 - 1.0 lbf (0.9 - 4.4 N) Typical: 0.6 lbf (2.7 N)	
Standard Reel Lengths	2.2 - 8.8 km	
Optical Characteristics		
Attenuation @ 850 nm @ 1300 nm	≤ 2.9 dB/km ≤ 0.6 dB/km	
Overfilled Bandwidth @ 850 nm @ 1300 nm	**62.5** ≥ 200 MHz-km ≥ 500 MHz-km	**62.5 XL** ≥ 350 MHz-km ≥ 500 MHz-km
Transmission Distance (Link Length) Support Gigabit Ethernet at 850 nm Gigabit Ethernet at 1300 nm	**62.5** 300 meters 550 meters	**62.5 XL** 500 meters 1000 meters
Attenuation at 1380 nm minus attenuation at 1300 nm	≤ 1.0 dB/km	
Attenuation Uniformity / Point Discontinuities at 850 nm and 1300 nm	≤ 0.08 dB	
Numerical Aperture	0.275 ± 0.015	
Chromatic Dispersion Zero Dispersion Wavelength (λ_0) Zero Dispersion Slope (S_0)	 1320 – 1365 nm ≤ 0.11 ps/nm^2-km (1320 ≤ λ_0 ≤ 1348 nm) ≤ 0.001 x (1458 – λ_0) (1348 ≤ λ_0 ≤ 1365 nm)	
Group Refractive Index at 850 nm at 1300 nm	 1.496 1.491	
Backscatter Coefficient at 850 nm at 1300 nm	 -68.4 dB -72.1 dB	
Macrobend Attenuation 100 turns on a 75 mm mandrel at 850 nm and 1300 nm	≤ 0.5 dB	
Environmental Characteristics		
Operating Temperature Range	-60 °C to +85 °C	
Temperature Induced Attenuation at 850 nm and 1300 nm from -60 °C to +85 °C (5 24-hour cycles)	≤ 0.1 dB/km	
Temperature and Humidity Induced Attenuation at 850 nm and 1300 nm from -10 °C to +85 °C 94% RH, (30 24-hour cycles)	≤ 0.1 dB/km	
Accelerated Aging (Temperature) Induced Attenuation at 85 °C for 30 days	≤ 0.1 dB/km	
Water Immersion Induced Attenuation, 23 °C for 30 days	≤ 0.1 dB/km	
Dynamic Fatigue Stress Corrosion Parameter (n_d)	≥ 18	

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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