

GigaGuide® 62.5/62.5 XL Fibers



Laser-certified, high performance 62.5 micron multimode fiber that combines One Gigabit Ethernet capabilities and full compatibility with standard multimode networks

High Performance, Longer Distances for Gigabit Ethernet Systems

GigaGuide 62.5 and 62.5 XL graded-index multimode optical fiber from OFS provides high performance over longer link lengths for Gigabit Ethernet and other high-speed transmission protocols. With the same outstanding quality and easy installation of OFS's standard multimode fiber, GigaGuide 62.5 and 62.5 XL fibers are fully compatible with your installed base of 62.5/125 micron multimode fiber.

Designed to carry the high bandwidth required by today's network users, GigaGuide 62.5 fiber provides transmission distances up to 300 meters at 850 nm and up to 550 meters at 1300 nm. GigaGuide 62.5 XL fiber extends transmission distances up to 500 meters at 850 nm and up to 1000 meters at 1300 nm. GigaGuide fibers meet or exceed all performance requirements for Institute of Electrical and Electronics Engineers (IEEE) 802.3z Gigabit Ethernet standards.

Optimized for Gigabit Ethernet, Fully Compatible with Today's Networks

Today's traffic-intensive networks are requiring higher transmission speeds. By increasing those speeds to 1,000 Mb/s (1 Gb/s), Gigabit Ethernet architecture provides optimal performance for those sites where even Fast Ethernet speeds are inadequate. GigaGuide fibers are designed to maximize the potential of this high-speed, Gigabit Ethernet protocol. GigaGuide fiber is also fully compatible with all standard fiber optic network protocols including Fiber Distributed Data Interface (FDDI), Fast Ethernet and 155 Mb/s Asynchronous Transfer Mode (ATM), making it an excellent choice for new installations that may be upgraded to Gigabit Ethernet in the future. GigaGuide 62.5 XL fiber maximizes high speeds with longer distances.

In Gigabit Ethernet networks, our laser-certified GigaGuide fiber offers outstanding performance with both conventional edge emitting lasers and Vertical Cavity Surface Emitting Lasers (VCSELs).



Key Specifications:

Core Diameter:

62.5 ± 2.5 micron

Clad Diameter:

125 ± 1 micron

Attenuation:

≤ 2.9 dB/km at 850 nm

≤ 0.7 dB/km at 1300 nm

Allows for Gigabit Ethernet operation up to 500 meters at 850 nm and up to 1000 meters at 1300 nm

Fully compatible with standard 62.5/125 graded index multimode optical fiber

Product Specifications:

GigaGuide fiber meets or exceeds industry standards for fiber specifications.

Physical Characteristics

Core Diameter (µm)	62.5 ± 2.5
Clad Diameter (µm)	125 ± 1
Coating Diameter (µm)	245 ± 10
Core Non-Circularity (%)	≤ 5
Clad Non-Circularity (%)	≤ 1
Core-Clad Offset (µm)	≤ 1.5
Coating Non-Circularity (%)	≤ 5
Clad-Coating Offset (µm)	≤ 6
Standard Proof Test (kpsi)	≥ 100
Standard Reel Lengths (km)	2.2 – 8.8

Optical Characteristics

Attenuation at 850 nm (dB/km)	≤ 2.9
Attenuation at 1300 nm (dB/km)	≤ 0.7
Attenuation Difference 1380 nm - 1300 nm (dB/km)	≤ 1.0
Numerical Aperture	0.275 ± 0.015
Zero Dispersion Wavelength Range (nm)	1320 – 1365
Maximum Dispersion Slope (ps/nm ² ·km)	0.097
Macrobend Attenuation (dB/km) 100 turns on a 75 mm mandrel at 850 nm and 1300 nm	≤ 0.5
Point Discontinuities (dB) at 850 nm and 1300 nm	≤ 0.08

Group Refractive Index

850 nm	1.496
1300 nm	1.491

GigaGuide fiber provides resistance to temperature and humidity extremes.

Environmental Performance

Temperature Induced Attenuation @ 850 nm and 1300 nm from -60° to +85° C (dB/km)	≤ 0.1
Temperature and Humidity Induced Attenuation @ 850 nm and 1300 nm from -10° to +90° C (dB/km), 85% RH 30 day cycle	≤ 0.2

GigaGuide fiber's dual layer UV-cured acrylate coating provides excellent fiber protection and strips cleanly and easily.

Coating Removal Performance

Strip Force, Aged and Unaged (ldf)	0.5 – 1.0 (2.2 – 4.4 N) Typical 0.7 (3.0 N)
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Advanced Processes, Stringent Quality Control

Robust and easy to connectorize, GigaGuide 62.5 and 62.5 XL fibers promote ease of installation even under the most stringent conditions. OFS protects the fibers by using a dual-layered, UV-cured acrylate coating system that provides excellent protection against temperature and humidity extremes, yet still strips cleanly and easily.

GigaGuide fiber is manufactured at the OFS *Multimode Center of Excellence* in Sturbridge, Massachusetts, using the company's advanced Inside Vapor Deposition (IVD) technology. Using the IVD process, OFS produces a range of multimode fiber products that offer excellent performance for all transmission protocols. The IVD 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 of the OFS graded index multimode fibers, GigaGuide 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.

For additional information please contact your sales representative.

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You can also visit our website at <http://www.ofsoptics.com>.

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