Corning® InfiniCor® 62.5 µm Optical Fibers

Product Information

CORNING

How Do You Measure Trust? Gb/s Works for Us.

In today's enterprise networks, bandwidth demands are growing – rapidly. That's because end-user productivity is increasingly dependent on instant accessibility and high throughput of information. Narrow bandwidth constricts your capacity to succeed. Corning's 62.5 µm InfiniCor® fibers, the world's first laser-optimized™ 62.5 µm multimode fibers, help you to stay ahead of escalating network demands with:

- Greater distance capability at data rates up to 1 Gb/s in both the 850 and 1300 nm windows
- Higher data aggregation in the backbone, riser and horizontal, compared with non-laser-optimized fibers
- Full compatibility with the broad range of laser-based and legacy protocols and applications
- Superior measurement technology and manufacturing control
- Industry-leading CPC® coating for superior microbend and environmental performance

	InfiniCor® CL™ 1000 fiber	InfiniCor® 300 fiber
Optimized Data Rate over Distance	1 Gb/s over 500 m at 850 nm 1 Gb/s over 1000 m at 1300 nm	1 Gb/s over 300 m at 850 nm 1 Gb/s over 550 m at 1300 nm
Standards Compliance*		
ISO/IEC 11801	type OM1 fiber	type OM1 fiber
IEC 60793-2-10	type A1b fiber	type A1b fiber
TIA/EIA	492AAAA-A	492AAAA-A

*Corning InfiniCor 62.5 µm laser-optimized™ fibers meet or exceed standards requirements for the fiber specifications listed.

Optical Specifications

Bandwidth

	Intermediate Performance EMB* (MHz•km)	Legacy Performance EMB** (MHz•km)	
Corning Optical Fiber	850 nm Only	850 nm	1300 nm
InfiniCor CL 1000 fiber	385	200	500
InfiniCor 300 fiber	220	200	500

*RML BW, per TIA/EIA 455-204 and IEC 60793-1-41, for intermediate performance laser-based systems (typically up to 1 Gb/s).

**OFL BW, per TIA/EIA 455-204 and IEC 60793-1-41, for legacy and LED-based systems (typically up to 100 Mb/s).

Attenuation

Wavelength (nm)	Maximum Value (dB/km)
850	≤ 2.9
1300	≤ 0.6

No point discontinuity greater than 0.2 dB.

Attenuation at 1380 nm does not exceed the attenuation at 1300 nm by more than 1.0 dB/km.

Induced attenuation from 100 turns around a 75 mm mandrel shall be ≤ 0.5 dB at 850 nm and 1300 nm.

Numerical Aperture

0.275 ± 0.015

How to Order

Contact your sales representative, or call the Optical Fiber Customer Service Department:
Ph: 1-607-248-2000 (U.S. and Canada)
+44-1244-525-320 (Europe)
Email: cofic@corning.com
Please specify the fiber type, attenuation, and quantity when ordering.

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Dimensional Specifications

Glass Geometry

Core Diameter	62.5 ± 2.5 µm
Cladding Diameter	125.0 ± 2.0 µm
Core-Clad Concentricity	≤ 1.5 µm
Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5%

Coating Geometry

Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 850 and 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C*	≤ 0.10
Temperature Humidity Cycling	-10°C to +85°C* and 4% to 98% RH	≤ 0.10
Water Immersion	23°± 2°C	≤ 0.20
Heat Aging	85°± 2°C*	≤ 0.20
Damp Heat	85°C at 85% RH	≤ 0.20

Operating Temperature Range: -60ºC to +85ºC

Mechanical Specifications

Proof Test

The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m²)*.

*Higher proof test levels available.

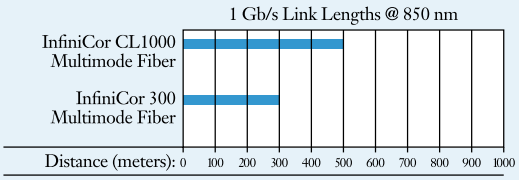
Length

Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Characterized parameters are typical values.

Link Length



Link Lengths as characterized in IEEE 802.3z (Gigabit Ethernet) for product-specific bandwidth metrics and values provided in this document.

Refractive Index Difference	2%
Effective Group Index of Refraction (N_{eff})	850 nm: 1.496 1300 nm:1.491

N_{eff} was empirically derived to the third decimal place using a specific commercially available OTDR.

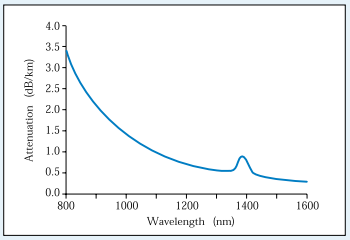
Fatigue Resistance Parameter (N_d)	20
Coating Strip Force	Dry: 0.6 lbs. (2.7N) Wet, 14 days in 23°C water soak: 0.6 lbs. (2.7N)
Rayleigh Backscatter Coefficient (for 1 ns Pulse Width)	850 nm: -68 dB 1300 nm: -76 dB

Chromatic Dispersion

Zero Dispersion Wavelength (λ_0): 1332 nm ≤ λ_0 ≤1354 nm

Zero Dispersion Slope (S_0): ≤ 0.097 ps/(nm²•km)

Spectral Attenuation (Typical Fiber)



Formulas

Dispersion

$$\text{Dispersion} = D(\lambda): \approx \frac{S_0}{4}\left[\lambda - \frac{\lambda_0^4}{\lambda^3}\right] \text{ps/(nm•km)},$$

for 750 nm ≤ λ ≤ 1450 nm

λ = Operating Wavelength

Cladding Non-Circularity

$$\text{Cladding Non-Circularity} = \left[1 - \frac{\text{Min. Cladding Diameter}}{\text{Max. Cladding Diameter}}\right] \times 100$$

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