LaserWave® FLEX G+ (OM2+) Multimode Optical Fiber
A 50 µm multimode fiber optimized for low bend loss in 1 Gigabit Ethernet applications

Overview
LaserWave FLEX G+ (OM2+) Multimode Optical Fiber provides high bandwidth and reduced bending loss for extended reach 1 Gigabit Ethernet transmission in local area networks at distances up to 750 meters. The fiber offers outstanding bend performance at a radius as low as 7.5 mm, enabling smaller, higher density fiber management systems in space-constrained environments and routing.

LaserWave FLEX G+ (OM2+) Multimode Optical Fiber maximizes the potential of the Gigabit Ethernet standard while also delivering 10 Gb/s application support up to 150 meters at 850 nm. This capability allows it to be used for longer distance 1 Gb/s applications and shorter reach 10 Gb/s 850 nm applications.

A cost-effective solution for 1 Gb/s transmission, LaserWave FLEX G+ (OM2+) Multimode Optical Fiber offers low bending loss at both the 850 and 1300 nm operating windows, with excellent long term fiber strength and reliability. The fiber can be installed in loops as small as 7.5 mm radius with less than 0.2 dB bending loss at 850 nm and 0.5 dB at 1300 nm.

Features
• Extended reach for 1 Gb/s enterprise applications
• Superior geometric tolerances and very low attenuation
• DMD-tested for higher reliability at longer link lengths
• Backward compatible with all standard 50 µm multimode fibers

Benefits
• Allows Gigabit Ethernet operation up to 750 meters at 850 nm and 10 Gb/s operation up to 150 meters at 850 nm
• Enables minimal connection loss and low cabled attenuation
• Outstanding bend performance

Applications
• 1 Gb/s transmission in campus backbone, riser and horizontal applications
• Internet data centers
• Equipment rooms and short building backbones
• Low-loss cabling systems

www.ofsoptics.com
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.

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

Asia Pacific
Telephone: +852 2506 5054
Fax: +852 2506 0166
E-mail: fibersalesap@ofsoptics.com

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

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

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

China
Telephone: +86 10 6505 3660
Fax: +86 10 65059515
E-mail: fibersaleschina@ofsoptics.com

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**Physical Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Core Diameter</td>
<td>50 ± 2.5 μm</td>
</tr>
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<td>Core Non-Circularity</td>
<td>≤ 5 %</td>
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<tr>
<td>Clad Diameter</td>
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</tr>
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<td>Coating-Clad Concentricity Error (Offset)</td>
<td>≤ 12 μm</td>
</tr>
</tbody>
</table>

**Product Specifications**

**Physical Characteristics**

- **Core Diameter**: 50 ± 2.5 μm
- **Core Non-Circularity**: ≤ 5%
- **Clad Diameter**: 125 ± 0.8 μm
- **Clad Non-Circularity**: ≤ 0.7%
- **Core/Clad Concentricity Error (Offset)**: ≤ 1.0 μm
- **Coating Diameter**: 242 ± 5 μm
- **Coating Non-Circularity**: ≤ 5%
- **Coating-Clad Concentricity Error (Offset)**: ≤ 12 μm

**Tensile Proof Test**: 100 kpsi (0.69 GPa)

**Coating Strip Force**: Range: 0.22 - 2.0 lbf (1.0 - 8.9 N), Typical: 0.6 lbf (2.7 N)

**Standard Reel Lengths**: 2.2 – 8.8 km

**Optical Characteristics**

- **Attenuation at 850 nm**: ≤ 2.2 dB/km
- **Attenuation at 1300 nm**: ≤ 0.6 dB/km
- **Overfilled Bandwidth at 850 nm**: ≥ 700 MHz-km
- **Overfilled Bandwidth at 1300 nm**: ≥ 500 MHz-km
- **Laser Bandwidth/EMB at 850 nm**: ≥ 950 MHz-km
- **Laser Bandwidth/EMB at 1300 nm**: ≥ 500 MHz-km

**Transmission Distance (Link Length) Support**

- **Gigabit Ethernet at 850 nm**: 750 meters
- **Gigabit Ethernet at 1300 nm**: 600 meters
- **10 Gigabit Ethernet at 850 nm**: 150 meters

**Attenuation 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**: 0.200 ± 0.010

**Chromatic Dispersion**

- **Zero Dispersion Wavelength (λ₀)**: 1297 ≤ λ₀ ≤ 1328 nm
- **Zero Dispersion Slope (S₀)**: S₀ ≤ 4(-103) / (840(1-(λ₀/840)^4)) ps/nm².km

**Group Refractive Index**

- **at 850 nm**: 1.483
- **at 1300 nm**: 1.479

**Backscatter Coefficient**

- **at 850 nm**: -68.4 dB
- **at 1300 nm**: -75.8 dB

**Macrobend Attenuation**

- **at 850 nm**: 850 nm ≤ 0.5 dB
- **at 1300 nm**: 1300 nm ≤ 0.5 dB
- **2 turns @ 15 mm radius**: ≤ 0.1 dB
- **2 turns @ 7.5 mm radius**: ≤ 0.2 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 (n₀)**: ≥ 18