Member of LEONI Group

j-BendAble OM5 Wideband Multimode Fiber

Bend-insensitive fiber for multi-wavelengths systems

High-bandwidth performance in multi-wavelength transmission systems accompagnied by superior bend-loss performance

j-BendAble OM5 Wideband Multimode fiber is a bend-insensitive 50μm Multimode fiber optimized for multi-wavelentghs transmission systems operating in the range of 850nm to 950nm wavelength.

j-BendAble OM5 Wideband Multimode fiber enables 25 Gbps Ethernet transmission for wavelength-multiplexing systems such as 100G SWDM4. At the same time it provides best macrobending performance and supports high-density packaging cables, smallest bend radii and challenging installation situations in advanced data centers. j-BendAble OM5 Wideband Multimode is compatible with all commercially available standard and bend-insensitive 50μm fibers.

Benefits

- 25 Gb/s Ethernet multi-wavelength transmission 850nm to 950 nm with guaranteed OM5 standard compliant optical performance
- Guaranteed OM5 compliance: Effective Modal Bandwidth (EMB) ≥ 4700 MHz·km @ 850nm and ≥ 2470 MHz·km @ 953nm
- Minimum bend loss in very small bend-radii applications
- Ensures compatibility with currently commercially available bend-insensitive MMF and standard MMF
- Supports compact cable management systems in advanced data center applications
- Supports high fiber count cable manufacturing

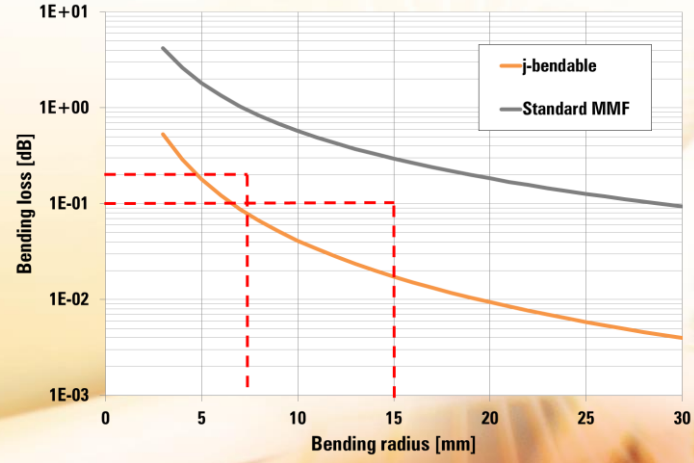
Standardization for j-BendAble OM5 Wideband Multimode fiber

- IEC 60793-2-10 Ed. 6 (OM5)
- TIA/EIA 492AAAE
- ITU G651.1
- IEEE 802.3

Bending Performance

Macrobending Loss / Bend Induced Attenuation	850 nm	1300 nm	Unit
2 turns Radius 15 mm	≤ 0.1	≤ 0.3	dB
2 turns Radius 7.5 mm	≤ 0.2	≤ 0.5	dB

Typical bend loss of j-BendAble OM5 vs. Standard 50μm fiber
2 turns on mandrel of varying diameter at 850nm



For further information about our Multimode Fiber and other j-fiber products and services, please contact us:

j-fiber GmbH
Im Semmicht 1
D-07751 Jena, Germany
Tel.: +49-3641-352 100
Fax: +49-3641-352 101
Email: info@j-fiber.com
Internet: www.j-fiber.com

DB-FNB-003-03-0516 Issued November 2016
Supersedes DB-FNB-003-02-1101

Officially registered facility according to EWG
No1221/2009

Performance Characteristics

		Spec. Values	Unit
Bandwidth (Overfilled Launch)	850 nm	≥ 3500	MHz·km
	953 nm	≥ 1850	
	1300 nm	≥ 500	
Effective Modal Bandwidth (EMB)	850 nm	≥ 4700	MHz·km
	953 nm	≥ 2470	

Optical Characteristics

		Spec. Values	Unit
Attenuation[1]	850 nm	≤ 2.3	dB/km
	953 nm	≤ 1.7	
	1300 nm	≤ 0.7	
	1383 nm	< 2.0	
Attenuation Discontinuities (OTDR 1300 nm)		< 0.05	dB
Zero Dispersion Wavelength λ_0		$1297 \le \lambda_0 \le 1328$	nm
Zero Dispersion Slope, S_0		$\le 4(-103)/(840(1-(\lambda_0/840)^4))$	ps/nm^2·km
Numerical Aperture		0.200 ± 0.015	
Effective Group Index of Refraction	850 nm	1.483	
	1300 nm	1.478	

[1] Special attenuation values available upon request.

Geometrical Characteristics

	Spec. Values	Unit
Core Diameter	50 ± 2.5	µm
Core Non-Circularity	≤ 5.0	%
Core/Clad Concentricity Error	≤ 1	µm
Cladding Diameter	125 ± 1.0	µm
Cladding Non-Circularity	≤ 1.0	%
Coating Diameter	242 ± 7	µm
Coating /Clad Concentricity Error	≤ 10	µm
Standard Lengths	1.1 - 8.8	km

Mechanical Characteristics

	Spec. Values	Unit
Proof Test	≥ 0.69	GPa
	≥ 8.8	N
Dynamic Tensile Strength Unaged Fiber (0.5m) Median Tensile Strength 15th Percentile Tensile Strength	 ≥ 3.8 ≥ 3.3	GPa
Aged Fiber (0.5m) Median Tensile Strength 15th Percentile Tensile Strength	 ≥ 3.03 ≥ 2.76	
Dynamic Fatigue Stress Corrosion Parameter n_d (typical)	≥ 23	
Operating Temperature Range	-60 to +85	°C
Coating Strip Force (typical)	1.9	N

Environmental Characteristics

	Spec. Values	Unit
	850nm/1300 nm	
Change of Temperature Attenuation increase, -60°C to+85°C	≤ 0.1	dB/km
Dry Heat Attenuation increase, 30 days at 85°C	≤ 0.1	dB/km
Damp Heat Attenuation increase, 30 days at 85°C/85% R.H.	≤ 0.1	dB/km
Water Immersion Attenuation increase, 30 days in 23°C water	≤ 0.1	dB/km

Coating

j-fiber Multimode optical fiber is protected with our enhanced coating material that guarantees long-term performance and reliability. The dual-layer acrylate material is user-friendly and compatible in all cable constructions, such as tight buffer and loose tube designs with low bending loss. Optimized for multimode fiber, the coating enables lowest microbending sensitivity of the fiber. The coating is mechanically strippable and leaves no residue. Coating options for special applications are available on request.

Spool Size

	Size
Spool diameter	9.25"/23.5cm
Spool width	4.21"/10.7cm
Spindle	1"/2.54cm
Traverse width	3.75"/9.5cm

Environmental friendly Packaging

The shipping spool is designed to safeguard j-fiber optical fiber not only during shipping but also during subsequent handling in the customer's plant. It features smooth inside surfaces to ensure that the fiber is wound on and off the reel without the risk of breaking. The reel barrel is isolated via a polyethylene air cushion cover. The inside end of the fiber can be accessed for various measurements while still on the shipping spool. All reels and transport boxes are designed to take advantage of our recycling program.

Ordering Information

To order our j-BendAble OM5 please call, fax or email us and specify the following parameters when ordering:

Fiber Type:	j-BendAble OM5 50/125/242 µm
Fiber Quantity:	kms
Other:	desired ship date, reel length, special requests

All fibers and preforms are subject to j-fiber's ongoing process and quality improvement programs ensuring excellent performance and high reliability. We reserve the right to make changes to the above specification without notice.