

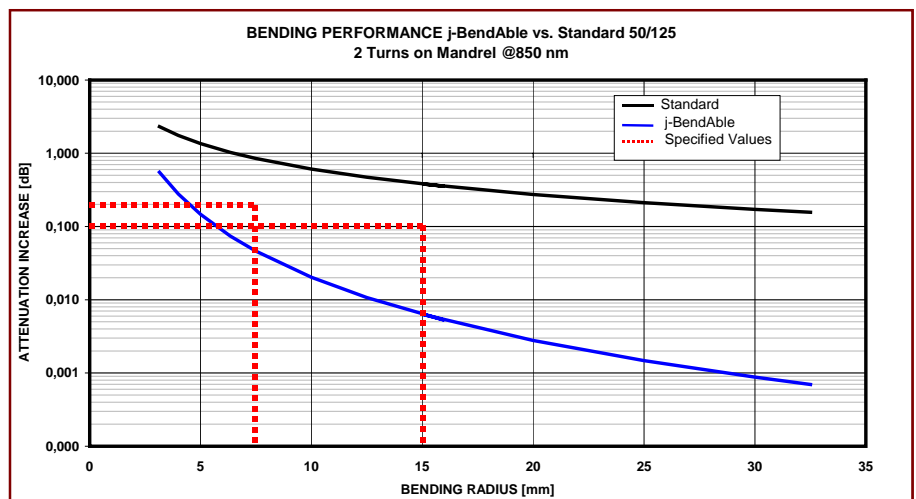
j-BendAble OMx Fiber

Bend-insensitive OM2, OM2⁺, OM3, OM4 compliant MMF

Superior bend-loss performance in standard compliant high-bandwidth transmission up to 10 GB/s in demanding data center installations

j-BendAble OMx fibers are bend-insensitive 850nm laser-optimized 50 μm Multimode fibers in compliance with OM2, OM3 and OM4 standards and also available in advanced OM2⁺ bandwidth. With their superior bend-loss performance j-BendAble OMx fibers support compact packaging, small bend-radii and other challenging installation situations in advanced data centers. j-BendAble OMx fibers enable serial 10 Gb/s Ethernet transmission over up to 550 m link lengths as well as parallel transmission options in 40 Gb/s or 100 Gb/s speeds over up to 150 m. j-BendAble OMx fibers ensure maximum compatibility with all available Bend-insensitive Multimode Fiber brands and standard multimode fibers.

Superior bending performance of j-BendAble OMx (typical)



Manufacturing Process

j-BendAble Multimode fibers are manufactured by j-fiber's proprietary MCVD and PBD process for preform fabrication, a technology to flexibly provide innovative, customer specific fiber and preform designs with maximum splicing compatibility. Our DMD monitored process results in fibers with a precisely controlled index of refraction. Low attenuation values, consistent geometric properties and high strengths of the fibers are also subject to tight quality control.

Benefits

- Minimum bend loss in very small bend-radii applications
- 10 Gb/s Ethernet serial transmission with guaranteed OM4, OM3 standard compliant optical performance
- Ensures maximum compatibility with currently commercially available BIMMF and MMF
- OM2 and OM2⁺ available for cost-efficient applications
- Supports compact cable management systems in advanced data center applications.
- Supports high fiber count cable manufacturing.
- Provides for future-safe 40/100 Gb/s parallel transmission over up to 150 m.
- Guarantees reliable system performance by most stringent DMD characterization.

Bending Performance

Macrobending Loss / Bend Induced Attenuation		Spec. Values	Unit
100 turns	850 nm	≤ 0.05	dB
Radius 37.5 mm	1300 nm	≤ 0.15	dB
2 turns	850 nm	≤ 0.1	dB
Radius 15 mm	1300 nm	≤ 0.3	dB
2 turns	850 nm	≤ 0.2	dB
Radius 7.5 mm	1300 nm	≤ 0.5	dB

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Performance Characteristics

		j-BendAble				Unit
		OM2	OM2 ⁺	OM3	OM4	
Bandwidth (Overfilled Launch, LED based sources)	850nm	≥500	≥750	≥1500	≥3500	MHz·km
	1300nm	≥500	≥500	≥500	≥500	MHz·km
Effective Modal Bandwidth (EMB)	850nm	-	≥1000	≥2000	≥4700	MHz·km
Transmission Link Lengths ¹ for 10 Gb/s (LX4)	850nm	-	150	300	550	m
	1300nm	-	300	300	300	m

¹ Other link lengths available on request

Optical Characteristics

		Spec. Values	Unit
Attenuation Coefficient ¹	850 nm	≤ 2.3	dB/km
	1300 nm	≤ 0.7	dB/km
Attenuation @ 1383 nm (OH-Peak)		< 2.0	dB/km
Attenuation Discontinuities (OTDR 1300 nm)		< 0.05	dB
Zero Dispersion Wavelength		1295 ≤ λ ₀ ≤ 1320	nm
Zero Dispersion Slope	1295 ≤ λ ₀ ≤ 1300	≤ 0.001 (λ ₀ - 1190)	ps/nm·km
	1300 ≤ λ ₀ ≤ 1320	≤ 0.11	ps/nm·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	≤ 1.5	μm
Cladding Diameter	125 ± 1.0	μm
Cladding Non-Circularity	≤ 1.0	%
Coating Diameter	245 ± 10	μm
Coating /Clad Concentricity Error	≤ 10.0	μm
Standard Lengths	1.1-8.8	km

Ordering Information

Fiber Type:	j-BendAble OMx 50/125/250 μm
Desired j-BendAble Class:	OM2, OM2 ⁺ , OM3, OM4
Desired Attenuation:	at 850 nm/1300 nm
Fiber Quantity:	kms
Other:	desired ship date, reel length, special requests

Mechanical Characteristics

	Spec. Values	Unit
Proof Test	≥ 200	kpsi
	≥ 17.6	N
Dynamic Tensile Strength Unaged Fiber (0.5 m)		
	Median Tensile Strength	≥ 3.8
15th Percentile Tensile Strength Aged Fiber (0.5 m)		
	Median Tensile Strength	≥ 3.03
15th Percentile Tensile Strength		
		≥ 2.76
Dynamic Fatigue Stress Corrosion Parameter n _d	≥ 23	
Operating Temperature Range	-60 to +85	°C
Coating Strip Force (typical)	3.5	N

Environmental Characteristics

	Spec. Values	Unit
	@ 850/1300 nm	
Change of Temperature Attenuation increase, -60°C to +85°C	≤ 0.20	dB/km
Dry Heat Attenuation increase, 30 days @ 85°C	≤ 0.20	dB/km
Damp Heat Attenuation increase, 30 days @ 85°C/85% R.H.	≤ 0.20	dB/km
Water Immersion Attenuation increase, 30 days in 23°C water	≤ 0.20	dB/km

Standard compliance

Standardization of BI-MMF is still in process.

- IEC 60793-2-10
- ITU G651.1
- TIA/EIA 492AAAD ; TIA/EIA 492AAAC-B; TIA/EIA 492AAAB-A

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.

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