

j-BendAble Robust Fiber

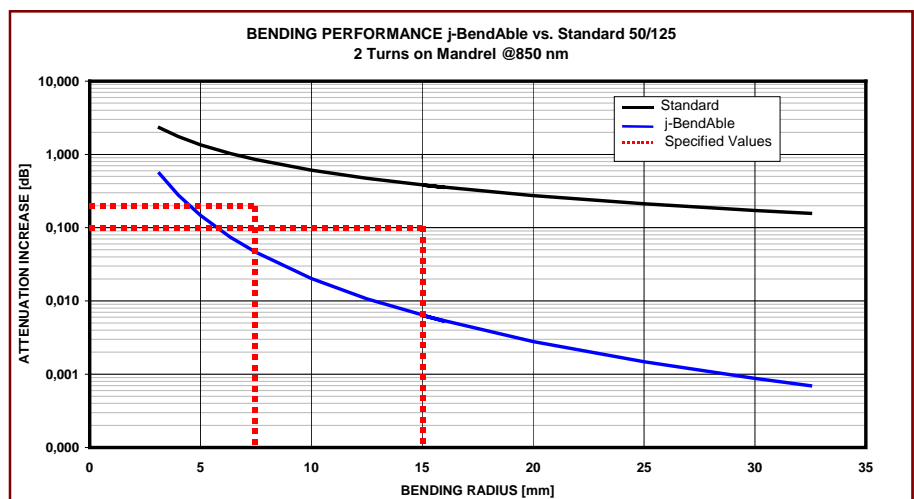
Bend-insensitive Multimode Fiber with 500 μm Coating

Superior bend loss performance combined with maximum protection from mechanical impacts for high-bandwidth 10 Gigabit Ethernet transmission

j-BendAble Robust fiber is a bend-insensitive, trench-assisted 50/125 fiber with a 500 μm coating. It has been developed to provide for superior bend-loss performance even in most challenging installation situations with very small bend-radii applications and exposure to mechanical stress.

j-BendAble Robust is laser-optimized for transmission at 850 nm and is available with OM2, OM3 and OM4 standard compliant optical performance. The fiber enables serial 10 Gb/s Ethernet transmission from 150 m up to 550 m link lengths.

Superior bending performance of j-BendAble Robust (typical)



Benefits

- Bend-insensitive MMF with minimum bend loss performance in very small bend-radii applications
- Special 500 μm coating for best fiber protection against mechanical impacts
- 10 Gb/s Ethernet serial transmission with standard compliant OM4, OM3, OM2, OM2+ bandwidth
- Guarantees most 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	850nm	≤ 2.4	dB/km
	1300nm	≤ 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	850nm	1.483	
	1300nm	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	500 ± 15.0	μm
Coating /Clad Concentricity Error	≤ 10.0	μm
Standard Lengths	1.1-8.8	km

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	GPa
Aged Fiber (0.5 m)			
	15th Percentile Tensile Strength	≥ 3.3	GPa
Dynamic Fatigue Stress Corrosion Parameter n _d			
	Median Tensile Strength	≥ 3.03	GPa
	15th Percentile Tensile Strength	≥ 2.76	GPa
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	≤ 0.10	dB/km
Dry Heat Attenuation increase, 30 days @ 85°C	≤ 0.10	dB/km
Damp Heat Attenuation increase, 30 days @ 85°C/85% R.H.	≤ 0.10	dB/km
Water Immersion Attenuation increase, 30 days in 23°C water	≤ 0.10	dB/km

Spool Size

	small	large
Fiber Length	≤ 4.4km	> 4.4km
Spool Diameter	9.25"/23.5cm	10.4"/26.4cm
Spool Width	4.21"/10.7cm	6.65"/16.9cm
Spindle	1"/2.54cm	1"/2.54cm
Traverse Width	3.75"/9.5cm	5.9"/15.0cm

Ordering Information

Fiber Type:	j-BendAble Robust 50/125/500 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

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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