

## j-BendAble OM4 Multimode Fibers

### Bend-insensitive fiber

#### Superior bend-loss performance in OM4 standard compliant high-bandwidth performance for 10 Gb/s Ethernet transmission rates

j-BendAble OM4 Multimode fiber is a bend-insensitive 850 nm laser-optimized 50 $\mu$ m Multimode fiber. It provides for best macrobending performance and supports high-density packaging cables, smallest bend-radii and challenging installation situations in advanced data centers. j-BendAble OM4 fiber enables serial 10 Gb/Ethernet transmission over 550 m. j-BendAble is compatible with all commercially available standard and bend-insensitive 50 $\mu$ m fibers.

#### Benefits

- Minimum bend loss in very small bend-radii applications
- 10 Gb/s Ethernet serial transmission with guaranteed OM4 standard compliant optical performance
- Guaranteed OM4 compliance: Effective Modal Bandwidth (EMB)  $\geq$  4700 MHz·km @850nm
- Provides high performance at overfilled launch (OFL) bandwidth  $\geq$  3500 MHz·km @ 850 nm
- 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
- Guarantees reliable system performance by most stringent DMD characterization

#### Standardization and Compliances for j-BendAble OM4

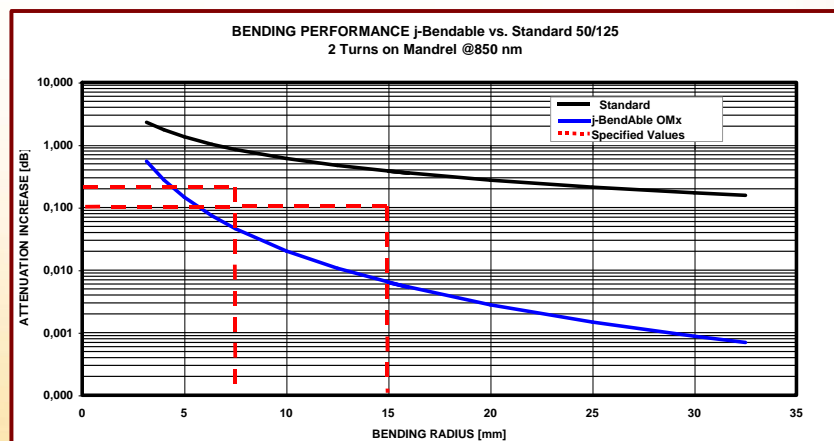
- IEC 60793-2-10
- ITU G651.1
- TIA/EIA 492AAAD
- IEEE 802.3

#### Bending Performance

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

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

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## Performance Characteristics

		Spec. Values	Unit
Bandwidth (Overfilled Launch)	850 nm	$\geq 3500$	MHz·km
	1300 nm	$\geq 500$	MHz·km
Effective Modal Bandwidth (EMB)	850 nm	$\geq 4700$	MHz·km
Transmission Link lengths for 10 Gb/s <sup>1</sup>	850 nm	550	m
	1300 nm	300	m

<sup>1</sup> 850 nm operating wavelength, transmitters meeting encircled flux of  $\leq 30\%$  @ radius  $4.5\text{ }\mu\text{m}$  and  $\geq 86\%$  @ radius  $19.0\text{ }\mu\text{m}$ . At 1300nm link length using LX4.

## Optical Characteristics

		Spec. Values	Unit
Attenuation Coefficient <sup>1</sup>	850 nm	$\leq 2.3$	dB/km
	1300 nm	$\leq 0.7$	dB/km
Attenuation at 1383 nm (OH-Peak)		$< 2.0$	dB/km
Attenuation Discontinuities (OTDR 1300 nm)		$< 0.05$	dB
Chromatic Dispersion Zero Dispersion Wavelength $\lambda_0$		$1295 \leq \lambda_0 \leq 1340$	nm
Zero Dispersion Slope, $S_0$ – from $1295 \leq \lambda_0 \leq 1310$ – from $1310 \leq \lambda_0 \leq 1340$		$\leq 0.105$	ps/nm <sup>2</sup> ·km
		$\leq 0.000375 \cdot (1590 - \lambda_0)$	ps/nm <sup>2</sup> ·km
Numerical Aperture		$0.200 \pm 0.015$	
Effective Group Index of Refraction	850 nm	1.483	
	1300 nm	1.478	

<sup>1</sup> Special attenuation values available upon request.

## Geometrical Characteristics

	Spec. Values	Unit
Core Diameter	$50 \pm 2.5$	$\mu\text{m}$
Core Non-Circularity	$\leq 5.0$	%
Core/Clad Concentricity Error	$\leq 1$	$\mu\text{m}$
Cladding Diameter	$125 \pm 1.0$	$\mu\text{m}$
Cladding Non-Circularity	$\leq 1.0$	%
Coating Diameter	$242 \pm 7$	$\mu\text{m}$
Coating /Clad Concentricity Error	$\leq 10$	$\mu\text{m}$
Standard Lengths	1.1 - 8.8	km

## Mechanical Characteristics

	Spec. Values	Unit
Proof Test	$\geq 0.69$	GPa
	$\geq 8.8$	N
Dynamic Tensile Strength Unaged Fiber (0.5m)		
	$\geq 3.8$	GPa
Median Tensile Strength 15th Percentile Tensile Strength	$\geq 3.3$	GPa
Aged Fiber (0.5m)		
	$\geq 3.03$	GPa
Median Tensile Strength 15th Percentile Tensile Strength	$\geq 2.76$	GPa
Dynamic Fatigue Stress Corrosion Parameter $n_d$ (typical)	$\geq 23$	
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	$\leq 0.1$	dB/km
Dry Heat Attenuation increase, 30 days at 85°C	$\leq 0.1$	dB/km
Damp Heat Attenuation increase, 30 days at 85°C/85% R.H.	$\leq 0.1$	dB/km
Water Immersion Attenuation increase, 30 days in 23°C water	$\leq 0.1$	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 shows lowest microbending sensitivity. 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 OM4 please call, fax or email us and specify the following parameters when ordering:

Fiber Type:	j-BendAble OM4 50/125/242 $\mu\text{m}$
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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