

Bend-insensitive fibre

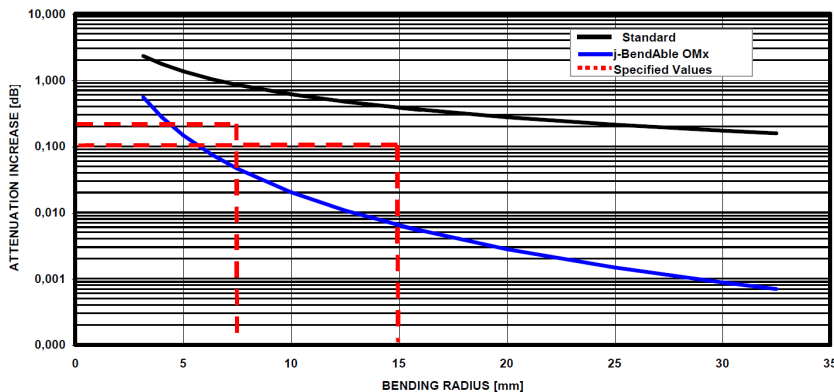
OM2/OM2+ type fibres with superior bend-loss performance for short distance

BendAble OM2/OM2+ Multimode fibres are bend-insensitive 850 nm laser-optimized 50µm Multimode fibres. They provide for best macro-bending performance and support high-density packaging cables, smallest bend-radii and challenging installation situations in advanced data centres. BendAble OM2 is best suited to support conventional LAN applications with OM2 performance. BendAble OM2+ (also known as OM3 – 150 type fibre) is the ideal solution for short reach 150m distance 10Gb/s Ethernet data transmission in high-speed interconnects for central offices and data centres. BendAble OM2/OM2+ are compatible with all commercially available standard and bend-insensitive 50µm fibres.

Bending Performance

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

BENDING PERFORMANCE j-Bendable vs. Standard 50/125
2 Turns on Mandrel @850 nm



Features & Benefits

- Minimum bend loss in very small bend-radii applications
- 10Gb/s Ethernet serial transmission over distances of 150m
- Effective Modal Bandwidth (EMB) $\geq 1000\text{MHz}\cdot\text{km}$ @ 850nm
- Provides high performance at overfilled launch (OFL) bandwidth $\geq 750\text{MHz}\cdot\text{km}$ @ 850nm and $500\text{MHz}\cdot\text{km}$ @ 1300nm to support conventional applications.
- Ensures compatibility with currently commercially available bend-insensitive MMF and standard MMF
- Supports compact cable management systems in advanced data centre applications.
- Supports high fibre count cable manufacturing

Standardisation and Compliances for BendAble OM2/OM2+

- IEC 60793-2-10
- ITU G651.1
- TIA/EIA 492AAAB-A

Coating

This multimode optical fibre 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 fibre, the coating shows lowest microbending sensitivity. The coating is mechanically strippable and leaves no residue. Coating options for special applications are available on request.

Environmental Friendly Packaging

The shipping spool is designed to safeguard optical fibre not only during shipping but also during subsequent handling in the customer's plant. It features smooth inside surfaces to ensure that the fibre 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 fibre 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.



Performance Characteristics

		OM2	OM2+	Unit
Bandwidth (Overfilled Launch, LED based sources)	850nm 1300nm	≥500 ≥500	≥750 ≥500	MHz·km MHz·km
Effective Modal Bandwidth (EMB) ¹	850nm	n/a	≥1000	MHz·km
Transmission Link Lengths for 1Gb/s	850nm 1300nm	500 500	750 500	m m
Transmission Link Lengths for 10Gb/s ¹	850nm 1300nm	n/a	150 300	m m

¹850nm operating wavelength with transmitters meeting encircled flux of ≤30% @ radius 4.5µm and ≥86% @ radius 19.0µm. At 1300nm link length using LX4.

Optical Characteristics

		Spec. Values	Unit
Attenuation Coefficient ¹	850nm 1300nm	≤2.3 ≤0.7	dB/km 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 λ ₀		from 1295 ≤ λ ₀ ≤ 1340	nm
Zero Dispersion Slope, S ₀	from 1295 ≤ λ ₀ ≤ 1310 from 1310 ≤ λ ₀ ≤ 1340	≤0.105 ≤0.000375·(1590-λ ₀)	ps/nm ² ·km ps/nm ² ·km
Numerical Aperture		0.200±0.015	
Effective Group Index of Refraction	850nm 1300nm	1.483 1.478	

¹Special attenuation values available upon request

Mechanical Characteristics

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

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	242±7	µm
Coating/Clad Concentricity Error	≤10	µm
Available Lengths	1.1-8.8 ¹	km

Environmental Characteristics

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

Spool Size

	Spec. Values
Spool Diameter	9.25"/23.5 cm
Spool Width	4.21"/10.7 cm
Spindle	1"/2.54 cm
Traverse Width	3.75"/9.5 cm

To Order

To place an order, email us using the contact details below or call +44 (0)1604 434188.

All fibres and preforms are subject to our 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.