

Legacy OM1 Graded-Index Multimode Fibre 62.5/125 µm (1300 nm bandwidth optimized)

Product Type: Legacy OM1 Multimode Fibre (62.5 µm core diam.)
Coating Type: Dual Layer Primary Coating (DLPC9)

Issue date: 03-2013
Supersedes: 04-2012



Legacy 850 nm Laser-Optimized **OM1 62.5 µm Multimode Fibre.**

This graded-index multimode fibre has a 62.5µm core diameter and a 125 µm cladding diameter. The fibre is designed for use at 1300 nm and can also be used at 850 nm and is suitable for use in premises cabling applications, like Local Area Networks (including backbone, riser and horizontal) with video, data and/or voice services using LED, VCSEL and Fabry-Perot laser sources at 850 nm or 1300 nm.

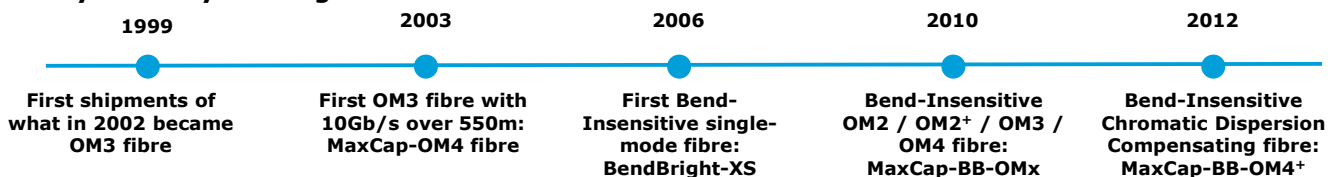
This multimode fibre assures full compatibility with legacy systems, like Fast Ethernet, FDDI, ATM, Fibre Channel and 1Gb/s Ethernet. Because of the nature of the Plasma-activated Chemical Vapor Deposition (PCVD and APVD™) manufacturing process, this fibre offers the highest bandwidth available in the market. OM1 and even OM2 fibre selections are available.

Standards references

The fibre complies with or exceeds IEC 60793-2-10 type A1b Optical Fibre Specification, TIA/EIA-492AAAA detail specification and Telcordia GR-20-CORE and GR-409-CORE specifications.

Features	Advantages
Produced by the PCVD and APVD™ processes, the ultimate processes for graded- index multimode fibres	<ul style="list-style-type: none"> • Superior geometry, uniformity and purity of glass • PCVD and APVD™ produced multimode fibres show excellent modal bandwidth performance
Coated with the dual layer UV Acrylate	<ul style="list-style-type: none"> • Optimized performance in tight-buffer cable applications • High resistance to micro-bending • Stable performance over a wide range of environmental conditions • Improved an easier strippability of tight buffer coatings

Key Industry Leading Milestones



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Characteristics	Conditions	Specified Values	Units
OPTICAL SPECIFICATIONS (Uncabled fibre)			
Attenuation Coefficient	850 nm 1300 nm	≤ 2.6 ≤ 0.5	dB/km
Numerical Aperture		0.275 ± 0.015	
Chromatic Dispersion			
Zero Dispersion Wavelength, λ_0		1320 ≤ λ_0 ≤ 1365	nm
Zero Dispersion Slope, S_0	1320 nm ≤ λ_0 ≤ 1348 nm 1348 nm ≤ λ_0 ≤ 1365 nm	≤ 0.11 ≤ 0.001 (1458 - λ_0)	ps/nm ² .km
Overfilled Modal Bandwidth ¹	850 nm 1300 nm	≥ 160 ≥ 500	MHz.km
Bending Loss	100 turns, D=75 mm; 850nm / 1300nm	≤ 0.5	dB
Backscatter Characteristics ²			
Point Discontinuity ³	850 nm, 1300 nm	≤ 0.1	dB
Irregularities over fibre length	850 nm, 1300 nm	≤ 0.1	dB
Reflections		Not allowed	
Group Index of Refraction (Typ.)	850 nm 1300 nm	1.496 1.491	
GEOMERICAL SPECIFICATIONS			
Core Diameter		62.5 ± 2.5	µm
Core Non-Circularity		≤ 5	%
Core/Cladding Concentricity Error		≤ 1	µm
Cladding Diameter		125.0 ± 1.0	µm
Cladding Non-Circularity		≤ 0.7	%
Coating Diameter		242 ± 5	µm
Coating Non-Circularity		≤ 5	%
Coating/Cladding Concentricity Error		≤ 10	µm
Length	Standard lengths up to Other lengths available on request	26.4	km
MECHANICAL SPECIFICATIONS			
Proof Test	Off line	> 0.7 (100)	GPa (kpsi)
Dynamic Tensile Strength (median value)	0.5 meter gauge length, unaged and aged ⁴	> 3.8 (550)	GPa (kpsi)
Fatigue Parameter (Typical)	Dynamic fatigue, unaged and aged ⁴	$n_f > 25$	
Coating Strip Force	Average strip force, unaged and aged ⁵	1 to 3	N
	Peak strip force, unaged and aged ⁵	1.3 to 8.9	N
ENVIRONMENTAL SPECIFICATIONS			
Temperature Cycling	850 nm, 1300 nm; -60°C to +85°C	≤ 0.1	dB/km
Temperature-Humidity Cycling	850 nm, 1300 nm; -10°C to +85°C, 4-98% RH	≤ 0.1	dB/km
Water Immersion	850 nm, 1300 nm; 23°C, 30 days	≤ 0.1	dB/km
Dry Heat	850 nm, 1300 nm; 85°C, 30 days	≤ 0.1	dB/km
Damp Heat	850 nm, 1300 nm; 85°C; 85% RH, 30 days	≤ 0.1	dB/km

- 1). The modal bandwidth is linearly normalized to 1 km, according to IEC 60793-2-10.
- 2). OTDR measurement with 0.5 µs pulse width.
- 3). Mean of bi-directional measurement.
- 4). Aging at 85°C, 85% RH, 30 days.
- 5). Aging at 23°C, 0°C and 45°C; 30 days at 85°C and 85% RH; 14 days water immersion at 23°C.