GOF MM Fiber, 50/125 µm (OM4) / C11-060102

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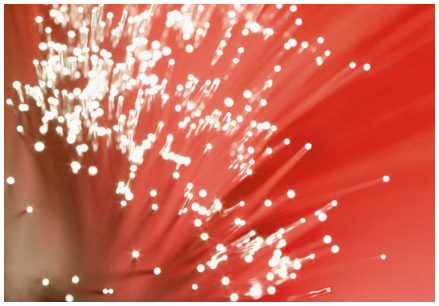

This fiber is a graded-index multimode fiber with extended reach, optimised for 10 Gb/s transmission speeds. It has a 50 µm core diameter and a 125 µm cladding diameter. The fiber is designed for use at 850 nm, but can also be used at 1300 nm.

R&M OM3 and OM4 fiber are bend-optimized (see table). The fiber is compliant or better than all relevant network standards e.g.

- Range for 40(100)GBASE – SR4(10): 150 m
- Range for 10GBASE – S: 550 m

Standards and norm

This fiber exceeds the requirements of:	• IEC 60793-2-10 Category A1a.3 • ITU Recommendation G.651 • TIA/EIA-492AAAC
Testing methods are in accordance with the following standards:	• IEC 60793-1-XX: 2002 • EN 60793-1-XX: 2002 • FOTP-220 (DMD)

Bend-optimized fiber

Criteria	Radius	Turns	Induced Attenuation
At 850 nm	37.5 mm 15.0 mm 7.5 mm	100 2 2	0.1 dB 0.1 dB 0.2 dB
At 1300 nm	37.5 mm 15.0 mm 7.5 mm	100 2 2	0.2 dB 0.3 dB 0.5 dB

Material

Criteria	Value
Core	The core is germanium doped
Coating	Dual layer UV curable acrylate, type DLPC9. The coating offers excellent stable stripping performance, and a unique high and stable value for the dynamic stress corrosion coefficient. This gives a greatly improved mechanical protection of the fiber when used in harsh environments.

Optical properties

Property	Unit	Value	
Attenuation (of cable with fibers)	[dB/km]	At 850 nm: At 1300 nm:	≤ 3.0 ≤ 1.0
Fiber attenuation (for reference only)	[dB/km]	At 850 nm: At 1300 nm:	≤ 2.5 ≤ 0.7
Numerical aperture	–		0.200 ± 0.015
In homogeneity of OTDR trace for any two 1000 metre fiber lengths	[dB/km]	Max.:	0.1

Property	Unit	Value	
Bandwidth (OFL)	[MHz x km]	At 850 nm: At 1300 nm:	≥ 3500 ≥ 500
Effective Modal Bandwidth[1]:	[MHz x km]	At 850 nm:	≥ 4700
Group index of refraction	–	At 850 nm: At 1300 nm:	1.482 1.477

[1] Effective Modal Bandwidth is assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49.

Dimensional and mechanical properties

Property	Unit	Value	Standard
Core diameter	[µm]	50 ± 2.5	IEC/EN 60793-1-20
Cladding diameter	[µm]	125.0 ± 1.0	IEC/EN 60793-1-20
Cladding non-circularity	[%]	≤ 1.0	IEC/EN 60793-1-20
Core non-circularity	[%]	≤ 5	IEC/EN 60793-1-20
Core-cladding concentricity error	[µm]	≤ 1.5	IEC/EN 60793-1-20
Primary coating diameter - uncoloured	[µm]	242 ± 7	IEC/EN 60793-1-21
Primary coating diameter - coloured	[µm]	250 ± 15	IEC/EN 60793-1-21
Primary coating non-circularity	[%]	≤ 5	IEC/EN 60793-1-21
Primary coating-cladding concentricity error	[µm]	≤ 10	IEC/EN 60793-1-21
Proof stress level	[GPa]	≥ 0.7 (≈ 1 %)	IEC/EN 60793-1-30
Typical average strip force	[N]	1.7	IEC/EN 60793-1-32
Strip force (peak)	[N]	$1.0 \leq F_{peak.strip} \leq 8.9$	IEC/EN 60793-1-32

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