

62.5 µm OM1 Multimode Fibre with 500 µm coating



APPLICABLE STANDARDS

- IEC / EN 60793-2-10: type A1-OM1
- ISO / IEC 11801: Category OM1
- TIA / EIA 492 AAAF

Issue Date: September 2024
Supersedes: November 2023

OPTICAL SPECIFICATIONS

BANDWIDTH (OFL)

Attribute	Units	Specified Values
Overfilled Modal Bandwidth at 850 nm	MHz·km	≥ 200
Overfilled Modal Bandwidth at 1300 nm	MHz·km	≥ 500

ATTENUATION

Attribute	Units	Specified Values
Attenuation coefficient at 850 nm	dB/km	≤ 3.0
Attenuation coefficient at 1300 nm	dB/km	≤ 0.7

Numerical Aperture

Numerical aperture	0.275 ± 0.015
--------------------	---------------

MACROBENDING LOSS

Conditions	Wavelength	Units	Specified Values
Mandrel Radius = 37.5 mm, 100 Turns	850 / 1300 nm	dB	≤ 0.5 / ≤ 0.5

CHROMATIC DISPERSION

Attribute	Conditions	Units	Specified Values
Zero Dispersion Wavelength, λ_0		nm	1320 ≤ λ_0 ≤ 1365

BACKSCATTER CHARACTERISTICS ¹

Attribute	Conditions	Units	Specified Values
Point Discontinuity ²	850 nm, 1300 nm	dB	≤ 0.1
Irregularities over fibre length	850 nm, 1300 nm	dB	≤ 0.1
Reflections	-	-	Not allowed
Group Index of Refraction at 850 nm	-	-	1.496 (typical)
Group Index of Refraction at 1300 nm	-	-	1.491 (typical)

¹ OTDR measurement with 0.5 µs pulse width.

² Mean of bi-directional measurement

GEOMETRICAL SPECIFICATIONS

GLASS GEOMETRY

Attribute	Units	Specified Values
Core Diameter	µm	62.5 ± 2.5
Core non-Circularity	%	≤ 5
Core-Cladding Concentricity Error	µm	≤ 1.5
Cladding Diameter	µm	125 ± 1
Cladding non-Circularity	%	≤ 1

COATING GEOMETRY

Attribute	Units	Specified Values
Coating Diameter	µm	500 ± 15
Coating non-Circularity	%	≤ 5
Coating-Cladding Concentricity Error	µm	≤ 20

MECHANICAL SPECIFICATIONS

Proof Test ³

The entire spool length is subjected to a tensile proof stress ≥ 0.7 GPa (100 kpsi) ; 1% strain equivalent

³ Higher proof test available upon request

COATING PERFORMANCE

Attribute	Units	Typical Values
Average Coating Strip Force, unaged and aged ⁴	N	2
Peak Coating Strip Force, unaged and aged ⁴	N	1.3 to 8.9

⁴ Aging at 23°C, 30 days

FIBRE STRENGTH

Attribute	Units	Specified Values
Dynamic Tensile Strength (0.5 meter gauge length), unaged and aged ⁵	GPa	median > 3.8 (550 kpsi)
Dynamic Fatigue, unaged and aged ⁵	-	n _d ≥ 18

⁵ Aging at 85°C, 85% RH, 30 days

ENVIRONMENTAL SPECIFICATIONS

Environmental test	Test Conditions	Induced attenuation at 850, 1300 nm (dB/km)
Temperature Cycling	-60°C to +85°C	≤ 0.1
Temperature - Humidity Cycling	-10°C to +85°C, 4-98% RH	≤ 0.1
Water Immersion	30 days; 23°C	≤ 0.1
Dry Heat	30 days ; 85°C	≤ 0.1
Damp Heat	30 days; 85°C; 85% RH	≤ 0.1

OTHERS

Attribute	Specification
Length	Up to 6.6 km per spool
Coating	Acrylate Coating (Clear)

All measurements in accordance with ITU-T G650 recommendations

© PRYSMIAN GROUP 2024, All Rights Reserved
All sizes and values without tolerances are reference values. Specifications are for product as supplied by Prysmian: any modification or alteration afterwards of product may give different result. The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian. The information is believed to be correct at the time of issue. Prysmian reserves the right to amend this specification without prior notice. This specification is not contractually valid unless specifically authorized by Prysmian.