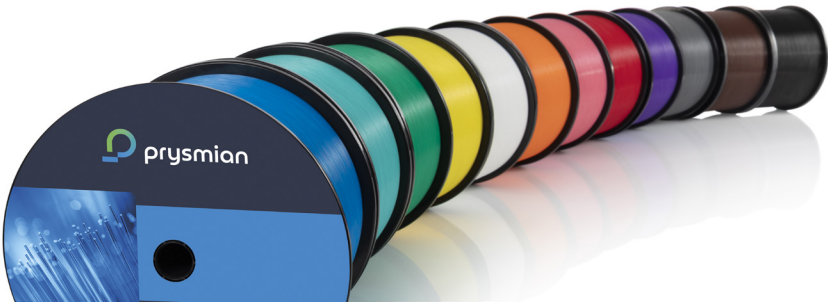




APPLICABLE STANDARDS

- IEC/EN 60793-2-50 type B-657.A2
- IEC/EN 60793-2-50 type B-652.D
- ITU-T Recommendation G.657.A2
- ITU-T Recommendation G.652.D

Issue Date: August 2024
Supersedes: November 2023

OPTICAL SPECIFICATIONS

ATTENUATION

Attribute	Units	1310 nm	1383 nm ¹	1460 nm	1550 nm	1625 nm
Attenuation	dB/km	≤ 0.35	≤ 0.35	≤ 0.25	≤ 0.20	≤ 0.21

¹ Including H2-aging according to IEC 60793-2-50, type B.1.3

ATTENUATION VS. WAVELENGTH

Wavelength Range (nm)	Reference λ (nm)	(dB/km)
1285 - 1330	1310	≤ 0.03
1525 - 1575	1550	≤ 0.02
1460 - 1625	1550	≤ 0.04

Point discontinuities

No point discontinuity greater than 0.05 dB at 1310 nm and 1550 nm.

ATTENUATION VARIATION VS. BENDING

Number of Turns	Wavelength (nm)	Induced Attenuation (dB)
10 turns on a R = 15 mm mandrel	1550	≤ 0.03
10 turns on a R = 15 mm mandrel	1625	≤ 0.1
1 turn on a R = 10 mm mandrel	1550	≤ 0.1
1 turn on a R = 10 mm mandrel	1625	≤ 0.2
1 turn on a R = 7.5 mm mandrel	1550	≤ 0.5
1 turn on a R = 7.5 mm mandrel	1625	≤ 1.0

MODE FIELD DIAMETER

Wavelength (nm)	Units	MFD
1310	μm	8.8 ± 0.4
1550	μm	9.8 ± 0.5

CUTOFF WAVELENGTH

Attribute	Specification
Cable Cutoff Wavelength (λ_{ccf})	≤ 1260 nm

CHROMATIC DISPERSION

Wavelength (nm)	Units	Chromatic Dispersion
In the interval 1285 – 1330	ps/[nm.km]	≤ 3.7
At 1550	ps/[nm.km]	≤ 18.5
At 1625	ps/[nm.km]	≤ 23.0
Zero Dispersion Wavelength, λ_0	nm	1300 - 1324
Slope (S0) at λ_0	ps/(nm ² · km)	≤ 0.092

POLARIZATION MODE DISPERSION (PMD)

Attribute	Units	Specified Values
PMD Link Design Value ²	ps/√km	≤ 0.06
Max. individual Fiber	ps/√km	≤ 0.1

² According to IEC 60794 –3, Ed 3 (Q=0.01%)

TYPICAL VALUES

Attribute	Units	1310 nm	1550 nm	1625 nm
Effective group index	-	1.467	1.468	1.468
Rayleigh Backscatter Coefficient for 1 ns pulse width	dB	- 79.1	- 81.4	- 82.2

GEOMETRICAL SPECIFICATIONS

GLASS GEOMETRY

Attribute	Units	Specified Values
Cladding Diameter	μm	125.0 ± 0.7
Core - Cladding Concentricity Error	μm	≤ 0.5
Cladding non-Circularity	%	≤ 0.7
Fiber Curl (radius)	m	≥ 4

COATING GEOMETRY

Attribute	Units	Specified Values
Coating Diameter	μm	200 ± 10
Coating - Cladding Concentricity Error	μm	≤ 10
Coating non-Circularity	%	≤ 5

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	Specified Values
Average Coating Strip Force, unaged and aged ⁴	N	$0.8 \leq F_{\text{avg-strip}} \leq 3$
Peak Coating Strip Force, unaged and aged ⁴	N	$0.8 \leq F_{\text{peak-strip}} \leq 8.9$

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	-	$n_d \geq 20$

⁵ Aging at 85°C, 85% RH, 30 days

ENVIRONMENTAL SPECIFICATIONS

Environmental test	Test Conditions	Induced attenuation at 1550, 1625 nm (dB/km)
Temperature Cycling	- 60°C to 85°C	≤ 0.05
Temperature - Humidity Cycling	- 10°C to 85°C, 4-98% RH	≤ 0.05
Water Immersion	14 days; 23°C	≤ 0.05
Dry Heat	30 days; 85°C	≤ 0.05
Damp Heat	30 days; 85°C; 85% RH	≤ 0.05

OTHERS

Attribute	Specification
Length	Up to 50.4 km per spool
Coating	Acrylate coating; ColorLock™ XS and 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.