

Product Type: G.655.D
Issue date: 07/09
Coating Type: Natural
Supersedes: --/--
Optical Specifications (Uncabled fiber)
Attenuation

	(dB/km)
Attenuation at 1383±3 nm	0.4
Attenuation at 1410 nm	0.32
Attenuation at 1450 nm	0.26
Attenuation at 1550 nm	0.22
Attenuation at 1625 nm	0.24

** Including H2-aging according to IEC 60793-2-50, type B.1.3*
Other values available on request.
Attenuation vs. Wavelength

Maximum attenuation change over the window from reference		
Wavelength range (nm)	Reference λ (nm)	(dB/km)
1525 - 1575	1550	≤ 0.02
1550 - 1625	1550	≤ 0.03

Point discontinuities

No point discontinuity greater than 0.05 dB at 1550 nm.

Attenuation with Bending

Number of Turns	Mandrel Radius (mm)	Wavelength (nm)	Induced Attenuation (dB)
1	16	1625	≤ 0.50
100	25	1550	≤ 0.05
100	30	1625	≤ 0.05

Mode Field Diameter

Wavelength (nm)	MFD (μm)
1550	9.6 ± 0.4

Chromatic Dispersion

Wavelength (nm)	(ps/(nm.km))
1530 - 1565	2.0 to 6.0
1565 - 1625	4.5 to 11.2

Polarization Mode Dispersion (PMD)

	(ps/ $\sqrt{\text{km}}$)
Max. PMD Link Design Value*	0.04
Max. Individual Fiber	0.1

** According to IEC 60794 -3, Ed 3 (Q=0.01%)*
Geometrical Specifications
Glass Geometry

Cladding Diameter	$125.0 \pm 0.7 \mu\text{m}$
Core/Cladding Concentricity Error	$\leq 0.5 \mu\text{m}$
Cladding Non-Circularity	$\leq 0.7 \%$
Fiber Curl (radius)	$\geq 4 \text{ m}$

Coating Geometry

Coating Diameter	$242 \pm 7 \mu\text{m}$
Coating/Cladding Concentricity Error	$\leq 12 \mu\text{m}$
Coating Non-Circularity	$\leq 5 \%$
Lengths	Standard lengths up to 25.2 km

Mechanical Specifications
Proof test

 The entire length is subjected to a tensile proof stress $> 0.7 \text{ GPa}$ (100 kpsi); 1% strain equivalent.

Tensile Strength

Dynamic tensile strength (0.5 meter gauge length):

 Aged** and unaged median $> 3.8 \text{ GPa}$ (550 kpsi)

** Aging at 85°C, 85% RH, 30 days

Dynamic and Static Fatigue

Dynamic fatigue, unaged and aged**	$n_d > 20$
Static fatigue, aged**	$n_s > 23$

Coating Performance

Coating strip force unaged and aged***:

- Average strip force:	1 N to 3 N
- Peak strip force:	1.2 N to 8.9 N

*** Aging:

- 0°C and 45°C
- 30 days at 85°C and 85% RH
- 14 days water immersion at 23°C
- Wasp spray exposure (Telcordia)

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

Typical Specifications

Dispersion at 1550 nm	4 ps/(nm.km)
Dispersion slope at 1550 nm	0.084 ps/(nm ² .km)
Zero Dispersion Wavelength (λ_0):	1500 nm
Effective area	72 μm^2
Effective group index @ 1550 nm	1.468
Effective group index @ 1625 nm	1.468

 Median Dynamic Tensile Strength 5.3 GPa (750 kpsi)
 (Aged at 85°C, 85% RH, 30 days; 0,5 m gauge length)