Corning® Vascade® EX2000 Optical Fiber

Product Information

CORNING

Vascade® EX2000 optical fiber is a silica-core fiber that combines ultra-low attenuation (0.149 dB/km nominal) with large effective area (115 µm² nominal) which is ITU-T G.654.B and G.654.D compliant. The result is a higher generalized signal to noise ratio (GSNR), an industry-accepted parameter that determines submarine wet plant performance. This fiber is designed for and deployed in a wide range of submarine applications globally.

To enable higher fiber count and higher-capacity submarine cable systems, Vascade EX2000 fiber is also available in a smaller 200 µm nominal coating diameter.

Optical Specifications

Attenuation

Wavelength (nm)	Maximum Value (dB/km)
1550	0.16

Macrobend Loss

Mandrel Radius (mm)	Number of Turns	Wavelength (nm)	Induced Attenuation* (dB)
25	1	1550	≤ 0.02
30	10	1550	≤ 0.02
30	100	1625	≤ 0.50

*The induced attenuation due to fiber wrapped around a mandrel of a specified radius.

Point Discontinuity

Wavelength (nm)	Point Discontinuity (dB)
1550	≤ 0.05

Cable Cutoff Wavelength (λ_{cc})

λ_{cc} ≤ 1520 nm

Mode Field Diameter

Wavelength (nm)	Mode Field Diameter (µm)
1550	11.9 ± 0.5

Dispersion

Wavelength (nm)	Dispersion Value [ps/(nm•km)]
1550	≤ 22

Polarization Mode Dispersion (PMD)

	Value (ps/√km)
PMD Link Design Value	≤ 0.08*
Maximum Individual Fiber PMD	≤ 0.1

*Complies with IEC 60794-3 (m = 24, Q = 0.1%)

The PMD link design value is a term used to describe the PMD of concatenated lengths of fiber (also known as PMD_Q). This value represents a statistical upper limit for total link PMD. Individual PMD values may change when fiber is cabled.

ColorPro® Identification Technology

Vascade EX2000 fiber is also available in colored variants, enabled by ColorPro® identification technology. Corning fibers with ColorPro® identification technology deliver better efficiency in cable manufacturing, simplify inventory management, and leverage an enhanced fiber product offering.

How to Order

Contact your sales representative, or call the Optical Fiber Customer Service Department:
Ph: 1-607-248-2000 (U.S./Can.)
+44-1244-525-320 (Europe)
Email: cofic@corning.com
Please specify the fiber type, attenuation, and quantity when ordering.

Dimensional Specifications

Glass Geometry

Fiber Curl	≥ 4.0 m radius of curvature
Cladding Diameter	125.0 ± 1.0 µm
Core-Clad Concentricity	≤ 0.8 µm
Cladding Non-Circularity	≤ 1.0%

Coating Geometry	Standard Offering	Smaller Coating Diameter Option
Coating Diameter	250 ± 5 µm	200 ± 5 µm
Coating-Cladding Concentricity	< 12 µm	< 10 µm

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 1550 nm (dB/km)
Temperature Dependence	-60°C to +85°C*	≤ 0.05
Temperature Humidity Cycling	-10°C to +85°C up to 98% RH	≤ 0.05
Water Immersion	23°C ± 2°C	≤ 0.05
Heat Aging	85°C ± 2°C	≤ 0.05

Operating Temperature Range: -60°C to +85°C
*Reference temperature = +23°C

Mechanical Specifications

Proof Test

The entire fiber length is subjected to a tensile stress ≥ 200 kpsi.

Length

Constituent fiber lengths available up to 50.4 km/spool. Spliced span configurations up to 100 km/spool.

Performance Characterizations

Characterized parameters are typical values.

Effective Group Index of Refraction (n_{eff})	1550 nm: 1.4634
Fatigue Resistance Parameter (n_d)	20
Rayleigh Backscatter Coefficient (for 1 ns Pulse Width)	1550 nm: -85 dB

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