



G.652.D

PureBand™ Submarine

Low Water Peak and Low Attenuation Single-Mode Optical Fiber



- **Low attenuation of 0.174 dB/km typical**
- **Compatible with standard G.652.D SMFs**
- **For cost effective regional repeated and unrepeated submarine systems**

General

Effective Area

Typical effective area at 1550 nm 83 μm^2

Attenuation

Typical attenuation at 1550 nm 0.174 dB/km

Core Glass

GeO₂-doped Silica

Optical Characteristics

Attenuation

Attenuation at 1550 nm (Individual) ≤ 0.182 dB/km

Attenuation at 1550 nm (Average in total quantity) *1) ≤ 0.177 dB/km

Point discontinuity at 1550 nm ≤ 0.05 dB

Mode Field Diameter (MFD)

MFD at 1550 nm 10.3 ± 0.5 μm

Chromatic Dispersion

Chromatic dispersion at 1550 nm 13.3-18.0 ps/nm/km

Chromatic dispersion slope at 1550 nm 0.052-0.068 ps/nm²/km

Cable Cutoff Wavelength (λ_{cc})

λ_{cc} ≤ 1260 nm

Polarization Mode Dispersion (PMD)

Individual fiber PMD *2) ≤ 0.1 ps/r-km

*1) Average attenuation will be applied only to a batch with the total quantity of 4,000 km or more.

*2) Measured on fiber with free tension. PMD values may change when fiber is cabled. This PMD value will be achieved when cabled properly.

This document states a standard specification. Upon request, alternative value offerings will be available.

Geometrical Characteristics

Glass Geometry

Core-cladding concentricity error ≤ 0.6 μm

Cladding diameter 125.0 ± 0.7 μm

Cladding non-circularity ≤ 1.0 %

Coating Geometry

Coating diameter (Natural) 245 ± 5 μm

Coating diameter (Colored) 250 ± 15 μm

Coating-cladding concentricity error ≤ 12 μm

Mechanical Characteristics

Proof Test

Proof stress level 2.0%
 (200 kpsi = 1.43 GPa)

Macrobending Loss

Bending radius	Number of turns	Wavelength	Induced Attenuation
30 mm	100	1550 nm	≤ 0.1 dB
30 mm	100	1625 nm	≤ 0.1 dB

Packaging

Delivery Length

5 – 100 km