



G.654.C

Z Fiber™ LL

Pure Silica Core Single Mode Optical Fiber



- **Ultra-low attenuation of 0.156 dB/km typical**
- **For regional to middle-reach repeatered (500 - 6,000 km) and unrepeatered (- 400 km) submarine systems**
- **200 μm coating diameter available**

General

Effective Area

Typical effective area at 1550 nm 85 μm²

Attenuation

Typical attenuation at 1550 nm 0.156 dB/km

Core Glass

Pure Silica

Optical Characteristics

Attenuation

Attenuation at 1550 nm (Individual) ≤ 0.166 dB/km

Attenuation at 1550 nm (Average in total quantity) *1) ≤ 0.159 dB/km

Point discontinuity at 1550 nm ≤ 0.05 dB

Effective Area

Effective area at 1550 nm 85 ± 10 μm²

Chromatic Dispersion

Chromatic dispersion at 1550 nm ≤ 20 ps/nm/km

Chromatic dispersion slope at 1550 nm ≤ 0.070 ps/nm²/km

Cable Cutoff Wavelength (λ_{cc})

λ_{cc} ≤ 1530 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 ≤ 0.8 μm

Cladding diameter 125.0 ± 1.0 μm

Cladding non-circularity ≤ 2.0 %

Coating Geometry

Coating diameter (Natural) 245 ± 10 μm

Coating diameter (Colored) 250 ± 15 μm

200 μm coating diameter Available

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