



G.654.C

# Z Fiber™ LL

Pure Silica Core Single Mode Optical Fiber



- **Ultra-low attenuation of 0.155 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 μm<sup>2</sup>

### Attenuation

Typical attenuation at 1550 nm      0.155 dB/km

### Core Glass

Pure Silica

## Optical Characteristics

### Attenuation

Attenuation at 1550 nm (Individual)      ≤ 0.164 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 μm<sup>2</sup>

### Chromatic Dispersion

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

Chromatic dispersion slope at 1550 nm      ≤ 0.070 ps/nm<sup>2</sup>/km

### Cable Cutoff Wavelength (λ<sub>cc</sub>)

λ<sub>cc</sub>      ≤ 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