CDSEI

G.652.D

DurableBand ™ 200μm

Low Water Peak Single-Mode Fiber

DurableBand™ 200μm low water peak single-model is applied in 1260-1625nm all band transmission systems, with low loss at 1383nm, fully utilizing E-band transmission. DurableBand™ 200μm exceeds the requirements of ITU-T G.652.D which is suitable for high-capacity and long-distance transmission. Smaller outer diameter size (customizable coating diameter of 180um-210um) effectively reduces the size and weight of optical cables, making it more suitable for miniaturized optical cables such as air blown micro cables. At the same time, it has the same glass outer diameter as conventional optical fibers and precise geometric dimension ensures low splicing loss and high splicing efficiency, excellent mechanical properties and environmental characteristics ensure stable performance of optical fibers in various usage environments.

Optical Characteristics

Attenuation	
1310nm	⩽0.35dB/km
1383nm	⩽0.33dB/km
1550nm	⩽0.21dB/km
1625nm	⩽0.23dB/km

Point Discontinuity	
1310/1550nm	⩽0.02dB

Cut-off Wavelength	
Cable cut-off wavelength (λcc)	⩽1260nm

Mode Field Diameter (MFD)	
MFD at 1310nm	9.2±0.4μm

Macro bending Induced Attenuation			
Bending radius	Number of Turns	Wavelength	Attenuation
30mm	100	1625nm	⩽0.10dB

Dispersion	
Zero-dispersion wavelength	1300~1324nm
Zero-dispersion slope	0.073~0.092ps/nm²/km
Dispersionat 1550 wavelength	⩽18.6ps/nm/km

Polarization Mode Dispersion	
Max. individual fiber PMD	$\leqslant 0.2ps/\sqrt{km}$
PMD link design value	$\leqslant 0.1ps/\sqrt{km}$

Geometric Characteristics

Geometrical Parameter	
Cladding diameter	125±0.7μm
Core/clad concentricity error	⩽0.5μm
Cladding non-circularity	⩽1.0%
Fiber curl R	⩾4m
Coating diameter	200±10μm
Coating-Cladding Concentricity	⩽10μm

Mechanical Characteristics

Proof Test	
Proof stress level	0.90GPa (1.3%, 130kpsi, 11.76N)

Strip Force	
Force (peak)	0.6N⩽F⩽8.9N
Force (average)	0.6N⩽F⩽5.0N

Tensile Strength	
Unaged (median; 0.5m)	⩾3.80GPa (⩾550kpsi)
Aged (median; 0.5m)	⩾3.14GPa (⩾460kpsi)

Dynamic fatigue parameters	
Fatigue	⩾20

Environmental Characteristics

Test items	Conditions	Induced Attenuation at 1550, 1625nm
Temperature	-60°C to + 85°C	⩽0.03dB/km
Water Immersion	+ 23°C/30Days	⩽0.03dB/km
Steady damp-heat	+ 85°C/85%RH/30Days	⩽0.03dB/km
Dry heat aging	+ 85°C/30Days	⩽0.03dB/km

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