

FutureGuide™-BIS-B-200

Compliant with ITU-T G.657.A2 / G.652.D

In urban optical fiber networks, efficient space utilization is essential, especially in access networks where high-density, small-diameter cables are increasingly required.

To address this need, FutureGuide™-BIS-B-200 employs advanced fiber coating technology to achieve a reduced coating diameter of 200 μm. This innovation maintains excellent bending performance while reducing the cross-sectional area by approximately 40%. FutureGuide™-BIS-B-200 enables more efficient use of available space and offers significant cost savings in cable manufacturing, transportation, and installation.

Of course, it also achieves low OH attenuation in compliance with ITU-T G.652.D.

Features

- 200 μm ultra-compact coating diameter.
- Excellent macro-bending performance (≤ 0.03 dB at 1550 nm) compliant with ITU-T G.657.A2.
- Compatible with G.652.D fibers for seamless splicing.
- Low OH attenuation compliant with ITU-T G.652.D

Customer's advantages

- The ultra-compact 200 μm coating diameter reduces the fiber's cross-sectional area by approximately 40%, enabling higher fiber counts and more compact cable designs.
- Ideal for FTTH, access networks, and data center applications where tight bends and limited space are common installation challenges

Optical Characteristics

Attenuation	
Attenuation coefficient at 1310 nm	≤ 0.35 dB/km
Attenuation coefficient at 1383 nm	≤ 0.34 dB/km *1
Attenuation coefficient at 1550 nm	≤ 0.20 dB/km
Attenuation coefficient at 1625 nm	≤ 0.22 dB/km
Attenuation vs. wavelength *2	
1285 – 1330 nm ref. λ of 1310 nm	$\alpha \leq 0.03$ dB/km
1525 – 1575 nm ref. λ of 1550 nm	$\alpha \leq 0.02$ dB/km
Macro-bending loss	
$\Phi=30$ mm, 10 turns at 1550 nm	≤ 0.03 dB
$\Phi=30$ mm, 10 turns at 1625 nm	≤ 0.1 dB
$\Phi=20$ mm, 1 turn at 1550 nm	≤ 0.1 dB
$\Phi=20$ mm, 1 turn at 1625 nm	≤ 0.2 dB
$\Phi=15$ mm, 1 turn at 1550 nm	≤ 0.5 dB
$\Phi=15$ mm, 1 turn at 1625 nm	≤ 1.0 dB

Cut off wavelength	
Cable cut-off wavelength	≤ 1260 nm
Chromatic dispersion	
Chromatic dispersion coefficient at 1285-1330 nm	≤ 3.5 ps/(nm·km)
Chromatic dispersion coefficient at 1550 nm	13.3 - 18 ps/(nm·km)
Chromatic dispersion coefficient at 1625 nm	17.2 - 22 ps/(nm·km)
Zero-dispersion wavelength	1300 - 1324 nm
Zero-dispersion slope	0.073 - 0.092 ps/(nm ² ·km)
Polarization mode dispersion (PMD) *3	
Uncabled fiber PMD coefficient	≤ 0.1 ps/ $\sqrt{\text{km}}$
Link design value PMD _Q	≤ 0.08 ps/ $\sqrt{\text{km}}$

*1. The attenuation at 1383nm after hydrogen aging in accordance with IEC60793-2-50

*2. The attenuation within the specified wavelength range is limited to a difference of α or less compared to the reference wavelength (ref. λ).

*3. This characteristic is guaranteed only under virtually tension-free conditions.



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Structural Characteristics

Mode field diameter at 1310 nm	8.6 ± 0.4 μm
Cladding diameter	125.0 ± 0.7 μm
Coating diameter (colored only)	190 - 210 μm
Core concentricity error	≤ 0.5 μm
Cladding non-circularity	≤ 0.7 %
Coating-Cladding concentricity	≤ 10 μm
Fiber curl radius	≥ 4.0 m

Mechanical Characteristics

Proof test *4	≥ 1.5 % (150 kpsi or 1.0 GPa)
Dynamic stress corrosion susceptibility parameter (n _d)	≥ 20
Coating strippability F	0.4 N ≤ F ≤ 8.9 N

*4. The product is subjected to tensile testing throughout its entire length.

Environmental Characteristics

	Attenuation Change at 1310, 1550, 1625 nm
Temperature dependence -60 to 85 °C	≤ 0.05 dB/km Ref. temp. 23 °C
Water immersion at 23 °C ± 2 °C	≤ 0.05 dB/km
Dry heat at 85 °C ± 2 °C	≤ 0.05 dB/km Ref. temp. 23 °C
Damp Heat 85 °C at 85 %R.H.	≤ 0.05 dB/km Ref. temp. 23 °C

Performance Characteristics

	Typical value
Zero dispersion wavelength	1315 nm
Zero dispersion slope	0.086 ps/(nm ² ·km)
Effective group index of refraction N _{eff} at 1310 nm	1.4681
Effective group index of refraction N _{eff} at 1550 nm	1.4687
Effective group index of refraction N _{eff} at 1625 nm	1.4691

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Note: If you require more detailed information, please contact us by scanning the QR code below.



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