

FutureGuide™-SR15E

Compliant with ITU-T G.657.A1

FTTx service is now becoming one of the main applications in the world. In the FTTx networks including inside buildings at the end of these networks, bend performance of optical fibers becomes more important due to dense distribution of cables and components.

FutureGuide™-SR15E fully complies with ITU-T G.657.A1 Recommendation and is specifically designed to excel in bend performance. While adhering to the G.657.A1 recommendation, it notably excels in bend performance and as good compatibility with existent optical networks, because it is also designed to be compliant with ITU-T G.652.D recommendation.

Features

- Improved outstanding macro-bend performance while complying with ITU-T G.657.A1.
- Full compliance with ITU-T G.652 recommendation and Zero(low)-water peak attenuation complying with ITU-T G.652.D

Customer's advantages

- Enables design of reduced-diameter and/or high fiber-count cable etc. for FTTx (access) networks applications.
- Replace with SR15E for more stable performance in the fields.
- Helps full-band CWDM by its zero(low)-water peak technology.

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	
Φ=30 mm, 10 turns at 1550 nm	≤ 0.25 dB
Φ=30 mm, 10 turns at 1625 nm	≤ 1.0 dB
Φ=20 mm, 1 turn at 1550 nm	≤ 0.75 dB
Φ=20 mm, 1 turn at 1625 nm	≤ 1.5 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/√km
Link design value PMD _α	≤ 0.08 ps/√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 in a virtually tension-free condition.



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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 (Uncolored)	240 ± 5 μm
Coating diameter (colored)	250 ± 10 μm
Core concentricity error	≤ 0.5 μm
Cladding non-circularity	≤ 0.7 %
Coating-Cladding concentricity	≤ 12 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	1.3 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	1.4680
Effective group index of refraction N _{eff} at 1550 nm	1.4686
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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