

FutureGuide™-SR15E
Compliant with ITU-T G.657.A1 / G.652.D

FutureGuide™-SR15E fully complies with the ITU-T G.657.A1 Recommendation and is specifically designed to excel in bend performance. As the G.657.A1 standard is fully compatible with G.652.D, SR15E ensures seamless integration with existing G.652.D-based networks.

It is manufactured using advanced VAD (Vapor-phase Axial Deposition) technology, which Fujikura continues to refine through ongoing research and development. The coating material has also been continuously improved over many years, resulting in enhanced environmental durability and bend performance.

Its enhanced bend performance supports compact cable designs and high fiber density. This makes SR15E ideal for installations in space-constrained environments such as data centers and buildings.

Features

- Designed with a narrower Mode Field Diameter (MFD) than standard G.652.D fibers, enabling exceptional bend performance.
- Maintains full compatibility with G.652.D, making it suitable for a wide range of network applications.
- For customers requiring reduced cable diameter, a 200 μm coating option is also available.

Customer's advantages

- Exceptional bend performance enables efficient cabling in space-constrained environments such as data centers and buildings.
- Suitable for use in reduced-diameter cables and high fiber-count designs, contributing to compact and flexible network layouts.
- Fully applicable to FTTx deployments where bend sensitivity is critical, ensuring stable and reliable performance in various installation conditions.

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 _Q	≤ 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 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 (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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