中国华能
CHINA HUANENG

Huaneng Taian Optic-Electric Technology Co.,Ltd Product Introduction

Product Name: G.657.A2 Bend-Insensitive Single-Mode Optical Fiber for Access Networks

1、Product description:

HuaNeng Taian Optic-Electric G.657.A2 bend-insensitive single-mode fiber for access networks has all the characteristics of G.652.D and G.657.A1 fiber and superior bending performance. Under bending conditions in the long wavelength band, the bending radius can be as small as 7.5mm. It is suitable for full-band transmission in 1260nm–1625nm.

2、Product Features:

(1) Specifications exceed the technical specifications of ITU-T G.657.A2 and IEC 60973-2-50 B6.

(2) Excellent bending performance, suitable for occasions with special requirements for bending radius.

(3) Completely compatible with the existing G.652.D fiber.

(4) Excellent PMD coefficient meets the long relay distance and high rate in transmission system.

3、 Product Application:

(1) Applicable to various optical cable structures. Especially suitable for tight buffer cable, butterfly drop cable, and the first choice for FTTH.

(2) Used in optical cables with small bending radius requirements.

(3) Can be used in short-distance flight equipment in the low-altitude

economy field, such as UAV optical fibers.

4、Product Standards

Optical Performance			
Performance	Conditions	Data	Units
Attenuation	1310 nm	≤0.35	[dB/km]
	1383nm	≤0.34	[dB/km]
	1550 nm	≤0.21	[dB/km]
	1625 nm	≤0.24	[dB/km]
Dispersion coefficient	1285-1339nm	≥-3.5 ≤3.5	[ps/(nm·km)]
	1271-1360nm	≥-5.3 ≤5.3	[ps/(nm·km)]
	1550 nm	≤18	[ps/(nm·km)]
	1625 nm	≤22	[ps/(nm·km)]
Zero dispersion wavelength		1312±12	[nm]
Zero dispersion slope		≤0.092	[ps/(nm2·km)]
Typical value		0.086	[ps/(nm2·km)]
Polarization mode dispersion	Maximum individual fiber	≤0.2	[ps/ √km]
	Link design value (M=20,Q=0.01%)	≤0.1	[ps/ √km]
	Typical value	0.04	[ps/ √km]
Cut-off wavelength	Cable cut-off wavelength	≤1260	[nm]
	Fiber cut-off wavelength	1150-1350	[nm]
Mode-field diameter	1310 nm	8.6±0.4	[μm]
	1550 nm	9.7±0.6	[μm]
Effective group index of refraction	1310 nm	1.4672	
	1550 nm	1.4683	
Point discontinuities	1310 nm	≤0.04	[dB]
	1550 nm	≤0.04	[dB]
Geometrical Performance			
Cladding diameter		125±0.7	[μm]
Cladding non-circularity		≤1.0	[%]
Secondary Coating diameter		245±10	[μm]
Secondary Coating eccentricity		≤10.0	[μm]
Coating non-circularity		≤6.0	[%]
Core/Cladding eccentricity		≤0.5	[μm]
Fiber curl radius		≥4	[m]
Delivery length		2.1- 50.4	[km/reel]
Environmental Behavior			
Temperature dependence induced attenuation	-60℃ to +85℃	≤0.03	[dB/km]
Water immersion dependence induced	23℃, for 30 days	≤0.03	[dB/km]

Damp heat dependence induced attenuation	85℃，85% relative humidity, for 30 days	≤0.03	[dB/km]
Dry heat aging induced attenuation	85℃，for 30 days	≤0.03	[dB/km]
Mechanical Behavior and Macro-bending Attenuation			
Proof test	Off-line	≥9.2	[N]
		≥1.0	[%]
		≥100	[kpsi]
Macro-bending induced loss	10 turns 15 mm radius，1550 nm	≤0.03	[dB]
	10 turns 15 mm radius，1625 nm	≤0.1	[dB]
	1 turn 10mm radius，1550 nm	≤0.1	[dB]
	1 turn 10 mm radius，1625 nm	≤0.2	[dB]
	1 turn 7.5 mm radius，1550 nm	≤0.5	[dB]
	1 turn 7.5 mm radius，1625 nm	≤1.0	[dB]
Coating strip force	Typical average value	1.0-5.0	[N]
	Peak value	1.3-8.9	[N]
Dynamic fatigue parameter		≥20	