中国华能
CHINA HUANENG

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

Product Name: Optical Fiber Preform

1、Product Description:

The optical fiber preform is manufactured through a two-step process of VAD (Vapor Axial Deposition) core rod and OVD (Outside Vapor Deposition) cladding. The main component of the preform is SiO_2 but mixed with F and Ge in specific areas. The preform with diameter 130-150mm is used for drawing SMF(single-mode optical fiber) that meet the standards of ITU-T G.652.B/D and ITU-T G.657.A1/A2/B3, etc.

2、Product Features:

(1) Stable refractive index profile, precise geometric dimensions, and extremely low loss characteristics.

(2) Key technical performance is superior to ITU-T and relevant national standards.

3、 Product Applications:

SMF manufacturing such as the entire series of G.652 and G.657 according customers' requirements.

4、Product Standards:

Geometric Properties of Optical Fiber Perform		
Outer diameter		130-150（±5）[mm]
Tolerance of outer diameter		≤5 [mm]
Effective length		≥1600 [mm]
Effective weight		≥45 [Kg]
Non-circularity		≤1 [%]
Core/Cladding eccentricity		≤0.5 [mm]
Bow		≤1.0 [mm/m]
Appearance Defect Performance of Optical Fiber Perform		
Core area		No defect
The number of bubbles allowed to exist in the cladding area of the prefabricated rod per meter, L is the bubble	L≤0.5 mm	/
	0.5 mm≤L≤1.0 mm	≤8
	1.0 mm≤L≤2.0 mm	≤4
	L>2.0 mm	0
Core/cladding interface		No obvious pollutants, no impurities, cracks, scratches, etc. (white impurities, spiral gas line, etc., have no effect on the drawing)
Optical fiber preform surface		Smooth surface, no scar, no damage
Main technical performance of drawn fiber products (conventional G.652.D)		
Attenuation at 1310 nm		≤0.35 [dB/km]
Attenuation at 1383 nm		≤0.34 [dB/km]
Attenuation at 1550 nm		≤0.21 [dB/km]
Attenuation at 1625 nm		≤0.24 [dB/km]
Chromatic dispersion at 1285-1339 nm		≤3.5 [ps/(nm·km)]
Chromatic dispersion at 1271-1360 nm		≤5.3 [ps/(nm·km)]
Chromatic dispersion at 1550 nm		≤18 [ps/(nm·km)]
Chromatic dispersion at 1625 nm		≤22 [ps/(nm·km)]
Zero dispersion wavelength		1312±12 [nm]
Zero dispersion slope		≤0.092 [ps/(nm2·km)]
Fiber cut-off wavelength		1150-1330 [nm]
Mode-field diameter at 1310 nm		9.2±0.4 [μm]
Mode-field diameter at 1550 nm		10.4±0.8 [μm]
Attenuation discontinuity at 1310 nm and 1550 nm		≤0.05 [dB]
Core/Cladding eccentricity		≤0.5 [μm]
Cladding non-circularity		≤1.0 [%]