G.657.A2 Bending Insensitive Single-mode Optical Fiber

Product Introduction

The bending insensitive single-mode optical fiber G.657.A2, is available in 200 μm & 242 μm diameters. Since dedicated high-performance acrylic composites are used for coating protection, the fiber still has outstanding bending loss characteristics while reducing the size. Small size optical fiber can save a lot of space occupancy of pipeline and increase the core capacity of cable, which is the best choice for pipeline network.

Performance Features

- Good bending loss characteristics, less bending loss.
- Smaller fiber sizes of 200 μm are available, and the design cross-sectional area of the cable is reduced by more than 30%.

Application Scenarios

- High density metropolitan area network and narrow space access network
- Blowing tiny cables
- FTTx

Product Specification

Parameter	Conditions	Units	Value
Optical			
Attenuation	1310nm	dB/km	≤ 0.350
	1383nm	dB/km	≤ 0.350
	1550nm	dB/km	≤ 0.210
	1625nm	dB/km	≤ 0.230
Attenuation vs. Wavelength	1310nm VS. 1285-1330nm	dB/km	≤ 0.05
	1550nm VS. 1525-1575nm	dB/km	≤ 0.04
Zero Dispersion Wavelength	—	nm	1300 - 1324
Zero Dispersion Slope		ps/(nm^2 ·km)	≤ 0.092
Polarization Mode Dispersion	—	ps/√km	≤ 0.2
Cut-off Wavelength λ_{cc}-Cable	—	nm	≤ 1260
Mode Field Diameter (MFD)	1310nm	μm	8.6±0.4
	1550nm	μm	9.6±0.5
Attenuation Discontinuity	1310nm	dB	≤ 0.03
	1550nm	dB	≤ 0.05

Geometrical			
Cladding Diameter		μm	125±0.7
Cladding Non-Circularity		%	≤ 0.8
Core/Cladding Concentricity Error		μm	≤ 0.5
Coating Diameter (Uncolored)		μm	245±10（standard）
			200±10（optional）
Coating/Cladding Concentricity Error		μm	≤ 12.5
Curl		m	≥ 4
Environmental (1550nm, 1625nm)			
Temperature Cycling	-60℃ to +85℃	dB/km	≤ 0.05
High Temperature & High Humidity	85℃, 85% RH, 30days	dB/km	≤ 0.05
Water Immersion	23℃, 30days	dB/km	≤ 0.05
High Temperature Aging	85℃, 30days	dB/km	≤ 0.05
Mechanical			
Proof Stress	—	GPa	0.69
		kpsi	100
Coating Strip Force *	Peak	N	1.3 - 8.9
	Average	N	1.0 - 5.0
Tensile Strength	F_k=50%	GPa	≥ 4.00
	F_k=15%	GPa	≥ 3.20
Dynamic Fatigue (N_d)	—	—	≥ 20
Macrobending Loss			
Ø30 mm×10 t	1550nm	dB	≤ 0.03
	1625nm	dB	≤ 0.1
Ø20 mm×1 t	1550nm	dB	≤ 0.1
	1625nm	dB	≤ 0.2
Ø15 mm×1 t	1550nm	dB	≤ 0.4
	1625nm	dB	≤ 0.8
* When the coating diameter is 200±10, the peak peeling force of the coating is 0.6-8.9N, and the average is 0.6-5.0N.			