

Description

CONNECSYS 9/125µm single-mode optical fiber is a matched cladding single-mode optical fiber which comprehensively optimized for the performance at the 1310nm and 1550nm operating wavelengths. The optical fiber complies with the ITU-T Recommendation G.652.B Optical Fiber Specification.

Characteristics	Conditions	Specified Values
Optical Characteristics		
Attenuation	1310 nm	≤ 0.34 dB/km
	1550 nm	≤ 0.20 dB/km
	1625 nm	≤ 0.24 dB/km
Attenuation vs. Wavelength	1285 – 1330 nm	≤ 0.03 dB/km
Max. α difference	1525 – 1575 nm	≤ 0.02 dB/km
Dispersion Coefficient	1285 – 1340 nm	≥ -3.5 ≤ 3.5 ps/(nm·km)
	1550 nm	≤ 18 ps/(nm·km)
	1625 nm	≤ 22 ps/(nm·km)
Zero Dispersion Wavelength		1312 ± 12 nm
Zero Dispersion Slope		≤ 0.091 ps/(nm ² · km)
Typical Value		0.086 ps/(nm ² · km)
Polarization Mode Dispersion (PMD)		
Maximum Individual Fiber		≤ 0.2 ps/√km
Link Design Value (M=20; Q=0.01%)		≤ 0.1 ps/√km
Cable Cut Off Wavelength λ _{cc}		≤ 1260 nm
Mode Field Diameter (MFD)	1310 nm	9.2 ± 0.4 µm
	1550 nm	10.4 ± 0.5 µm
Effective Group Index of Refraction (N _{eff})	1310 nm	1.466
	1550 nm	1.467
Point Discontinuities	1310 nm	≤ 0.05 dB
	1550 nm	≤ 0.05 dB
Geometrical Characteristics		
Cladding Diameter		124.8 ± 1.0 µm
Cladding Non-Circularity		≤ 1.0 %
Coating Diameter		245 ± 7 µm
Coating – Cladding Concentricity Error		≤ 12.0 µm
Coating Non-Circularity		≤ 6.0 %
Core – Cladding Concentricity Error		≤ 0.6 µm
Curl (Radius)		≥ 4 m
Environmental Characteristics		
@ 1310 nm, 1550 nm & 1625 nm		
Temperature Dependence Induced Attenuation at	-60°C to +85°C	≤ 0.05 dB/km
Temperature - Humidity Cycling Induced Attenuation at	-10°C to +85°C, 98% RH	≤ 0.05 dB/km
Water Soak Dependence Induced Attenuation at	23°C, for 30 Days	≤ 0.05 dB/km
Damp Heat Dependence Induced Attenuation at	85°C & 85% RH, 30 Days	≤ 0.05 dB/km
Dry Heat Aging at	85°C	≤ 0.05 dB/km
Mechanical Specifications		
Proof Test	Off Line	≥ 9.0 N; ≥ 1.0 %; ≥ 100 kpsi
Macro – Bend Induced Attenuation		
100 Turns Around a Mandrel of 50 mm Diameter	1310 nm & 1550 nm	≤ 0.05 dB
100 Turns Around a Mandrel of 60 mm Diameter	1625 nm	≤ 0.05 dB
Coating Strip Force	Typical Average Force	1.7 N
	Peak Force	≥ 1.3 N ≤ 8.9 N
Dynamic Stress Corrosion Susceptibility Parameter nd		≥ 20 nd

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