Single Mode 9/125 G657A

This single mode fiber encompasses all the features of G652D fiber and provides good resistance to macro-bending. It has low macro-bending sensitivity and low water-peak level. It is comprehensively optimized for use in O-E-S-C-L band (1260 -1625 nm). It offers good resistance to additional losses due to low macro bending in the 1600 nm wavelength region. This not only supports L-band applications but also allows for easy installation without excessive care when storing the fiber, for example, in splicing cassettes. For cable use inside buildings, the fiber supports installation with small cable bending radii and compact organizers. The bending induced loss at 1625 nm no more than 0.5 dB for one wind with 10 mm radius. The single mode fiber meets or exceeds the ITU-T Recommendation G.652.D/G.657.A including the IEC 60793-2-50 type B1.3 Optical Fiber Specification.

Optical Characteristics For Single Mode 9/125 µm (G657A)

CHARACTERISTIC		CONDITION	SPECIFIC VALUE	UNIT
Optical characteristics				
Attenuation		1310 nm	≤0.35	[dB/km]
		1383 nm(after H2-aging)	≤0.35	
		1460 nm	≤0.25	
		1550 nm	≤0.21	
		1625 nm	≤0.23	
Attenuation vs. Wavelength Max. α difference		1285-1330 nm	≤0.03	[dB/km]
		1525-1575 nm	≤0.02	
Dispersion coefficient		1285-1340 nm	≥-3.4 ≤3.4	[ps/(nm.km)]
		1550 nm	≤18	
		1625 nm	≤22	
Zero dispersion wavelength			1300~1324	[nm]
Zero dispersion slope			≤0.092	[ps/(nm².km)]
Zero dispersion slope typical value			0.086	[ps/(nm².km)]
PMD	Maximum Individual Fiber		≤0.10	[ps/√km]
	Link Design Value(M=20,Q=0.01%)		≤0.06	
	Typical value		0.04	
Cable cutoff wavelength λcc			≤1260	[nm]
Mode field diameter (MFD)		1310 nm	8.4~9.3	[µm]
		1550 nm	9.3~10.3	[µm]
Effective group index of refraction (Neff)		1310 nm	1.466	
		1550 nm	1.467	
Point discontinuities		1310 nm	≤0.05	[dB]
		1550 nm	≤0.05	[dB]
Macro bending induced loss 10 turns@30mm diameter		1550 nm	≤0.25	[dB]
Macro bending induced loss 10 turns@30mm diameter		1625 nm	≤1.0	[dB]
Macro bending induced loss 1 turns@20mm diameter		1550 nm	≤0.75	[dB]
Macro bending induced loss 1 turns@20mm diameter		1625 nm	≤1.5	[dB]
Geometrical characteristics				
Cladding diameter			125.0±0.7	[µm]
Cladding non circularity			≤0.7	[%]
Coating diameter			245±5	[µm]
Coating/cladding concentricity error			≤12.0	[µm]
Coating non circularity			≤6.0	[%]
Core/cladding concentricity error			≤0.5	[µm]
Curl (radius)			≥4	[m]
Delivery Length			2.1 to 50.4	[km/reel]
Environmental Characteristics		1310 nm, 1550 nm & 1625 nm		
Temperature dependence induced attenuation		- 60℃ to +85℃	≤0.05	[dB/km]
Temperature humidity cycling induced attenuation		-10℃ to +85℃, 98% RH	≤0.05	[dB/km]
Damp heat dependence induced attenuation		85℃ and 85% RH, for 30days	≤0.05	[dB/km]
Water soak dependence induced attenuation		23℃,for 30days	≤0.05	[dB/km]
Dry heat aging		85℃	≤0.05	[dB/km]
Mechanical Characteristics				
Proof test		Off line	≥9.0	[N]
			≥1.0	[%]
			≥100	[Kpsi]
Coating Strip Force		Typical Average	1.5	[N]
		Peak	≥1.3 & ≤8.9	[N]
Dynamic Stress corrosion susceptibility Parameter			≥27	