Fiberdyne Labs, Inc. G.652.D Single-mode Low Water Peak Fiber Minimum Specifications

Part Number Designator		**A1, A2, A3, or A4**	
ITU-T Compliance	**Meets or exceeds ITU recommendations for G.652.D and the IEC60793-2-50 type B1.3 Optical Fiber Specification**		
Characteristics	**Conditions**	**Specified Values**	**Units**
	Optical Characteristics		
Attenuation	1310 nm	≤ 0.34	[dB / km]
	1383 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. Difference	1525 ~ 1575 nm	≤ 0.02	[dB / km]
Dispersion Coefficient	1285 ~ 1340 nm	≥ -3.4 ≤ 3.4	[ps / (nm^2 *km)]
	1550 nm	≤ 18	[ps / (nm^2 *km)]
	1625 nm	≤ 22	[ps / (nm^2 *km)]
Zero Dispersion Wavelength		1312 ± 12	[nm]
Zero Dispersion Slope		≤ 0.091	[ps / (nm^2 *km)]
Typical Value		0.086	[ps / (nm^2 *km)]
PMD			
Max. Individual Fiber		≤ 0.2	[ps / √km]
Link Design Value (M=20, Q=0.01%)		≤ 0.1	[ps / √km]
Typical Value		0.04	[ps / √km]
Cable cutoff wavelength λ cc		≤ 1260	[nm]
Mode Field Diameter (MFD)	1310 nm	8.8 ~ 9.6	[µm]
	1550 nm	9.9 ~ 10.9	[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		125.0 ± 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	(1310nm ,1550nm &1625nm)		
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]
Watersoak dependence			
Induced attenuation at	23°C, for 30 days	≤ 0.05	[dB / km]
Damp heat dependence			
Induced attenuation at	85°C and 85% RH, for 30 days	≤ 0.05	[dB / km]
Dry Heat Aging	85°C, for 30 days	≤ 0.05	[dB / km]
Mechanical Characteristics			
Proof test	off line	≥ 9.0	[N]
		≥ 1.0	[%]
		≥ 100	[kpsi]
Macro-bend induced attenuation			
1 turn around a mandrel of 32mm radius	1550nm	≤ 0.03	[dB]
100 turns around a mandrel of 50mm radius	1310nm & 1550nm	≤ 0.1	[dB]
100 turns around a mandrel of 60mm radius	1625nm	≤ 0.1	[dB]
Coating strip force	average force (typical)	1.7	[N]
	peak force	≥ 1.3 ≤ 8.9	[N]
Dynamic stress corrosion susceptibility parameter n_d (typical)		≥ 20	

