

## Applications

- All types of fiber cables with different structures
- High speed optical routes for Fiber-to-the-Home networks
- Cables with extreme low bending requirements
- Small-sized fiber cable and optical component

## Norms

Meets or exceeds the ITU-T Recommendation G.652.D/G.657.A1/G.657.A2/G.657.B2 Including the IEC 60793-2-50 type B1.3/B6.a1/B6.a2/B6.b2 Optical Fiber Specification.

## Characteristics

- Extremely high bending loss resistance in the 7.5 to 15mm bending radius range
- Full compatibility with all G.652 fibers for any applications
- Low PMD satisfying high bit-rate and long distance transmission requirements
- Low bending loss for highly demanding cable designs including ribbons
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
- High  $n_d$ -value satisfying long operational lifetime in minimum bend radius

Characteristics		Conditions	Specified Values	Units
<b>Optical Characteristics</b>				
Attenuation		1310nm	≤0.35	[dB/km]
		1383nm(after H <sub>2</sub> -aging)	≤0.35	[dB/km]
		1460nm	≤0.35	[dB/km]
		1490nm	≤0.25	[dB/km]
		1550nm	≤0.21	[dB/km]
		1625nm	≤0.23	[dB/km]
Attenuation vs. Wavelength		1285-1330nm, in reference to 1310nm	≤0.03	[dB/km]
Max. a difference		1525-1575nm, in reference to 1550nm	≤0.02	[dB/km]
Zero Dispersion Wavelength( $\lambda_0$ )		-	1300-1324	[nm]
Zero Dispersion Slope ( $S_0$ )		-	≤0.092	[ps/(nm <sup>2</sup> -km)]
PMD	Maximum Individual Fibre		≤0.1	[ps/√km]
	Link Design Value (M=20, Q=0.01%)		≤0.06	[ps/√km]
	Typical Value		0.04	[ps/√km]
Cable Cutoff Wavelength ( $\lambda_c$ )		-	≤1260	[nm]
Mode Field Diameter (MFD)		1310nm	8.4-9.	[μm]
		1550nm	29.3-10.3	[μm]
Effective Group Index of Refraction ( $N_{eff}$ )		1310nm	1,466	-
		1550nm	1,467	-
Point Discontinuities		1310nm	≤0.05	[dB]
		1550nm	≤0.05	[dB]
<b>Geometrical Characteristics</b>				
Cladding Diameter		-	125.0±0.7	[μm]
Cladding Non-Circularity		-	≤0.7	[%]
Coating Diameter		-	235-245	[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		-	Up to 50.4	[km/reel]
<b>Environmental Characteristics</b>				
Temperature Dependence Induced Attenuation		-60°C to +85°C	≤0.05	[dB/km]
Temperature-Humidity Cycling Induced Attenuation		1°C to +85°C, 98% RH	≤0.05	[dB/km]
Watersoak Dependence Induced Attenuation		23°C, for 30 days	≤0.05	[dB/km]
Damp Head Dependence Induced Attenuation		85°C and 85% RH, for 30 days	≤0.05	[dB/km]
Dry Heat Aging		85°C, for 30 days	≤0.05	[dB/km]
<b>Mechanical Specifications</b>				
Proof Test		-	≥9.0	[N]
		-	≥1.0	[%]
		-	≥100	[kpsi]
Macro-bend Induced Loss	10 Turns Around a Mandrel of 15mm Radius	1550nm	≤0.03	[dB]
	10 Turns Around a Mandrel of 15mm Radius	1625nm	≤0.1	[dB]
	1 Turn Around a Mandrel of 10mm Radius	1550nm	≤0.1	[dB]
	1 Turn Around a Mandrel of 10mm Radius	1625nm	≤0.2	[dB]
	1 Turn Around a Mandrel of 7.5mm Radius	1550nm	≤0.5	[dB]
	1 Turn Around a Mandrel of 7.5mm Radius	1625nm	≤1.0	[dB]
Coating Strip Force		typical average force	1.5	[N]
		peak force	1.3-8.9	[N]
Dynamic Fatigue Parameter ( $n_f$ )		-	≥20	-