BEND INSENSITIVE FIBRE

DESCRIPTION

Sharp angular bends are increasingly unavoidable in both internal and external building installations. To overcome the bend sensitivity of G657D fibre optic cable, the cable is often placed is ducts or conduits with large sweeping bends. The wide internal bends are more obvious in internal building corners (as shown in figure 1 below).

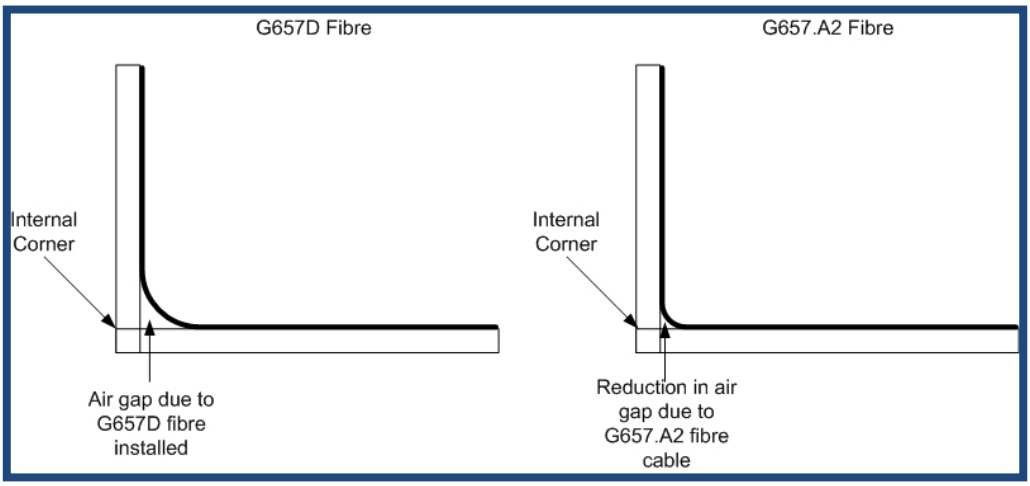

Figure 1: Bend Insensitive vs. Normal Fibre Internal Bending Radius

G657.A2 fibre offers enhanced bend performance down to 7.5 mm bend radii, is ideally suited for in-building and connectivity applications, and provides full compatibility and seamless splicing with the installed base of conventional G.652.D single-mode fibre.

G657.A2 Fibre is an excellent choice for Central Offices, backbone cabling, FTTH, OSP cabinets, fibre to the cell site, enterprise networks, or any application where very small bend diameters may be encountered.

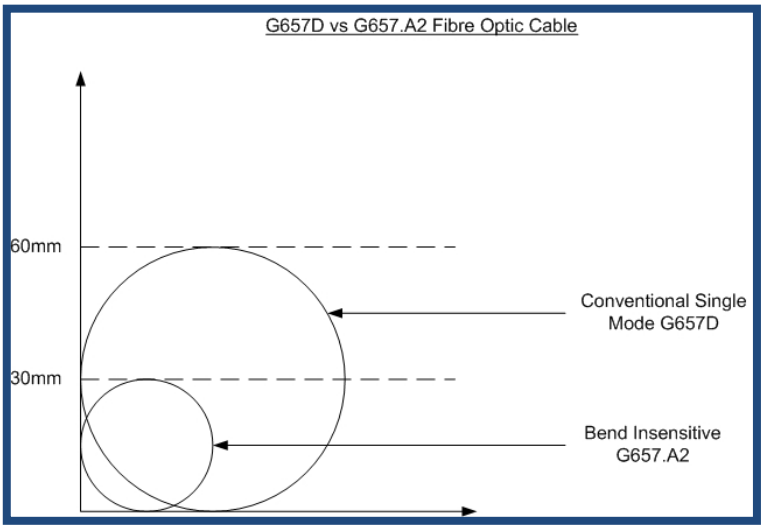

Figure 2: Bend Insensitive vs. G657 Fibre Bend Radii

Typical Performance		Units	Typical Rating (Characteristics)
Transmission Performance			
Attenuation at 1310nm		dB/km	≤0.35
Attenuation at 1550nm		dB/km	≤0.21
Attenuation at 1625nm		dB/km	≤0.23
Attenuation at 1383±3nm		dB/km	≤0.35
Attenuation discontinuity		dB	≤0.05
Attenuation-wavelength characteristic		dB/km	≤0.03
Zero dispersion wavelength		nm	1300~1324
Zero dispersion slope		ps/(nm^2.km)	≤0.090
Dispersion at 1288-1339nm		ps/(nm.km)	≤3.5
Dispersion at 1271-1360nm		ps/(nm.km)	≤5.3
Dispersion at 1550nm		ps/(nm.km)	≤18
PMD		ps/	≤0.1
Cut-off wavelength（λ_c）		nm	1150~1340
Cut-off wavelength（λ_{cc}）		nm	≤1260
Macro-bend Loss			
R15mm/10turns/1550nm		dB	≤0.03
R10mm/1turn/1550nm		dB	≤0.1
R7.5mm/1turn/1550nm		dB	≤0.5
R15mm/10turns/1625nm		dB	≤0.1
R10mm/1turn/1625nm		dB	≤0.2
R7.5mm/1turn/1625nm		dB	≤1
Geometric Performance			
Mode field diameter at 1310nm		μm	（8.6~9.2）±0.4
Cladding diameter		μm	125±0.7
Core/Cladding Concentricity Error		μm	≤0.5
Cladding Non-Circularity		%	≤1
Coating diameter（uncolored）		μm	243±7
Cladding/Coating Concentricity Error		μm	≤8
Mechanical Performance			
Proof test level		%	≥1.0
Fiber Strength		10m, Weibull lowest probability level:2.76GPa（15%）	
Dynamic corrosion parameter n_d			≥20
Curl radius		m	≥4
Strip force	Average value	N	1~5
	Peak value		1~8.9

Environment Performance	
Temperature performance（－60~＋85°C）	Additional attenuation ≤0.05dB/km is allowed at 1310nm and 1550nm.
Immersing performance（23±2°C， 30days）	
Humidity and heat performance （85±2°C，humidity degree over 85%，30days）	
Heat aging performance（85±2°C， 30days）	