

## Dispersion Shifted Fiber

## Product Information

Issue Date: 2004/5/25

**This specification conforms to the requirement of IEC 60793 B2 and ITU-T G.653.**

### FEATURES

Low dispersion and attenuation at 1550nm  
 Triangular pedestal index profile  
 Mechanically strippable acrylate coating with a 245  $\mu\text{m}$  nominal outside diameter  
 Primarily used in loose tube and slotted core cable designs  
 Optimum for use in optical amplifier systems

### OPTICAL CHARACTERISTICS

Characteristics	Conditions	Specified Values	Unit
Attenuation Coefficient	1310 nm	$\leq 0.5$	[ dB/km ]
	1550 nm	$\leq 0.25$	[ dB/km ]
Mode Field Diameter	1550 nm	7.4 ~ 9.0	[ $\mu\text{m}$ ]
Fiber Cut-Off Wavelength		< 1500	[ nm ]
Cable Cut-Off Wavelength		< 1500	[ nm ]
Zero Dispersion Wavelength		1525 ~ 1575	[ nm ]
Zero Dispersion Slope		$\leq 0.085$	[ ps/(nm <sup>2</sup> ·km) ]
Dispersion Coefficient	1525 – 1575 nm	$\leq 3.5$	[ ps/(nm·km) ]
PMD		$\leq 0.2$	[ ps/ $\sqrt{\text{km}}$ ]

### BACKSCATTER CHARACTERISTICS

Attenuation Directional Uniformity		$\leq 0.03$	[ dB/km ]
Attenuation Uniformity		$\leq 0.05$	[ dB ]
Reflections		Not Allowed	
Group Index of Refraction	1310 nm	1.4738	
	1550 nm	1.4732	

### PHYSICAL CHARACTERISTICS

Core / Cladding Concentricity Error		$\leq 0.8$	[ $\mu\text{m}$ ]
Cladding Diameter		125 $\pm$ 1	[ $\mu\text{m}$ ]
Cladding Non-Circularity		$\leq 2.0$	[ % ]
Coating Diameter (UV Curable Acrylate)		245 $\pm$ 10	[ $\mu\text{m}$ ]
Clad/Coat Concentricity Error		$\leq 10$	[ $\mu\text{m}$ ]
Fiber curl		$\leq 2$	[ m ]
Proof Test		100	[ kpsi ]
Bend Induced Attenuation at 1550 nm (100 turns around a mandrel of 60 mm diameter)		$\leq 0.1$	[ dB ]
Fatigue Resistance Parameter (nd)		20	
Average Coating Strip Force / Peak Coating Strip Force		$\geq 105 / 140$ (1.4)	[ g ] / (N)
Length (Typical)		12.6 ~ 25.2	[ km ]

### ENVIRONMENTAL CHARACTERISTICS

Temperature Dependence at 1310 nm and 1550 nm Induced Attenuation – 60°C to +85°C		$\leq 0.05$	[ dB/km ]
Watersoak Dependence at 1310 nm and 1550 nm Induced Attenuation at 20°C for 30 days		$\leq 0.05$	[ dB/km ]
Damp Heat Dependence at 1310 nm and 1550 nm Induced Attenuation at 85°C, 85%R.H., 30 days		$\leq 0.05$	[ dB/km ]

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