

## 50/125/500 $\mu$ m Multimode Optical Fiber

### Product Information

Issue Date: 2004/10/11

This specification conforms to the requirement of IEC 60793 A1a, IEC 11801OM2 and ITU-T G.651.

#### SPECIAL FEATURES FOR RIBBON CABLE APPLICATIONS

Cladding diameter, coating diameter and clad/coat concentricity error are specifically matched for ribbon cable.  
Fiber curls > 4m to ensure mass fusion splicing for ribbon cable.

#### OPTICAL CHARACTERISTICS

Characteristics	Conditions	Specified Values	Unit
Attenuation Coefficient	850 nm	$\leq 2.7$	[ dB/km ]
	1300 nm	$\leq 0.8$	[ dB/km ]
Numerical Aperture		$0.200 \pm 0.015$	
Bandwidth (*Higher bandwidth available upon request)	850 nm	$\geq 500$	[ MHz·km ]
	1300 nm	$\geq 500$	[ MHz·km ]

#### BACKSCATTER CHARACTERISTICS

Attenuation Directional Uniformity		$\leq 0.05$	[ dB/km ]
Attenuation Uniformity		$\leq 0.05$	[ dB ]
Group Index of Refraction	850 nm	1.481	
	1300 nm	1.476	

#### PHYSICAL CHARACTERISTICS

Core Diameter		$50.0 \pm 3.0$	[ $\mu$ m ]
Core Non- circularity		$\leq 5$	[ % ]
Core / Cladding Concentricity Error		$\leq 3.0$	[ $\mu$ m ]
Cladding Diameter		$125 \pm 1$	[ $\mu$ m ]
Cladding Non-Circularity		$\leq 2.0$	[ % ]
Coating Diameter		$245 \pm 10$	[ $\mu$ m ]
Clad/Coat Concentricity Error		$\leq 6$	[ $\mu$ m ]
Fiber curl		$\geq 4$	[ m ]
Proof Test		100	[ kpsi ]
Bend Induced Attenuation at 1300 nm (100 turns around a mandrel of 75 mm diameter)		$\leq 0.5$	[ dB ]
Coating Strip Force (Typical)		130	[ g ]
Length (Typical)		4.4~8.8	[ km ]

#### ENVIRONMENTAL CHARACTERISTICS

Temperature Dependence at 850 nm and 1300 nm Induced Attenuation – 60°C to +85°C		$\leq 0.2$	[ dB/km ]
Watersoak Dependence at 850 nm and 1300 nm Induced Attenuation at 20°C for 30 days		$\leq 0.2$	[ dB/km ]
Damp Heat Dependence at 850 nm and 1300 nm Induced Attenuation at 85°C, 85%R.H., 30 days		$\leq 0.2$	[ dB/km ]

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