

Sales Catalog of HNK Telecommunication Products

Fiber Optic Cable

Multimode 50/125 OM5

Wideband OM5 bend insensitive multimode fiber is a 50µm laser-optimized multimode fiber designed for short wavelength division multiplexing (SWDM) applications. Unlike traditional OM4 fiber with high bandwidth performance in a narrow band centered at 850nm, Wideband OM5 bend insensitive multimode fiber delivers OM4 performance in the 850-950nm window while maintaining compatibility with current multimode fibers. Wideband OM5 and multi-wavelength transceivers are a viable solution for future 100Gb/s and 400Gb/s multi-wavelength systems

Wideband OM5 bend insensitive multimode fiber complies with or exceeds ISO/IEC 11801 OM5 specification, IEC 60793-2-10 type A1a.4 optical fiber specification, and TIA/EIA-492AAAE detail specification.

Optical Characteristics for Multimode 50/125 µm (OM5)

CHARACTERISTIC	CONDITION	SPECIFIC VALUE	UNIT
Optical Characteristics			
OM5			
Attenuation	850 nm	≤2.4	[dB/km]
	953 nm	≤1.7	
	1300 nm	≤0.6	
Minimum Modal Bandwidth	850 nm	≥3500	[MHz.km]
	953 nm	≥1850	
	1300 nm	≥500	
Effective Modal Bandwidth	850 nm	≥4700	[MHz.km]
	953 nm	≥2470	
Application Support Distance on	1000 BASE-SX (850nm)	1100	[m]
	10G BASE-SR (850nm)	600	
	40&100Gigabit Ethernet (850nm)	200	
Numerical Aperture (NA)		0.200±0.015	
Group Index of Refraction (Typical)	850 nm	1.482	
	1300 nm	1.477	
Zero Dispersion Wavelength, λ_0		1297-1328	[nm]
Zero Dispersion Slope, S_0		$\leq 4(-103)/(840(1-(\lambda_0/840)^4))$	[ps/(nm ² .km)]
Macro Bending Induced loss 2 Turns @15mm Radius	850 nm	≤0.10	[dB]
	1300 nm	≤0.30	
Macro Bending Induced loss 2 Turns @7.5mm Radius	850 nm	≤0.20	[dB]
	1300 nm	≤0.50	
Geometrical Characteristics			
Core Diameter		50±2.5	[µm]
Cladding Diameter		125.0±0.8	[µm]
Core Non-Circularity		≤5.0	[%]
Cladding Non-Circularity		≤0.6	[%]
Coating Diameter		245±7	[µm]
Coating/Cladding Concentricity Error		≤10.0	[µm]
Coating Non-Circularity		≤6.0	[%]
Core/Cladding Concentricity Error		≤1.0	[µm]
Delivery Length		Up to 8.8	[km/reel]
Environmental Characteristics			
850 nm & 1300 nm			
Temperature Dependence (Induced Attenuation)	- 60°C to +85°C	≤0.10	[dB/km]
Temperature Humidity Cycling (Induced Attenuation)	-10°C to +85°C, 98% RH	≤0.10	[dB/km]
Damp Heat Dependence (Induced Attenuation)	85°C and 85% RH, for 30days	≤0.10	[dB/km]
Water Soak Dependence (Induced Attenuation)	23°C, for 30days	≤0.10	[dB/km]
Dry Heat Aging	85°C, for 30days	≤0.10	[dB/km]
Back Scatter Characteristics			
850 nm & 1300 nm			
Step (Mean of Bidirectional Measurement)		≤0.10	[dB]
Irregularities Over Fiber Length & Point Discontinuity		≤0.10	[dB]
Attenuation Uniformity		≤0.08	[dB/km]
Mechanical Characteristics			
Proof Test		≥9.0	[N]
		≥1.0	[%]
		≥100	[Kpsi]
Coating Strip Force	Typical Average Force	1.5	[N]
	Peak Force	≥1.3 & ≤8.9	[N]
Dynamic Stress Corrosion Susceptibility Parameter (N_d , Typical)		27	