



AKSH OPTIFIBRE LIMITED

An ISO 9001:2008 & ISO 14001:2004 Certified Company

Product: Aksh Multimode 50 micron Fibre- OM2 Grade

Product Description:

Aksh 50 micron Multimode Fibre-OM2 Grade is specified for use in high-speed laser based network protocols, as well as networks using LED as signal source. It supports fibre optic network protocols such as Gigabit Ethernet, ATM, Fast Ethernet and lower bit rate networks used in Local Area Networks (LAN), Storage Area Networks (SAN), high-speed parallel interconnects for central offices and local access networks.

International Standards:

Aksh 50 micron Multimode fibre- OM2 Grade complies or exceeds the ITU recommendation G.651 or the IEC 60793-2-10 Optical fibre specification. Each fibre is 100% quality measured according to IEC 60793.

Product Specification:

Material Properties:

Glass Composition

Core: Germania (GeO_2) doped Silica (SiO_2)

Cladding: Silica (SiO_2)

Primary Coating

2 layers of UV curable resin

Attenuation Coefficient:

At 850 nm	≤ 2.40 dB/km
At 1300 nm	≤ 0.70 dB/km
At 1383 nm	≤ 2.00 dB/km
Point Discontinuity	≤ 0.05 dB

Bandwidth vs. wavelength

At 850 nm	≥ 500 MHz.km
At 1300 nm	≥ 500 MHz.km

Numerical Aperture:

0.200 ± 0.015

Effective Group Refraction of Index (IOR)

At 850nm:	1.483
At 1300nm:	1.478

Dispersion:

Zero Dispersion Wavelength, λ_0	1295-1340 nm
Zero Dispersion slope	
$1295 \leq \lambda_0 \leq 1310$	≤ 0.105 ps/ nm^2 .km
$1310 \leq \lambda_0 \leq 1340$	$\leq 0.000375(1590-\lambda_0)$ ps/ nm^2 .km

Geometrical Specification:

Core Diameter	$50 \pm 2.5 \mu\text{m}$
Core Non-Circularity	$\leq 5.0 \%$
Cladding Diameter	$125 \pm 1.0 \mu\text{m}$
Core Clad Concentricity Error	$\leq 1.0 \mu\text{m}$
Cladding Non-Circularity	$\leq 1.0 \%$
Coating Diameter	$245 \pm 10 \mu\text{m}$
Coating-Cladding Concentricity Error	$\leq 10 \mu\text{m}$

Mechanical Characteristics:

Proof Test	1 %
Coating Strip force	$1.3 \leq F \leq 5.0$
Dynamic Fatigue Parameter	≥ 20
Static Fatigue Parameter	≥ 20
Dynamic Tensile Strength	
Unaged	$> 550 \text{ Kpsi (3.8 Gpa)}$
Aged (85 ⁰ C, 95 % RH for 30 days)	$> 440 \text{ Kpsi (3.0 Gpa)}$

Macro Bending Loss:

Mandrel Diameter (mm)	Number of Turns	Wavelength (nm)	Induced Attenuation (dB)
75	100	850	0.50
75	100	1300	0.50

Environmental Characteristics:

Environmental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60 ⁰ C to +85 ⁰ C	< 0.20
Water Immersion	$23^0 \pm 2^0\text{C}$	< 0.20
Heat Aging	$85^0 \pm 2^0\text{C}$	< 0.20
Damp Heat	85 ⁰ C at 85% RH	< 0.20

Shipping Information

Reel Dimension:	Fibre is available with following type of reel.
	Flange Diameter: 234.9 mm
	Traverse Width: 95.00 mm
	Bore Diameter: 25.45 mm
	Barrel Diameter: 152.4 mm

Reel Length:	Max. fibre length: 17.6 km
	<u>Length distribution</u>
	8.8 km or 17.6 km 100 %

Reel Identification:

The label with ID number, barcode of ID number, attenuation at 850 nm and 1300 nm, product code and fibre length shall be attached on each reel.