



## AKSH OPTIFIBRE LIMITED

TL:9000:2016, ISO 9001:2015, ISO 10002:2014, ISO 14001:2015 & ISO 45001:2018  
Certified Company

### ***Product: Aksh Non-Zero Dispersion Shifted Fibre***

#### ***Product Description:***

Aksh NZDS Fibre is a large effective area high capacity positive dispersion shifted single mode fibre. This fibre has low attenuation and moderate dispersion at 1550nm, which enables excellent performance in multi-channel Dense Wavelength Division Multiplex (DWDM) system. This fibre can be use to operate in C-band (1530 nm-1565 nm) as well as in L-band (1565-1625 nm).

#### ***International Standards:***

Aksh NZDS fibre complies or exceeds the ITU-T recommendation G.655 Optical fibre specification (Table A, B & C).

#### ***Product Specification:***

##### **Attenuation Coefficient:**

At 1550 nm	$\leq 0.21$ dB/km
At 1625nm	$\leq 0.23$ dB/km
At water Peak (at $1385 \pm 3$ nm)	$\leq 0.40$ dB/km
Point Discontinuity	$\leq 0.05$ dB

##### **Attenuation vs. wavelength:**

Between 1525-1565 nm	$\leq 0.22$ dB/km
Between 1565-1625 nm	$\leq 0.24$ dB/km

##### **Cable Cutoff Wavelength:**

$< 1450$  nm

##### **Mode Field Diameter at 1550nm:**

$9.6 \pm 0.4$   $\mu$ m

##### **Chromatic Dispersion:**

1530-1565 nm band:	2.0 -6.0 ps/nm.km
1565-1625 nm band:	4.5 -11.0 ps/nm.km

##### **Polarization Mode Dispersion at 1550nm:**

Individual Fibre	$\leq 0.15$ ps/ $\sqrt{\text{km}}$
Link Design Value	$\leq 0.10$ ps/ $\sqrt{\text{km}}$

##### **Geometrical Specification:**

Cladding Diameter	$125 \pm 0.7$ $\mu$ m
Core Clad Concentricity Error	$\leq 0.5$ $\mu$ m
Cladding Non-Circularity	$\leq 0.8$ %
Coating Diameter	$245 \pm 7$ $\mu$ m
Coating-Cladding Concentricity Error	$\leq 10$ $\mu$ m
Fibre Curl	$\geq 4$ m radius of curvature

**Mechanical Characteristics:**

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

**Macro Bending Loss:**

Mandrel Radius (mm)	Number of Turns	Wavelength (nm)	Induced Attenuation (dB)
16	1	1550	0.50
16	1	1625	1.00
30	100	1550	0.10
30	100	1625	0.20

**Environmental Characteristics:**

Environmental Test	Test Condition	Induced Attenuation 1550 nm & 1625 nm (dB/km)
Temperature Dependence	-60°C to +85°C	< 0.05
Temperature Humidity Cycling	-10°C to +85°C, 95% RH	< 0.05
Water Immersion	23° ± 2°C	< 0.05
Heat Aging	85° ± 2°C	< 0.05
Damp Heat	85°C at 85% RH	< 0.05

**Material Properties:**

Glass Composition	Core: Germania (GeO <sub>2</sub> ) doped Silica (SiO <sub>2</sub> ) Cladding: Silica (SiO <sub>2</sub> )
Primary Coating	2 layers of UV curable resin

**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: As agreed in PO.

**Reel Identification:**

The label with ID number, barcode of ID number, attenuation at 1550 nm and 1625 nm, product code and fibre length shall be attached on each reel.