

# ACSM2\_D

## ITU G.652D Single Mode Optical Fibre

Low attenuation in the peak OH band, low PMD.



### Dimensional Specifications

Cladding Diameter	125.0 +/- 1.0 $\mu\text{m}$
Colored Coating Outside Diameter	242 +/- 7 $\mu\text{m}$
Cladding Non-Circularity	$\leq 1\%$
Conceticity Error :	
Core/Cladding	$\leq 0.6 \mu\text{m}$
Cladding/ Coating	$\leq 12 \mu\text{m}$
Fiber CURL (radius)	$\geq 4$ mètres

### Mechanical Specifications

Attenuation with Bending (100 turns, 60 mm diameter )	$\leq 0.05$ dB at 1550 nm
Proof test of Colored Fiber	1% strain during 1s (0.69 $\text{GPa}$ )
Dynamic Tensile Strength	$\geq 45$ N
Dynamic Fatigue (nd)	$\geq 20$
Coating Strip Force	1.3 N < $F_{\text{moy}}$ < 8.9 N

### Environmental Specifications

Temperature Cycling Performance [-60 to 85°C]	$\leq 0.05$ dB/km at 1550 nm
Aging 30 days at 85°C	$\leq 0.05$ dB/km at 1550 nm
Aging : 30 days to 85°C and 85% relative Humidity	$\leq 0.05$ dB/km at 1550 nm

### Optical Specifications

Cutoff Wavelength cabled ( $\lambda_{\text{cc}}$ )	$\leq 1260$ nm
Mode Field Diameter $\lambda = 1310$ nm	9.0 +/- 0.4 $\mu\text{m}$
Mode Field Diameter $\lambda = 1550$ nm	10.2 +/- 1 $\mu\text{m}$

### Cabled Fibre Attenuation \*

$\lambda = 1310$ nm	$\leq 0.35$ dB/km
$\lambda = 1383$ nm**	$\leq 0.33$ dB/km
$\lambda = 1450$ nm	$\leq 0.26$ dB/km
$\lambda = 1550$ nm	$\leq 0.22$ dB/km
$\lambda = 1625$ nm	$\leq 0.25$ dB/km
Maximum attenuationchange over the window.	
1285 < $\lambda$ < 1310 nm	$\leq 0.035$ dB/km
1310 < $\lambda$ < 1330 nm	$\leq 0.03$ dB/km
1525 < $\lambda$ < 1550 nm	$\leq 0.03$ dB/km
1575 < $\lambda$ < 1550 nm	$\leq 0.03$ dB/km
Attenuation Uniformity @1310/1550nm	$\leq 0.1$ dB

### Chromatic Dispersion

Zero Dispersion Wavelength $\lambda_0$	1300-1320 nm
Typical value $\lambda_0$	1310 nm
Slope at $\lambda_0$ : $S_0$	$\leq 0.090$ ps/(nm <sup>2</sup> .km)
Typical value slope $S_0$	$\leq 0.086$ ps/(nm <sup>2</sup> .km)
Typical value of Chromatic Dispersion @ 1550 nm	17 ps/(nm.km)
@ 1285-1330 nm	2.8 ps/(nm.km)

### Effective Group Index

@ 1310 nm	1.464
@ 1550 nm	1.4645

### Polarization Mode Dispersion PMD

PMD (fiber)	$\leq 0.2$ ps.km <sup>-1/2</sup>
PMD Q (link)	$\leq 0.08$ ps.km <sup>-1/2</sup>

\* The optical transmission values are warranted for lengths of cable exceeding 1000 meters

\*\* Aged in 1% hydrogen at one atmosphere per IEC60793-2

Optical Fibres, ITU 652, EN 60793-1 & IEC/EN 60793-2 full compliant.