Single Mode Fiber

ITU-T G652(Tables A,B,C,D);
IEC Specifications 60793-2-50 Type B1.3

Type: Low Water Peak, Single Mode

CONSTRUCTION

Characteristic	Low water peak single mode optical fiber, which enables customers to construct high performance wired networks for voice , video, and/or data transmission. The fiber made of germanium doped silica core and a silica cladding is in compliance with ITU-T G.652A,B,C and D. A dual layer acrylate is coated over the cladding to provide high product reliability and allows easy splicing throughout the cable life. Its low water peak characteristics and excellent stability performace against hydrogen provide broad-range operational bandwith while maintaining fully compatibility with conventional SMF with higher proof testing , the fiber gives much tolerance in cabling and installation.
Type of primary coating	dual layer UV cured acrylate
Core material composition	germanium doped silica, no boron, no phosphorous
The optical fibres inside the cable do not contain splices.	

DIMENSIONS

mode field diameter @ 1310 nm	9.2 ± 0.4 µm
@ 1550 nm	10.4 ± 0.5 µm
Nominal core diameter	8.3 µm
Core/Clad concentricity error	≤ 0.4 µm
cladding diameter	125 ± 0.5 µm
cladding non-circularity	≤ 0.5 %
coating diameter (uncoloured fibre)	245 ± 5 µm
coating/cladding eccentricity	≤ 12 µm

OPTICAL PERFORMANCE

Attenuation	Typical Values	Max. Values
- @ 1310 nm	0.33-0.35 dB/km	0.40 dB/km
- @ 1550 nm	0.19-0.22 dB/km	0.25 dB/km
- @ 1625 nm	0.20-0.24 dB/km	0.40 dB/km
- @ 1383 nm	0.31-0.35 dB/km	0.40 dB/km

Chromatic dispersion	
- 1285 – 1330 nm	≤ 3.5 ps/(nm*km)
- 1525 – 1575 nm	≤ 18 ps/(nm*km)
- @ 1625nm	≤ 22 ps/(nm*km)
Polarization mode dispersion @ 1550 nm	≤ 0.1 ps/km$^{1/2}$
Zero dispersion slope	≤ 0.090 ps/nm^2/km
Cut-off wavelength (λcc)	≤ 1260 nm
Zero dispersion wavelength (λ_0)	$1300 < \lambda_0 < 1324$nm

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PERFORMANCE CHARACTERISTICS		
Effective group index of refraction	1,466	@1310 nm/1383 nm
	1,467	@1550 nm
	1,470	@1625 nm

MECHANICAL PROPERTIES		
prooftest entire length		1,2 %
macrobending sensitivity	(100 turns, mandrel 50 mm, 1550 nm)	≤ 0,05 dB/km
strippability; stripping force		1,3 – 8,9 N

ENVIRONMENTAL SPECIFICATIONS		
Test	Test Condition	Induced attenuation @1310, 1550 & 1625 nm
Temperature humidity cycling	-10 to + 85°C up to 98%RH	≤0,05 dB/km
Temperature dependen	-60 to + 85°C	≤0,05 dB/km