

Single Mode Fiber G.652.D

Specifications:

Fiber type G.652.D
OPK code D

Rev. 017-21/41

Fiber type	G.652.D
OPK code	D
Core	Germanium doped silica
Cladding	Silica, step index and matched clad type
Coating	Dual layers of UV-cured acrylate

Optical Characteristics

Attenuation coefficient Loose tube Cables (typical / max.)

at 1310 nm	0.32 / 0.36 dB/km
at 1550 nm	0.19 / 0.24 dB/km
at 1625 nm	0.22 / 0.26 dB/km

Attenuation coefficient Tight Buffered Cables (typical / max.)

at 1310 nm	0.35 / 0.40 dB/km
at 1550 nm	0.25 / 0.40 dB/km
Point of discontinuity at 1310 nm and 1550 nm	≤ 0.1 dB
Cable cut-off wavelength (λ_{cc})	≤ 1260 nm
Zero dispersion wavelength	1302 - 1322 nm
Zero dispersion slope	≤ 0.090 (ps/(nm ² /km))
Chromatic dispersion at 1285 ~ 1330 nm	≤ 3.5 ps/(nm.km)
Chromatic dispersion at 1550 nm	≤ 18.0 ps/(nm.km)
Chromatic dispersion at 1625 nm	≤ 22.0 ps/(nm.km)
Maximum individual fiber PMD	≤ 0.15 ps/Ökm
Fiber PMD link value	≤ 0.1 ps/Ökm
Effective group index of refraction at 1310 nm	1.467
Effective group index of refraction at 1550 nm	1.468

Effective group index of refraction at 1625 nm	1.468
Backscatter coefficient at 1310 nm	-79.2 dB
Backscatter coefficient at 1550 nm	-81.7 dB
Backscatter coefficient at 1625 nm	-82.5 dB

Geometrical Characteristics

Mode field diameter at 1310 nm	$9.2 \pm 0.4 \mu\text{m}$
Mode field diameter at 1550 nm	$10.4 \pm 0.5 \mu\text{m}$
Core/Cladding concentricity error	$\leq 0.5 \mu\text{m}$
Cladding diameter	$125.0 \pm 0.7 \mu\text{m}$
Cladding non-circularity	$\leq 0.7\%$
Primary coating diameter (uncoloured fibre)	$242 \pm 5 \mu\text{m}$
Primary coating diameter (coloured fibre)	$250 \pm 10 \mu\text{m}$
Fibre curl radius	$\geq 4.0 \text{ m}$
Coating-Cladding concentricity	$\leq 12 \mu\text{m}$

Macrobending loss

100 turns, mandrel diameter 50 mm at 1310 nm	$\leq 0.05 \text{ dB}$
100 turns, mandrel diameter 50 mm at 1550 nm	$\leq 0.05 \text{ dB}$
100 turns, mandrel diameter 60 mm at 1625 nm	$\leq 0.05 \text{ dB}$
1 turn, mandrel diameter 32 mm at 1550 nm	$\leq 0.05 \text{ dB}$

Mechanical Characteristics

Proof test level	$\geq 100 \text{ kpsi (1.0\% strain)}$
Coating strip force	$1.3 \sim 8.9 \text{ N}$
Dynamic fatigue resistance parameter	≥ 20

Typical attenuation is the value measured for at least 90% of the fibers in the cable.

OTDR measurement values can only be guaranteed for cable lengths of 1000 m and more.

Cable on the reel may show an discontinuity of the OTDR curve caused by winding of the cable on the reel.

