TECHNICAL SPECIFICATION

Distribution Cable

(2, 12, 24, 32, 48 Fibers)

(According to ITU-T G.652)

1. Optical Fiber

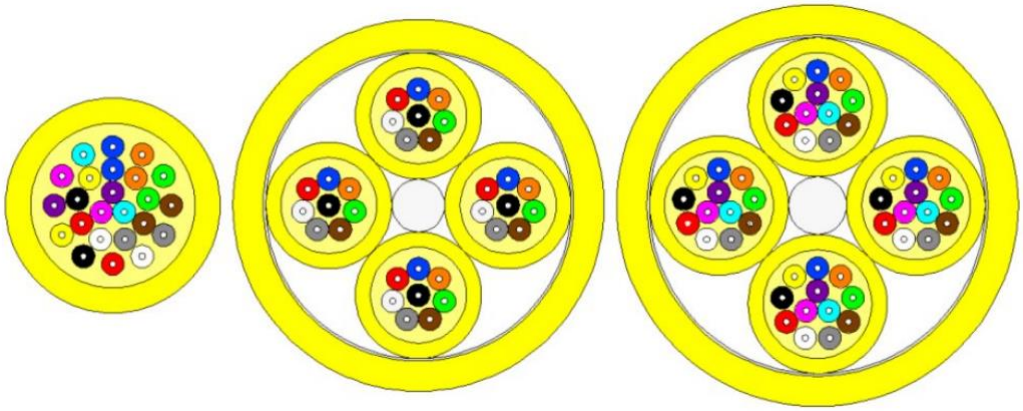
The optical fiber is made of high pure silica and germanium doped silica. The detail data of optical fiber performance are shown in the following table.
The performance of cabled single mode optical fiber **(ITU-T Rec. G.657.A)**

Item	Specification
1.Type of fiber	Single mode
2.Fiber material	Doped silica
3. Fiber Transmission Characteristics	
Attenuation coefficient @ 1310 nm @ 1383 nm @ 1550 nm @ 1625 nm	 ≤ 0.35 dB/km ≤ 0.31dB/km ≤ 0.21 dB/km ≤ 0.24 dB/km
1550nm Macrobending loss(10cycle@ϕ30mm)	≤ 0.03 dB
1625nm Macrobending loss(10cycle@ϕ30mm)	≤ 0.1 dB
1550nm Macrobending loss(1cycle@ϕ20mm)	≤ 0.1 dB
1625nm Macrobending loss(1cycle@ϕ20mm)	≤ 0.2 dB
Zero-dispersion wavelength	1302 ~ 1322 nm
Zero-dispersion slope	≤ 0.091 ps/(nm^2.km)
Chromatic dispersion @ 1288 ~ 1339 nm @ 1271 ~ 1360 nm @ 1550 nm @ 1625 nm	 ≤3.5 ps/(nm. km) ≤5.3 ps/(nm. km) ≤17.5 ps/(nm. km) ≤22 ps/(nm. km)
Fiber PMD	≤0.15 ps/km$^{1/2}$
(PMDQ,m=20,Q=0.01%) Fiber PMD link value	≤0.08 ps/km$^{1/2}$

Mode field diameter @ 1310 nm	9.0±0.4 um
Fiber cut-off wavelength	1150~1330nm
Cable cut-off wavelength	≤ 1260 nm
4.Fiber geometry characteristics	
Cladding diameter	125.0 ± 0.7 um
Core / Cladding concentricity error	≤ 0.5 um
Cladding non-circularity	≤1.0%
Primary coating diameter	244 ± 4um
Cladding non-circularity	≤3.0%
Coating/Cladding concentricity error	≤10
5.Fiber Mechanical Characteristics	
Fiber prooftest levels	≥ 1.02%
Fiber strip force peak value	1.3~8.9N
6.Fiber environmental characteristics	
Temperature dependence of attenuation at 1310nm and 1550nm between -60℃ and 85℃	≤ 0.03dB/km
Temperature humidity aging attenuation at 1310nm and 1550nm 85℃ and 85%RH	≤ 0.03dB/km
Water immision attenuation at 1310nm and 1550nm(23℃)	≤ 0.03dB/km
Accelerated temperature aging attenuation at 1310 and 1550nm	≤ 0.03dB/km

Distribution Cable

Profile View



Up to 2~48 fibers

Material

Item	Material
Fiber	G.657A2
Tight buffer	PVC
Strength member	Aramid yarn
Central strength member	FRP(32,48cores)
Outer sheath	LSZH

Cable Property

Number of cores	Diameter		Cable	Tensile strength		Crush resistance		Bending radius	
	Tight buffer	Cable	Weight	Long term	Short term	Long term	Short term	Static	Dynamic
	(mm)		Kg/km	(N)		(N/100mm)		—	
2	0.9	3.5	11	150	500	300	1000	10·D	20·D
12	0.9	6.0	32	200	660	300	1000	10·D	20·D
24	0.9	8.3	62	200	660	300	1000	10·D	20·D
32	0.9	15.0	172	400	1320	300	1000	10·D	20·D
48	0.9	16.0	200	400	1320	300	1000	10·D	20·D

Fiber Characteristic

Fiber type	Attenuation (Max)			
	850nm	1300nm	1310nm	1550nm
	(dB/km)			
G.657A2	–	–	≤0.40	≤0.30

Environmental Performance

Transportation & Storage	Installation	Operation	Remarks
-20℃ — +60℃	-10℃ — +50℃	-20℃ — +60℃	RoHS

SPEC. END