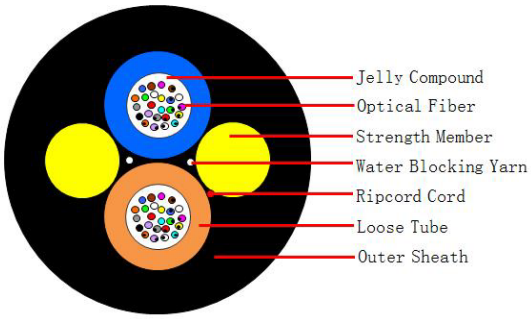
Central Loose Tube Aerial Self Supported, G.652D, FRP, Span 100m

Cable Design



Technical Data

No. of cable		Unit	4~6	8	12	24
Span		m	100			
Fiber Model		/	G.652D			
Loose Tube	Material	/	PBT			
	Diameter	mm	2.0±0.1		2.8±0.1	
	Thickness	mm	0.30±0.05		0.40±0.05	
	No. of tube	/	1	2	1	2
	Colour	/	Nature	Blue、Orang	Nature	Blue、Orang
Strength Member	Material	/	FRP			
	Diatmeter	mm	1.8±0.05			2.0±0.05
Outer Sheath	Material	/	PE			
	Color	/	Black			
Water Blocking	Material	/	Water Blocking Yarn			
Ripcord	Material	/	Nylon			
	No.	/	1			
Cable Diameter		mm	6.8±0.4	7.5±0.4	7.8±0.4	9.0±0.4
Cable Weight		kg/2 km	115	115	115	125
Allowable Tensile Strength		N	2400N			2800N
Allowable Crush Resistance		N/100mm	2000N/100mm			
Min. bending radius	Without Tension	mm	10.0×Cable-φ			
	Under Tension		20.0×Cable-φ			
Temperature range	Installation	℃	-20~+60			
	Transport&Storage		-40~+70			

	Operation		-40~+70

Fibre Color

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

Loose Tube

No.	1	2
Color	Blue	Orange

The properties of single mode optical fiber (ITU-T Rec. G.652.D)

Item	Specification
Fiber type	Single mode
Fiber material	Doped silica
Attenuation coefficient @ 1310 nm @ 1383 nm @ 1550 nm @ 1625 nm	 ≤ 0.35 dB/km ≤ 0.32 dB/km ≤ 0.21 dB/km ≤ 0.25 dB/km
Point discontinuity	≤ 0.05 dB
Cable cut-off wavelength	≤ 1260 nm
Zero-dispersion wavelength	1300 ~ 1324 nm
Zero-dispersion slope	≤ 0.092 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) ≤18 ps/(nm. km) ≤22 ps/(nm. km)
PMD_Q (Quadrature average*)	≤0.2 ps/km$^{1/2}$
Mode field diameter @ 1310 nm	9.2±0.4 um
Core / Clad concentricity error	≤ 0.5 um
Cladding diameter	125.0 ± 0.7 um
Cladding non-circularity	≤1.0%
Primary coating diameter	245 ± 10 um
Proof test level	100 kpsi (=0.69 Gpa), 1%

Temperature dependence 0oC~ +70oC @ 1310 & 1550nm	≤ 0.1 dB/km

Mechanical and thermal performances

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	- Load: 2400N(2800N) - Length of cable: about 50m	- Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: 2000N/100mm - Load time: 1min	- Loss change ≤ 0.1dB@1550nm - No fiber break and no sheath damage.
Impact Test IEC 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 5J	- Loss change ≤ 0.1dB@1550nm - No fiber break and no sheath damage.
Temperature Cycling Test IEC60794-1-2-F4	- Temperature step: +20°C→-40°C→+70°C →+20°C - Time per each step: 12 hrs - Number of cycle: 2	- Loss change ≤ 0.1 dB/km@1550 nm - No fiber break and no sheath damage.

Sheath Marking

The optical fiber drop cable shall have sequentially numbered length marking at intervals of approximately 1 meter. The starting number of ordering length for any coil shall begin whit zero meter. The accuracy of the measurement of lenth marking shall be held within the limits of ±1%.

a) Manufacturer's name
b) Type of wire
c) Year and month of manufacture
d) Length marking each meter along the wire