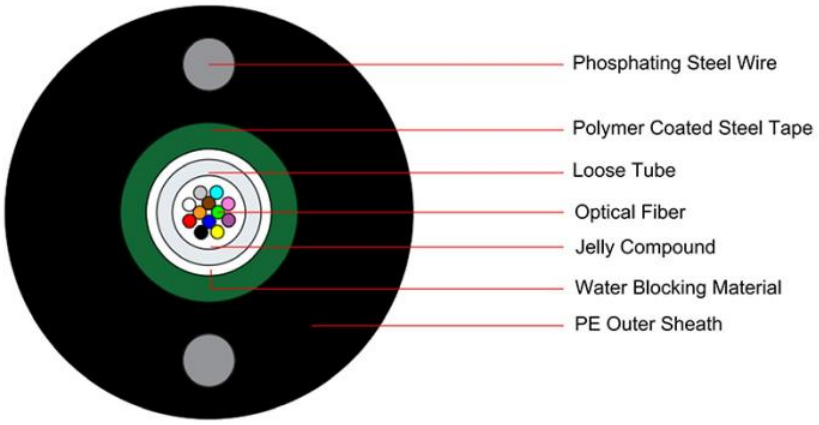
Central gel-filled loose tube metallic strength member armored cable GYXTW

Cable Design



Technical data

Fibers of Cable		2-8	10-12	14-24
Fiber Model		G.652D	G.652D	G.652D
Strength Member	Material	Phosphating steel wire	Phosphating steel wire	Phosphating steel wire
	Diameter（±0.05）mm	0.8*2	0.8*2	0.8*2
Loose Tube	Material	PBT	PBT	PBT
	Diameter（±0.1）mm	1.8	2.0	2.8
	Thickness（±0.05）mm	0.28	0.3	0.4
	Fibers/Tube	2-8	10-12	14-24
	The No. of tubes	1	1	1
Water Blocking Material		Water blocking Yarn	Water blocking Yarn	Water blocking Yarn
Outer Sheath	Material	MDPE	MDPE	MDPE
	Thickness（±0.1）mm	3.3	3.5	4.0
Cable Diameter（±0.2）mm		7.7	7.9	8.5
Cable Wetght（±10.0）kg/km		58	60	68

Fibre Color

No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
No.	13	14	15	16	17	18	19	20	21	22	23	24
Color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua

Note: The colors of the fibers from No. 12 to 24 are all circular chromatograms.

Loose Tube Color

No.	1
Color	Blue

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 ≤ 0.24 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)
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

Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	- Load: 2.0kn - Length of cable: about 50m	- Fiber strain ≤ 0.33% - Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: 2200N/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 IEC 60794-1-2-F1	- Temperature step: +20ºC→-40ºC→+70ºC →+20ºC - 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 length marking shall be held within the limits of ±1%.