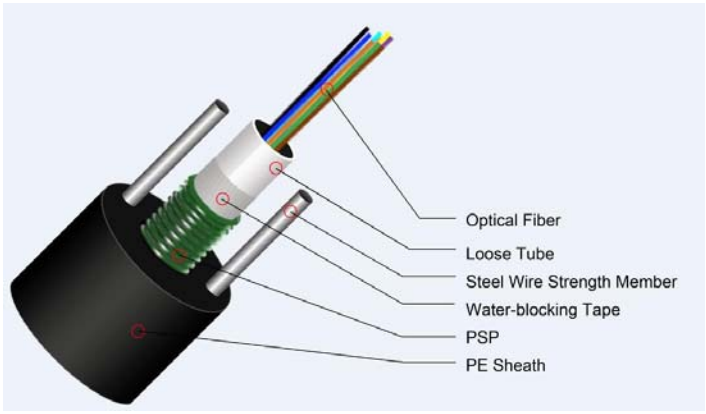
Unitube armored outdoor single mode Fiber Cable



1. Cable models:

Ref	Description
TS-04SM-1GAM	Fiber cable Single Mode 04 FO
TS-08SM-1GAM	Fiber cable Single Mode 08 FO
TS-12SM-1GAM	Fiber cable Single Mode 12 FO

No.	Items		Unit	Specification
1	Mode Field Diameter	1310nm	μm	9.2±0.4
		1550nm	μm	10.4±0.5
2	Cladding Diameter		μm	124.8±0.7
3	Cladding Non-Circularity		%	≤0.7
4	Core-Cladding Concentricity Error		μm	≤0.5
5	Coating Diameter		μm	245±5
6	Coating Non-Circularity		%	≤6.0
7	Cladding-Coating Concentricity Error		μm	≤12.0
8	Cable Cutoff Wavelength		nm	$\lambda_{cc} \leq 1260$
9	Attenuation (max.)	1310nm	dB/km	≤0.36
		1550nm	dB/km	≤0.22

2. Fiber Parameters

2.1. The properties of single mode optical fiber

Item	Specification
Fiber type	Single mode
Fiber material	Doped silica

Attenuation coefficient @ 1310 nm @ 1383 nm @ 1550 nm @ 1625 nm	≤ 0.35 dB/km ≤ 0.30 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)
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 0℃~ +70℃ @ 1310 & 1550nm	≤ 0.1 dB/km

2.2.Structural parameters:

Fiber count	Cable Diameter	Cable weight	Steel wire diameter	Tensile Strength	Crush Resistance	Bending Radius
	mm	kg/km ±3	mm	Long/short term	Long/short term	Static/Dynamic
			2 wire	N	N/100mm	mm
2~12	6.0	42	0.8	600/1500	300/1000	10D/20D
2~12	6.5	47	0.8	600/1500	300/1000	10D/20D
2~12	7.0	52	0.8	600/1500	300/1000	10D/20D
2~12	8.0	57	0.8	600/1500	300/1000	10D/20D
2~12	9.0	62	0.8	600/1500	300/1000	10D/20D

3. Fiber and Loose buffer tube Identification

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

3.1. Temperature range

working temperature	**-40℃~+60℃**
Storage/transportation temperature	**-50℃~+70℃**
Installation temperature	**-20℃~+60℃**

3.2. Sheath Marking

The optical fiber 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%.