



This spec. covers the requirements and constructional details for 4 fibers single-mode optical fiber cable, which consist of central loose tube for self-supporting serial application.

GYXTC8S Type cable description : Color-coded optical, jelly filled central loose tubes, water-blocking type, steel plastic laminate tape, galvanized steel stranded wire for messenger wire and outer PE jacket.

❖ **Fiber Material :** Core : Silica (SiO₂) doped with Germanium Dioxide (GeO₂)
Coating : Dual Layers of UV-Curable-Acrylate

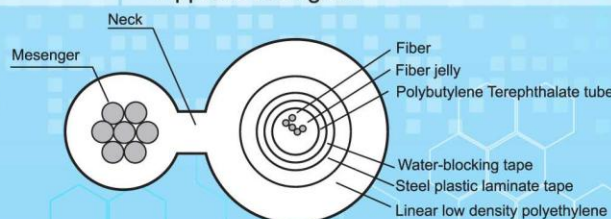
❖ **Cladding Configuration : Matched**

❖ **The optical and geometrical performance of the optical fiber shall be in accordance with table 1**

Items	Specification
Mode Field Diameter	9.3±0.7µm at 1310nm
Cladding Layer Diameter	125±1.0µm
Diameter of Coating Layer (uncolored)	245±10µm
Diameter of Coating Layer (colored)	250±15µm
Eccentricity of Cladding Layer	< 2.0%
Concentricity Error of Mode Field/Cladding Layer	≤0.8 µm
Concentricity Error of Cladding Layer/Coating Layer	≤12.5µm
Attenuation Constant	≤0.36dB/km at 1310nm ≤0.22dB/km at 1550nm
Cut-off Wavelength (λ _{cc})	≤1250nm
Wavelength of Zero Dispersion	1300 ~ 1324 nm
Zero Dispersion Slope	≤0.093ps/ (nm ² .km)
Absolute value of 1288 ~ 1339 Dispersion Coefficient	≤3.5ps/ (nm.km)
Absolute value of 1271~1360 dispersion coefficient	≤5.3ps/ (nm.km)
1550nm dispersion coefficient	≤18ps/ (nm.km)
PMD Coefficient	≤3ps/ (nm.km)
Effective Group index of Reflection (Neff)	1.4675 at 1310nm 1.4681 at 1550nm

❖ **The construction of the cable shall be in accordance with table 2**

Items	Description
Number of Fiber	4 fibers
Type of fiber	Single mode (ITU-T G.652)
Loose Tube	PBT (Polybutylene Terephthalate), Tube Diameter : Nom. 2.0 mm
Filling Compound in tube	Jelly
Wrapping Tape	Water-Blocking tape (To prevented the ingress of water)
Humidity-blocking layer	Steel plastic laminate tape, Thickness : Nom. 0.25 mm
Messenger Wire	Galvanized stranded steel wire Wire diameter : Nom. 0.86 mm, Number of stranded wires : 7 wires
Outer Jacket	Black LLDPE (Linear low density polyethylene) Thickness : ≥ 1.5mm (Calbe core), ≥ 1.0mm (Messenger wire) Neck height : Nom. 3.0 mm, Neck thickness : Nom, 2.0 mm
Cable Diameter	Nom. 7.0 mm (excluding messenger wire), Calbe height : 12.4 mm
Cable Weight	Approx. 105 kg/km



❖ **CABLE MARKING :** The completed cable shall have sequentially numbered length markers in meters at intervals of 1 meter along the outside of the cable jacket. Continuous sequential numbering shall be employed in a single length of cable and started from zero the inner end of the cable