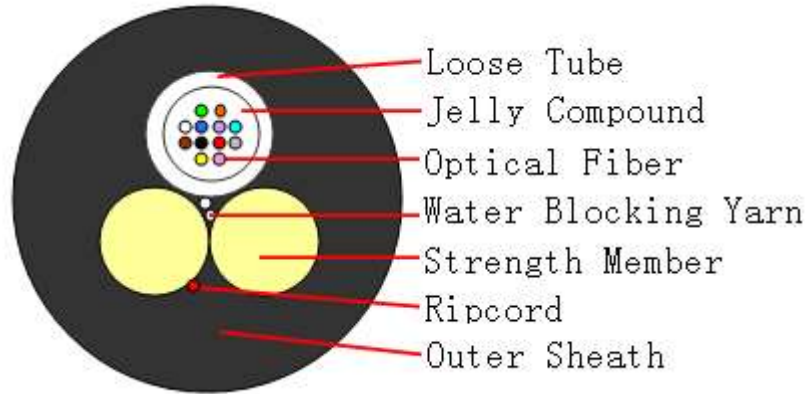


Central Loose Tube Aerial Self Supported, G.652D, FRP, PE

Cable Design



Technical data

| | | | |
|----------------------------|-----------------------|---------------------|--------------|
| No. of cable | | 2~6 | 8~12 |
| Span | | 80m | |
| Fiber Model | | G.652D | |
| Loose Tube | Material | PBT | |
| | Diameter | 1.5±0.1 mm | 2.0±0.1 mm |
| | Thickness | 0.25±0.05 mm | 0.32±0.05 mm |
| | NO. | 1 | |
| | Color | Natural | |
| Strength Member | Material | FRP | |
| | Diameter | 1.5±0.05 mm | |
| | NO. | 2 | 2 |
| Water Blocking | Material | Water Blocking Yarn | |
| Rip Cord | Material | Nylon | |
| | NO. | 1 | |
| Outer Sheath | Material | PE | |
| | Color | Black | |
| Cable Diameter | | 6.8±0.2 mm | |
| Cable Weight | | 39±5.0 kg/km | |
| Allowable Tensile Strength | | 2000N | |
| Allowable Crush Resistance | | 2200N/100mm | |
| Min. bending radius | Without Tension | 12.5×Cable- φ | |
| | Under Maximum Tension | 25.0×Cable- φ | |
| Temperature range (°C) | 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 |

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 | ≤ 0.35 dB/km |
| @ 1383 nm | ≤ 0.32 dB/km |
| @ 1550 nm | ≤ 0.21 dB/km |
| @ 1625 nm | ≤ 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 | ≤ 3.5 ps/(nm. km) |
| @ 1271 ~ 1360 nm | ≤ 5.3 ps/(nm. km) |
| @ 1550 nm | ≤ 18 ps/(nm. km) |
| @ 1625 nm | ≤ 22 ps/(nm. km) |
| PMD _Q (Quadrature average*) | ≤ 0.2 ps/km ^{1/2} |
| Mode field diameter @ 1310 nm | 9.2±0.4 μm |
| Core / Clad concentricity error | ≤ 0.5 μm |
| Cladding diameter | 125.0 ± 0.7 μm |
| Cladding non-circularity | ≤ 1.0% |
| Primary coating diameter | 245 ± 10 μm |
| Proof test level | 100 kpsi (=0.69 Gpa), 1% |
| Temperature dependence 0°C ~ +70°C @ 1310 & 1550nm | ≤ 0.1 dB/km |

Mechanical And Thermal Performances

| Item | Test Method | Acceptance Condition |
|--------------------------------------|---|---|
| Tensile Strength IEC 60794-1-2-E1 | - Load: 2000N - Length of cable: about 50m | - Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage. |
| Crush Test | - Load: 2000N/100mm | - Loss change ≤ 0.1dB@1550nm |

| | | |
|--|--|--|
| IEC 60794-1-2-E3 | - Load time: 1min | - 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 $\leq 0.1\text{dB}@1550\text{nm}$ - No fiber break and no sheath damage. |
| Temperature Cycling Test IEC60794-1-22-F1 | - Temperature step: +20°C → -40°C → +70°C → +20°C - Time per each step: 12 hrs - Number of cycle: 2 | - Loss change $\leq 0.1 \text{ dB/km}@1550 \text{ nm}$ - 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 with zero meter. The accuracy of the measurement of length marking shall be held within the limits of $\pm 1\%$.

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