

FIBER OPTIC CABLE PRODUCT

ADSS FIBER OPTIC DOUBLE JACKET



PRODUCT DESCRIPTION

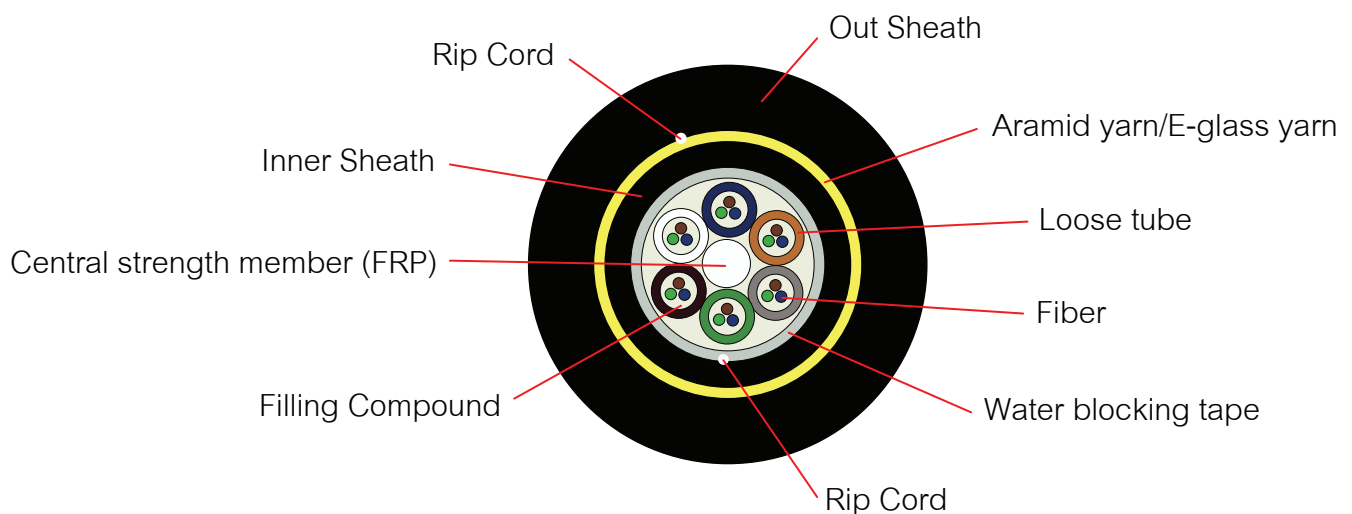
- The cable shall be used for aerial or duct installed.
- Provide additional mechanical protection.
- low friction installation.
- Excellent protection from environmental hazards.
- Single Mode.
- Color code fiber and Loose tube in standard

APPLICATION

- Environment with high electric field strength in the Power communication system and the area where frequent thunder happens.
- Ethernet LAN Network, CCTV, Network Camera, PLC.

STANDARD

- ATM, FDDI, FTTX, Fiber Channel, CATV, Communication
- ISO/IEC 11801:2007, ISO/IEC 11801:2011(Ed.2.2)
- ANSI/TIA/EIA-568-B.3, ANSI/TIA-568-C.3, ANSI/TIA-568.3-D, ANSI/ICEA 640
- Telcordia (Bellcore)GR-20CORE, GR-409-CORE
- ANSI/ICEA 596, ICEA696, IEC61034-2, IEC60754-2, IEC60793, IEC60794-1-2
- ITU G.652D, ITU-TG 657A2
- TIA/EIA-598-C (Rev.TIA/EIA-598-A), EIA-359-A.
- IEEE802.3z, IEEE802.3ae, IEEE802.3 (LAN, Ethernet Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet 40-100 Gbps)
- RoHS compliant
- TIS 2166
- Made in Thailand : MIT



CONSTRUCTION CABLE

| | | |
|-------------------------|--------------|--|
| Cable type | ADSS | |
| Element | - | 6 |
| Central strength member | Material | FRP (1.8mm) |
| Loose tube | Material | PBT |
| | Diameter | 2.0mm |
| | - | 6 fiber per tube, Thixotropic Jelly compound. |
| Protective tape | Material | Water-blocking tape and Water Swallable yarn |
| Strength member | Material | Aramid yarns/E-glass yarn |
| Outer Sheath | Material | UV-Proof Black HDPE (non Rodent Repellent / Rodent Repellent(LS2)) |
| | Thickness | 1.8 ± 0.2 mm |
| Inner Sheath | Material | Black PE |
| | Material | Water blocking tape |
| Overall diameter | Diameter | 13.4mm-16.4mm |
| Weight | - | Approx. 180kg/km |
| Tensile Load | Short term | 5000N |
| | Long term | 4000N |
| Bending radius | Short term | 20H |
| | Long term | 10H |
| Span | | 40-80m |
| Temperature Range | Operation | -40+70 °C |
| | Installation | -40+70 °C |
| | Storage | -40+75 °C |
| Pole mount | | 80 m and wind force 126 Km/hr |
| Rip Cord | Material | Polyester cords or Aramid yarn |
| | Number | 2 |

OPTICAL FIBER CHARACTERISTICS

| CATEGORY | DESCRIPTION | SPECIFICATIONS |
|----------------------------------|--------------|-------------------------------|
| Mechanical Specifications | | |
| Proof test level | | ≥1.0 % |
| Fiber curl radius | | ≥4.0 m |
| Peak coating strip force | | 1.3 - 8.9N |
| Relative humidity | | Up to 90%, no frost |
| Maximum Span Length | Sag 0.5% | 40 m. |
| | Sag 1.0% | 80 m. |
| Maximum Wind Velocity | | 80 m and wind force 126 Km/hr |
| Max. Tensile load | Installation | 5000 N. |
| | Operation | 4000 N. |
| Maximum Crush resistance | | 3,400 N./10 cm. |
| Minimum bending Radius | Installation | 20 x Diameter of Cable |
| | Operation | 10 x Diameter of Cable |

OPTICAL FIBER CHARACTERISTICS

| CATEGORY | DESCRIPTION | SPECIFICATIONS |
|--|--------------------|---|
| Optical Specifications | | ITU-T G.652D(SinglemodeOS2) 9/125 μm (OS2) ITU-T G651(Multimode) 62.5/125 μm , 50/125 μm |
| Attenuation | @1310nm | ≤0.35/≤0.33dB/km |
| | @1383nm | ≤0.35/≤0.31dB/km |
| | @1490nm | ≤0.24db/km |
| | @1550nm | ≤0.21/≤0.19dB/km |
| | @1625nm | ≤0.23/≤0.20dB/km |
| Attenuation discontinuity | | ≤0.05 dB |
| Attenuation vs. Wavelength | 1285 -1330 @1310nm | ≤0.05 dB/km |
| | 1525 -1575@1550nm | ≤0.05 dB/km |
| Zero dispersion wavelength | | 1300 -1324 nm |
| Zero dispersion slope | | ≤0.092 ps/(nm ² .km) |
| Dispersion | @1310nm | ≤3.5 ps/nm.km |
| | @1550nm | ≤18 ps/nm.km |
| Polarization mode dispersion(PMD) | | ≤0.1 ps/km ½ |
| Cable cutoff wavelength (λ _{cc}) | | ≤1260 nm |
| Effective group index of reaction | @1310nm | 1.4675 |
| | @1550nm | 1.4681 |
| Geometric Specifications | | |
| Mode field diameter | @1310nm | 9.2 ± 0.6 μm |
| | @1550nm | 10.4 ± 0.8 μm |
| Cladding diameter | | 125 ± 1 μm |
| Cladding non -circularity | | ≤1.0 % |
| Coating Material | Material | UV curable acrylate |
| | Diameter | 250 ± 5μm |
| Coating/Cladding concentricity error | | ≤12 μm |
| Core/Cladding concentricity error | | ≤0.5μm |
| Color Fiber Diameter | | 250 μm ± 15 μm (Colored) |
| Fiber proof-tested | | 0.69 GPa (1.0%, 100kpsi) in accordance with the optical fiber proof test by IEC 60793-1-30 |

IDENTIFICATION COLOR CODE OF FIBER AND LOOSE TUBE

The color code of the loose tubes and the individual fibers within each loose tube shall be in accordance TIA/EIA-598-C (Rev.TIA/EIA-598-A) and EIA-359-A

| NO. | FIBER COLOR | LOOSE TUBE COLOR |
|-----|-------------|------------------|
| 1 | Blue | Blue |
| 2 | Orange | Orange |
| 3 | Green | Green |
| 4 | Brown | Brown |
| 5 | Slate | Slate |
| 6 | White | White |
| 7 | Red | Red |
| 8 | Black | Black |
| 9 | Yellow | Yellow |
| 10 | Violet | Violet |
| 11 | Rose | Rose |
| 12 | Aqua | Aqua |

PACKING AND DRUM

The cable is rounded on a non-returnable wooden drum. Cable Packing 4000m/reel. Both ends of cable are securely fastened to drum and sealed with a shrinkable cap to prevent ingress of moisture. The following information shall be marked on the outer sheath of the cable at an interval of about 1 meter.

- Cable type and number of optical fiber
- Manufacturer name
- Month and Year of Manufacture
- Cable length
- Logo and Thai word

The sequential number of the cable length shall be marked on the outer sheath of the cable at an interval of 1meter \pm 1%

TEST REQUIREMENTS

| Item | Method | Acceptance criteria |
|---------------------------|---|--|
| Tensile test | - Max. tensile strength: 3000 N | -Fiber strain at maximum |
| IEC 60794-1-2-E1A | - Sample length: 100 meters | -Load max. 0.33 % |
| TIA/EIA-455-33A | - Times: 1 hour | -Attenuation increase ≤ 0.1 dB |
| Crush or Compression test | - Load: 2200 N | -No splits or cracks in the outer jacket |
| IEC 60794-1-2-E3 | - Time: 10 minutes | -Attenuation increase ≤ 0.10 dB |
| TIA/EIA-455-41A | - Length: 100 mm | |
| Impact test | - Impact energy: 450 g | - No splits or cracks in the outer jacket |
| IEC 60794-1-2-E4 | - Height: 1 meter | -Attenuation increase ≤ 0.10 dB (after the test) |
| TIA/EIA-455-25C | - Impact points: min.1 | |
| | - Number of impacts: 5 | |
| Torsion or Twist test | - 1 m cable length with 150 N weight | - No splits or cracks in the outer jacket |
| IEC 60794-1-2-E7 | - $\pm 180^\circ$,10 cycles | -Attenuation increase ≤ 0.10 dB (after the test) |
| TIA/EIA-455-85A | | |
| Repeated bending | - Radius = 20 × cable outer diameter | - No splits or cracks in the outer jacket |
| Cable bending Test | - 1m cable length with 150 N weight, 30 cycles | -Attenuation increase ≤ 0.10 dB (after the test) |
| IEC 60794-1-2-E6, | | |
| TIA/EIA-455-104A | | |
| IEC 60794-1-2-E11B | | |
| Temperature cycling test | - Temperature step: +20 °C -40 °C+70 °C-40 °C | -Attenuation variation for reference |
| IEC 60794-1-2-F1 | +70 °C+20 °C | value(the attenuation to be measured before |
| TIA/EIA-455-3A | - Time per each step: 16 hrs. | test at +20 \pm 3) ≤ 0.10 dB/km |
| | - Number of cycles: 2 cycles | |
| Water penetration test | - Water height: 1m | -No water leakage at the end of the sample |
| IEC 60794-1-2-F5 | - Sample length:3m | |
| TIA/EIA-455-82B | - Duration of test: 24hrs | |
| Drip test | - Five 0.3m samples suspended vertically in a climate | -No filling compound shall drip from tubes after 24 hrs. |
| IEC 60794-1-2-E14 | chamber, raised temperature to +70°C | |

ORDER INFORMATION

