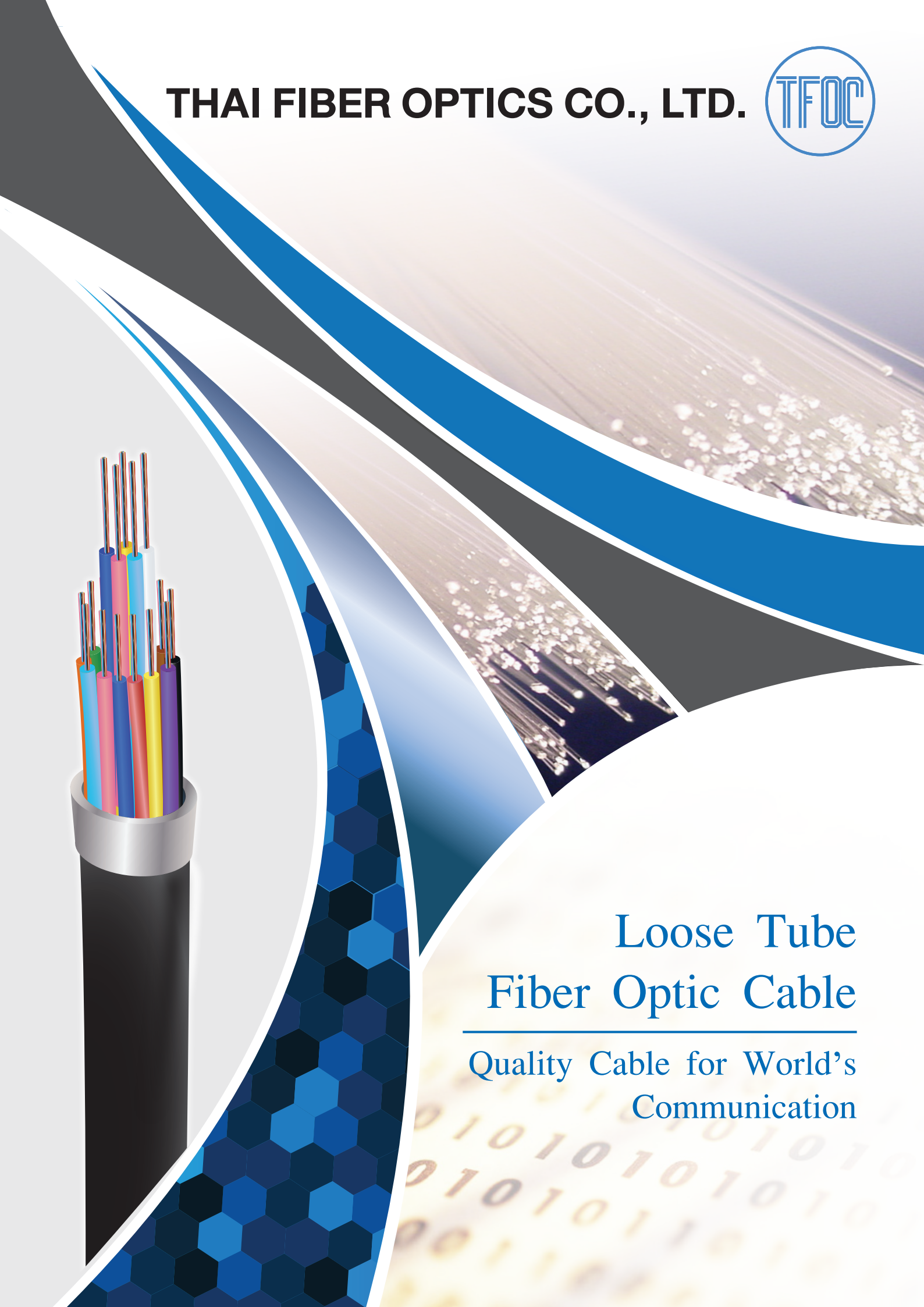
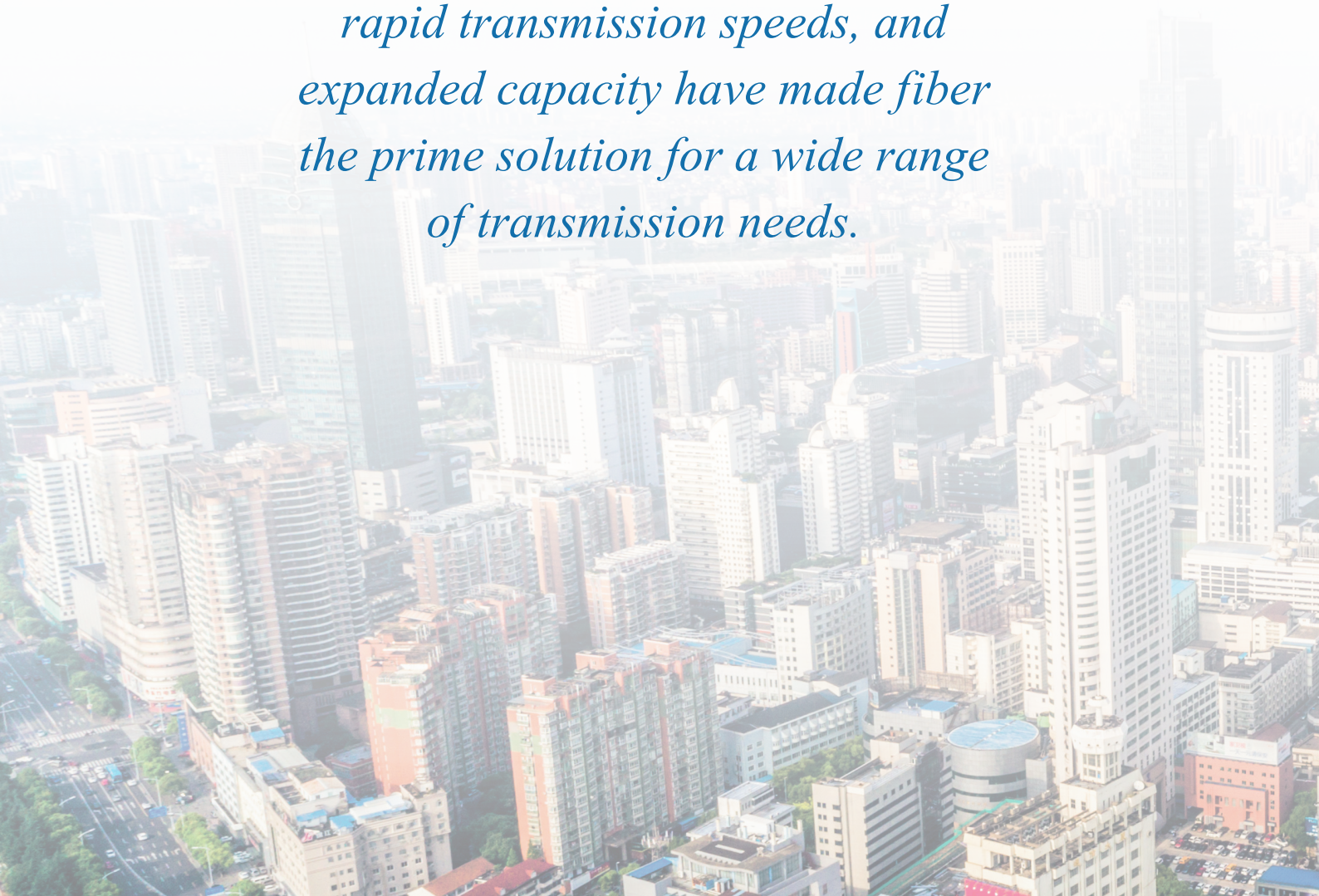
THAI FIBER OPTICS CO., LTD.



Loose Tube Fiber Optic Cable

Quality Cable for World's Communication

Nothing travels faster than light, optical fiber is the ultimate transmission medium for today's complex communications networks. Demand for increased bandwidth, rapid transmission speeds, and expanded capacity have made fiber the prime solution for a wide range of transmission needs.



Thai Fiber Optics Co., Ltd.

(TFOC) was established in 1996 as a joint venture between Loxley Public Co., Ltd. and Furukawa Electric Co., Ltd. with an initial investment of 100 millions baht. TFOC is the first manufacturer in Thailand to produce single-mode and multi-mode loose tube fiber optic cables that meet international standards.

TFOC receive fully support from Furukawa Electric Co., Ltd. (OFS Fitel) which is one of the world leader in optical fiber cable and Network (Furukawa Fitel have acquired Optical Fiber Solution, the optical fiber and cable division of Lucent Technologies, since July 2001.)

An extremely high performance of our products is assured by a strict quality control, resulting in standard far above requirements. The international quality certifications ISO 9001 and ISO14001 awarded by BVC-Bureau Veritas Certification confirm such performance.

"TFOC-Optical fiber cable partner for today and tomorrow"

Optical Fiber Performance
for your Most Demanding Application

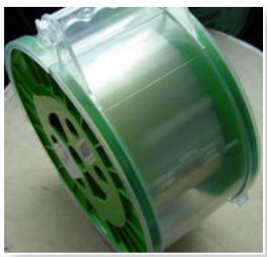
Our optical fiber cables are available with all types of fibers;

1. Multimode Fiber (50/125 and 62.5/125), Our 50/125 µm optical fiber is typically used for high bandwidth, low attenuation applications spanning several kilometers, such as private premise networks. Our 62.5/125 µm optical fiber is widely used for a broad range of data communications applications. This fiber combines good coupling efficiency with premier optical performance.
2. Dispersion Unshifted, Zero-OH Fiber (ITU-T G.652 table D) is low water peak attenuation fiber for full spectrum transmission range from 1280 nm to 1625 nm, which is capable of 50% more usable transmission wavelengths over conventional single-mode fiber (Note; ITU-T G.652 define standard single-mode fibers for use across a broad wavelength range including the extended band (1360 nm. - 1530 nm.)
3. Non-Zero, Dispersion Shifted Fiber (ITU-T G.655) is offered for optimized system operation at 1550 nm (third window) systems designed for Dense Wavelength Division Multiplexing (DWDM) with erbium-doped fiber amplifiers (EDFA). Emerging systems will also use the 1565 to 1620 nm fourth window.
4. AllWave FLEX Zero Water Peak (ZWP) Single-Mode Fiber is the first ZWP G.652.D fiber to offer optimized bend performance for any application where small bend diameters may occur. Fully compliant with ITU-T G.657.A, AllWave FLEX ZWP Fiber is completely compatible with all conventional single-mode fibers.

These Fibers feature a dual UV curable acrylate coating system, which provides unparalleled performance in a wide range of environmental conditions. The advantages of this coating structure are excellent resistance to micro-bending induced losses, superior hydrolytic stability and long term preservations of color code integrity. The coating is easily strippable using mechanical methods.

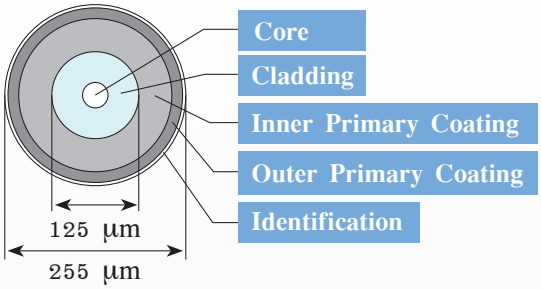
Each fiber is proof-tested to ensure that it will survive installation loads and associated long term residual stresses, ever under extreme environmental conditions. The optical, dimensional and mechanical properties are measured for compliance to Industry specifications (Bellcore, EIA/TIA, IEC, etc.). Excellent control of fiber geometry permits low loss splicing using either mechanical or fusion techniques. In addition, all single mode fibers are manufactured to meet a low polarization mode dispersion (PMD) specification.

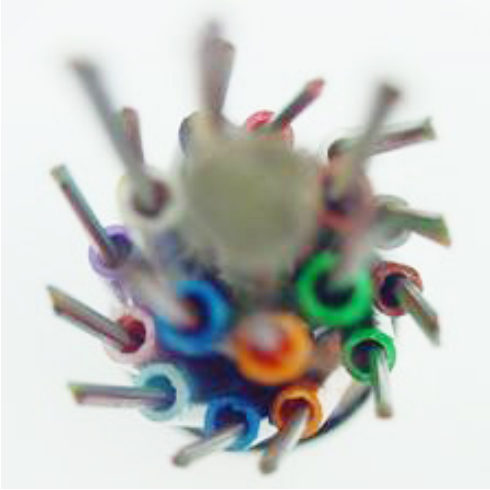
(Note : The SM optical fibers outlined herein are our most popular optical fiber, but for requirements not address in this catalog, please contact us for details fiber specifications and performance data. (e.g. True Wave reach® for the Long Haul terrestrial routes, UltraWave® for ultra Long Haul terrestrial routes, UltraWave® IDF with SLA or TrueWave® SRS with XL for submarine network).



Bare Fiber

Colored Fiber





Loose Tube Fiber Optic Cable

Thai Fiber Optics designs and manufactures loose tube optical fiber cable. We offer a complete line of standard and special cable types for the full range of outside plant applications. Fiber type is single mode in counts from 2 to 312. Our loose tube construction ensures exceptional long-term cable performance and reliability by protecting the optical fibers in a virtually stress-free environment.

Our cable designs conform to stringent industry standards, including;

Electronic Industries Association (EIA), Telecommunications Industry Association (TIA), International Telecommunications Union (ITU), International Electrotechnical Commission (IEC), American Society for Testing and Materials (ASTM)

Buffer Tube

The basic building block of loose tube consists of the thermoplastic buffer tubes containing 1 to 12 loose optical fibers. Positive identification is provided by color coding both the optical fibers and the buffer tubes. All buffer tubes are provided with the filling compound or totally dry, gel-free material to provide water penetrations resistance.

Cable Core

To form the cable core, the individual buffer tubes are stranded about a central strength element of either Glass Reinforced Plastic or Steel. The stranding process, via the Reverse Oscillating Lay (ROL, S-Z) technique, which periodically reverses the rotation of stranding, is employed to facilitate cable mid-span entry. Once a reversal point is located, the tubes can be easily unwrapped from the central strength member. A water blocking material is then applied to the cable core region to prevent water migration.

- **Flooding Compound**

Conventional loose tube cable designs have a flooding compound introduced into core that effectively blocks the penetration of water.

- **Dry Core**

Dry core technology uses dry water-reactive materials for excellent water resistance without using flooding compound. Dry core cables weight less, save on preparations and installation time and virtually eliminate the need for cleaning solvents.

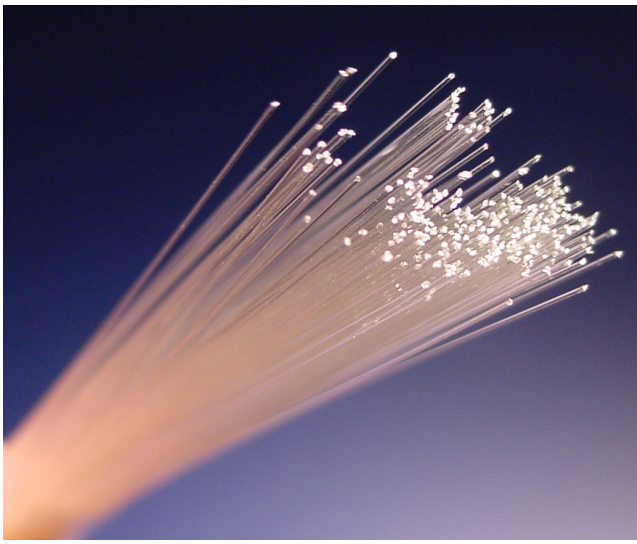
Sheathing

In the final steps, dielectric strength elements are applied over the cable core. The quantity of dielectric strength shall be selected to minimize cable cost while meeting the performance requirements of the cable application.

A variety of sheaths are available to withstand the rigors of duct, buried, aerial and outdoor/indoor installations. Thai Fiber Optics primary loose tube optical fiber cable products outlined here are our most popular fiber optic cable product, but for requirements not address in this cable product, please contact us for details cable specifications and performance data.

Features & Advantages

- Full range of fiber type for the performance you need. (Ask for details)
- Fiber count available up to 312 for full communications capacity.
- Small minimum bend radius of 15 x cable outer diameter during installation and 10 x cable outer diameter post-installation, excellent for confined space installations
- Full range of cable construction to provide the strength and protections needed for duct, buried, aerial, outdoor/indoor and indoor application
- Dry Core technology for a more craft-friendly, jelly-free cable core-permitting quicker cable preparation and splicing.
- ROL buffer tube stranding technique permits quick and easy mid-span fiber access
- 5 Position structure, Smaller, Lighter and more economical
- Ripcords for fast sheath removal
- Abrasion-resistant outer PE jacket with UV-resistant for reliable service in direct sunlight.
- Nylon Jacket for Rodent Resistance
- Special Tracking Resistance Sheath available for ADSS cable where electric field space potentials up to 25 kV
- Low-smoke, Zero Halogen and Flame Retardant Sheath for indoor, outdoor/indoor installations
- Plastic coated Aluminum Tape on both sides encases cable core and provides additional moisture barrier
- Electrolytic chrome-coated steel (ECCS) armor or stainless steel armor for enhanced rodent protection and crush resistance.
- Color stripes run longitudinally along the outer sheath is available upon request.
- Fully qualified in accordance with;
  - Electronic Industries Association (EIA)
  - Telecommunications Industry Association (TIA)
  - International Telecommunications Union (ITU)
  - International Electrotechnical Commission (IEC)
  - Telecordia Technologies (GR-20-CORE)
  - American Society for Testing and Materials (ASTM)
- ISO 9001&14001 certified manufacturer
- Thai Industrial Standard (TIS)



Multi-Mode Fiber Type, Performance Grades

Features :
- **Versatility in 850 nm and 1300 nm applications**
- **Economical support for short reach applications**

OVERVIEW/DESCRIPTION

In data communications where high reliability, high data capacity and ease of connectivity are required, OFS multimode optical fibers have become the medium of choice. Among U.S. manufacturers, OFS offers the widest range of graded index multimode fibers as standard selections.

Fiber Type	Wavelength (mm)	Max Loss (dB/km)	Min Bandwidth (MHz • km)
OM1 (62.5 µm)	850 1300	3.5 1.5	200 500
OM2 (50 µm)	850 1300	3.0 1.0	500 500
OM3 (50 µm)	850 1300	3.0 1.0	1500 500
OM4 (50 µm)	850 1300	3.0 1.0	3500 500

Single-Mode Optical Fiber Selection Guide

Single-mode Optical Fiber Selection Guide for terrestrial applications including transcontinental, regional, metropolitan, home/business access, and in-building fiber optic systems. This document is a quick reference guide for general understanding OFS single-mode fiber types and applications. This guide describes several families of OFS fiber and provides recommendations for single-mode fibers used in Outside Plant (OSP) as well as Indoor (Premises, Enterprise) applications.

Selecting the right fiber for your application can help lower system costs. Characteristics such as lower loss, larger effective area, optimized dispersion, and tight bend performance can provide economic benefits compared to using a standard G.652.D single-mode fiber. Please contact OFS for more thorough explanations of the various fiber value propositions to assist with the selection process.

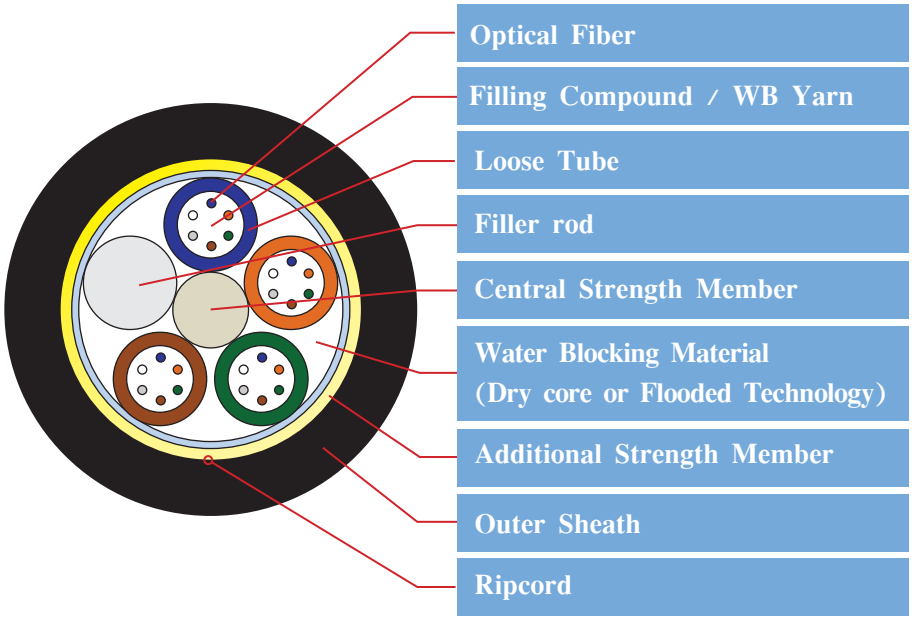
OFS product portfolio includes the following families of optical fiber:

- **AllWave® Optical Fibers**
  - ITU-T G.652.D standard single-mode fibers. AllWave Fibers provide seamless splicing and are zero water peak (ZWP) and can be used everywhere from long haul to shorter reach in-building applications. Full-spectrum zero water peak performance.
- **TrueWave® Optical Fibers**
  - ITU-T G.655 and/or G.656 Non-Zero Dispersion fibers (NZDF) that have reduced chromatic dispersion characteristics to simplify dispersion compensation.
- **AllWave® FLEX and EZ-Bend® Optical Fibers**

  are ITU-T G.657 Bend insensitive single-mode fibers.

Cables with stranded loose tubes represent the fiber optic cable design which is most frequently used all over the world and can certainly be referred to as the standard cable type. Beyond the mechanical properties stemming from stranding, such as flexibility, it also provides the optical fibers with the clearance necessary to protect them from external loads. TFOC's loose tube fiber optic cables are specially designed to provide a stress-free environment for the fiber when install/operating within their designed load and temperature range. The following cable construction outlined here are our most popular fiber optic cable construction;

Single Jacket, Loose Tube Fiber Optic Cable (Duct Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Outer Sheath

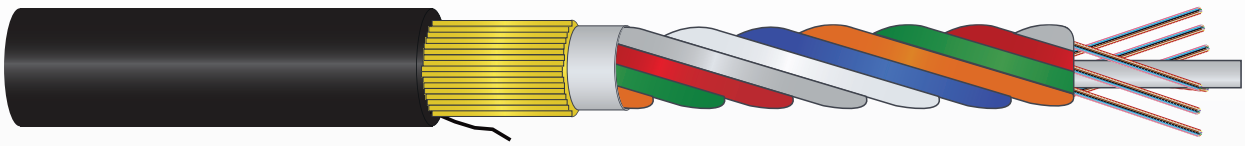
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

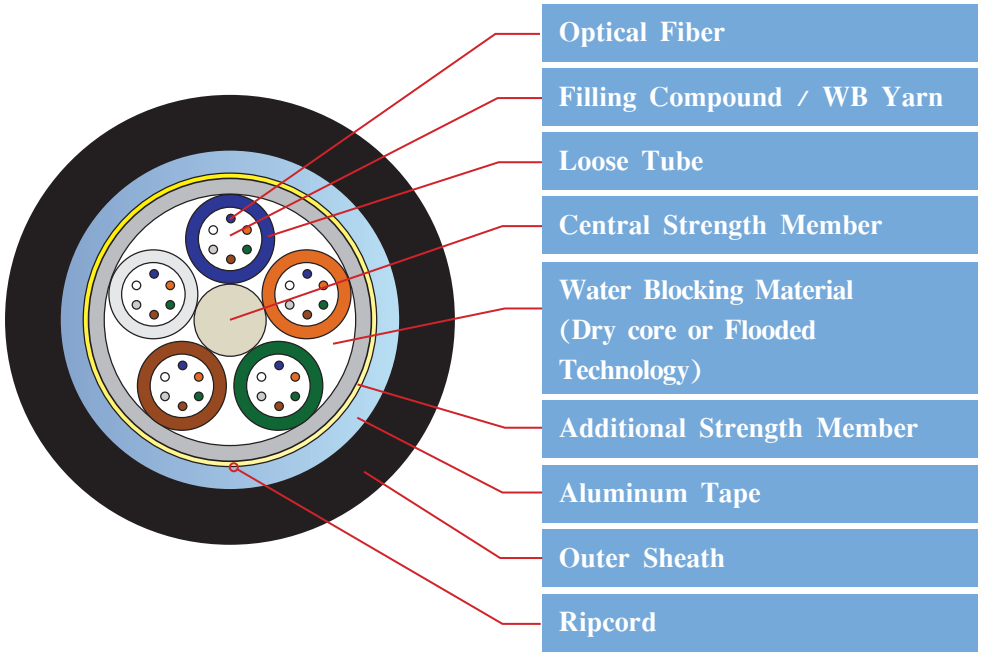
- Design for duct and lashed aerial installations

Features/Advantages or Optional

- Please refer to sub-heading "Features and Advantages



Single Jacket, Laminated Aluminum, Loose Tube Fiber Optic Cable (Duct, LAP Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Moisture Barrier

Aluminum tape coated with polymer on both sides

Outer Sheath

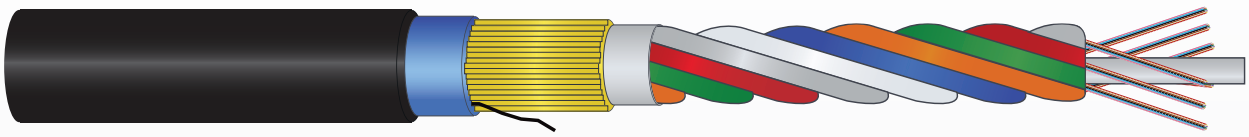
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

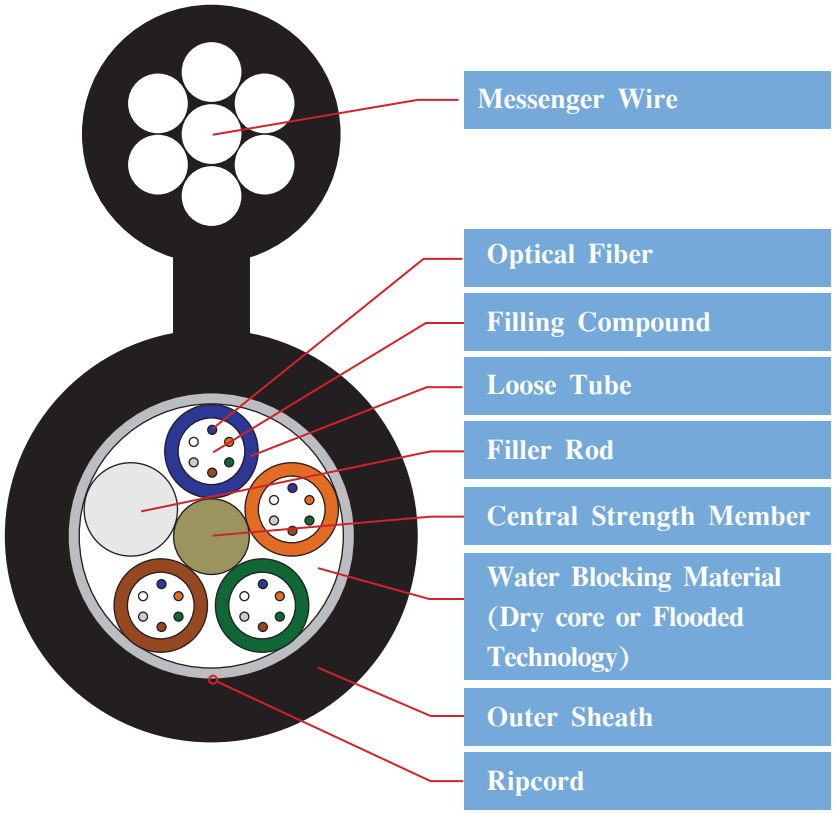
- Design for duct and lashed aerial installations
- Suitable for selected duct installations
- Ideal for environments in which an additional moisture barrier is desired

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Single Jacket, Self-Supporting, Aerial Loose Tube Fiber Optic Cable (Figure-8, Self-supporting Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Messenger Wire

A strand 7/1.04 to 7/2.03 mm, extra high strength galvanized steel is used as the tensile bearing element.

Outer Sheath

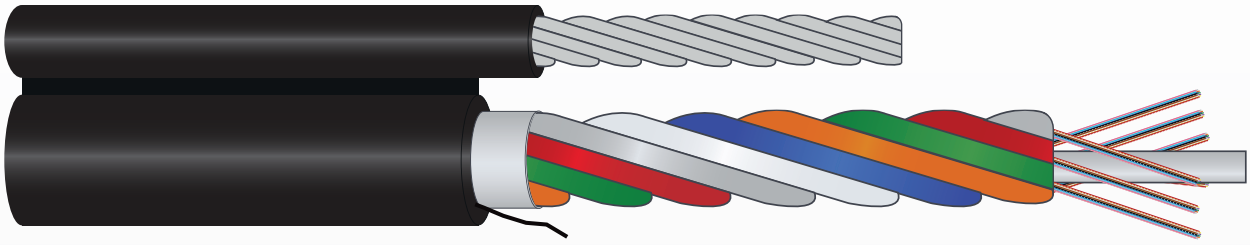
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

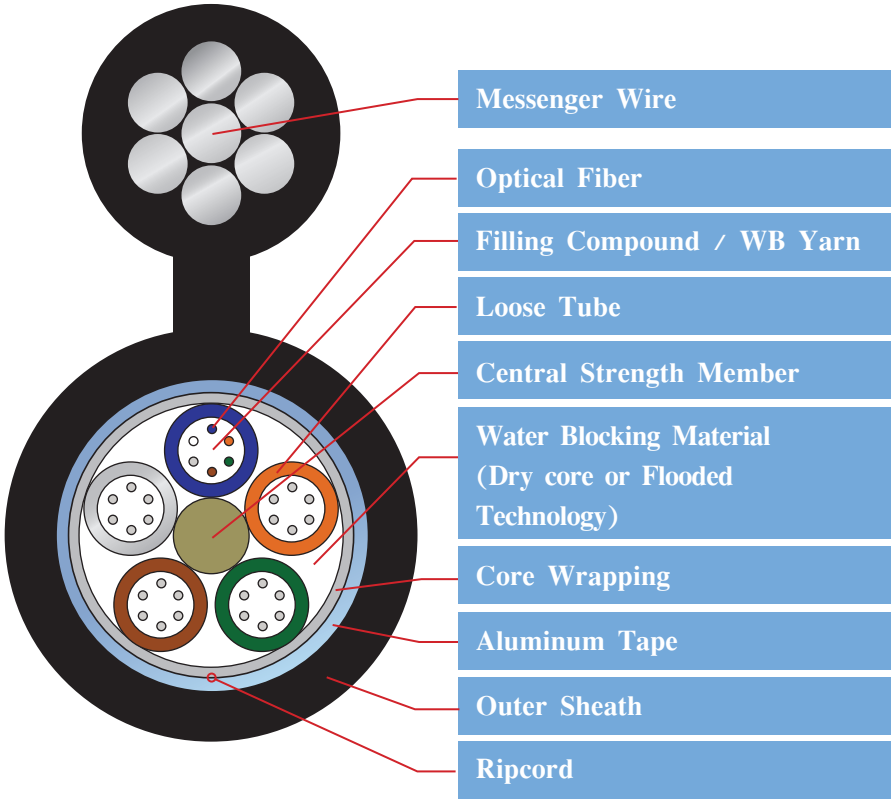
- Self-supporting design excellent for rapid one-step installation in aerial network

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Single Jacket, Self-Supporting, Laminated Aluminum, Aerial Loose Tube Fiber Optic Cable (Figure-8, LAP, Self-supporting Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Moisture Barrier

Aluminum tape coated with polymer on both sides

Messenger Wire

A strand 7/1.04 to 7/2.03 mm, extra high strength galvanized steel is used as the tensile bearing element.

Outer Sheath and Web

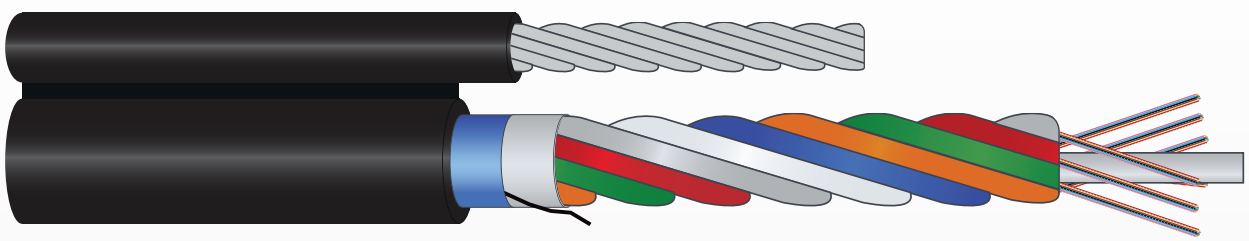
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

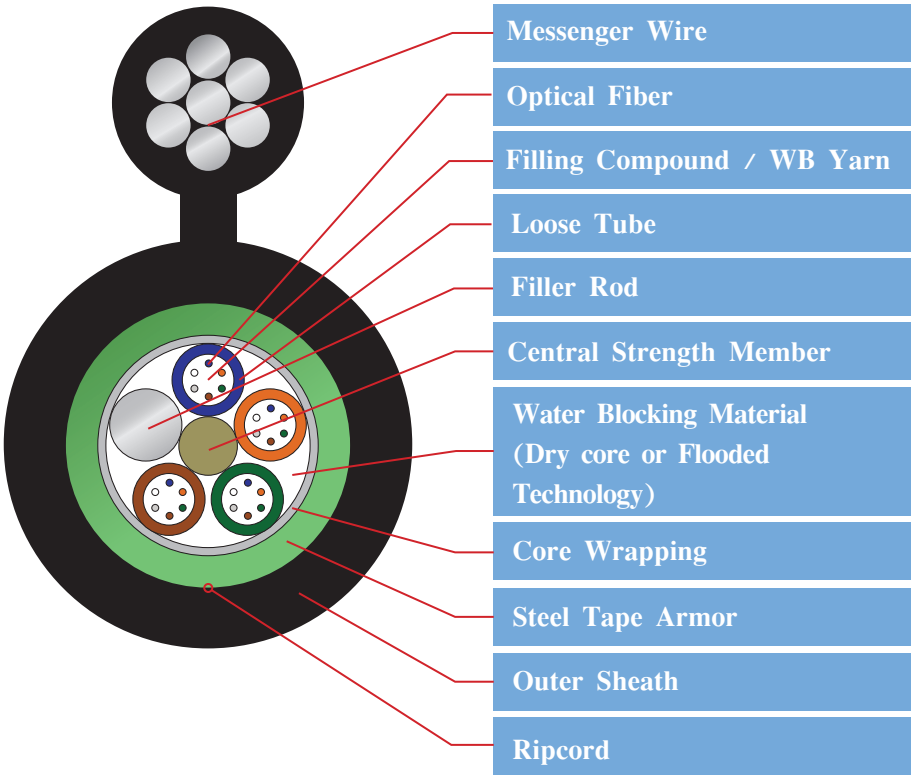
- Self-supporting design excellent for rapid one-step installation in aerial network
- Ideal for environments in which an additional moisture barrier is desired

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Single Jacket, Single Armor, Self-supporting, Aerial Loose Tube Fiber Optic Cable (Light Armored Figure-8, Self-supporting Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Steel Tape Armor (Anti-Rodent)

The armor is a corrugated tape of 0.15 electrolytic chrome coated steel (ECCS)

Messenger Wire

A strand 7/1.04 to 7/2.03 mm, extra high strength galvanized steel is used as the tensile bearing element.

Outer Sheath and Web

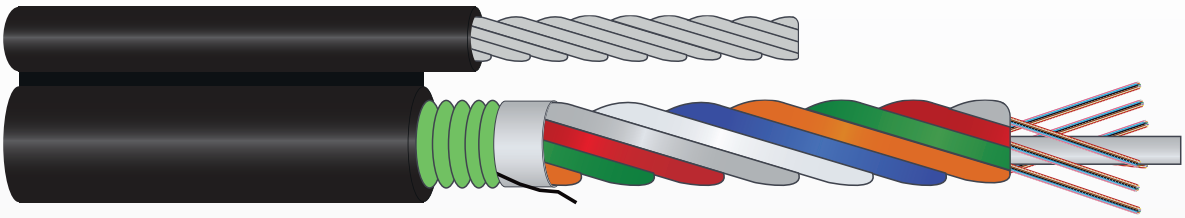
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

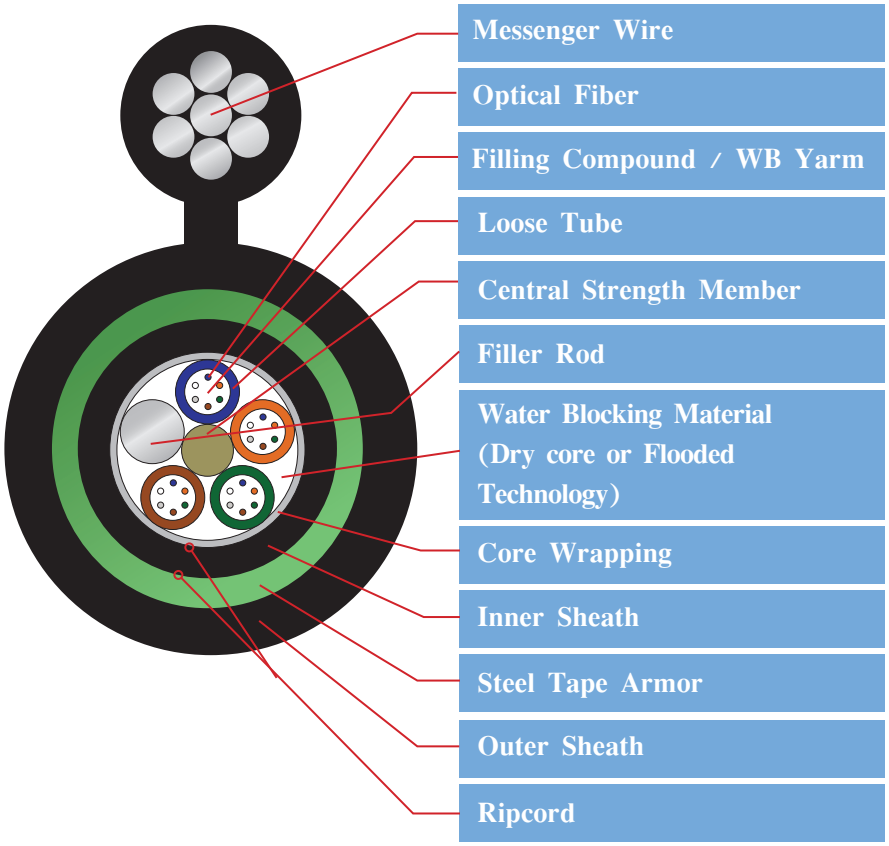
- Self-supporting design excellent for rapid one-step installation in aerial network
- Provides additional mechanical protection and squirrel/rodent resistance

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Double Jacket, Single Armor, Self-supporting, Aerial Loose Tube Fiber Optic Cable (Armored Figure-8, Self-supporting Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Steel Tape Armor (Anti-Rodent)

The armor is a corrugated tape of 0.15 electrolytic chrome coated steel (ECCS)

Messenger Wire

A strand 7/1.04 to 7/2.03 mm, extra high strength galvanized steel is used as the tensile bearing element.

Inner/Outer Sheath and Web

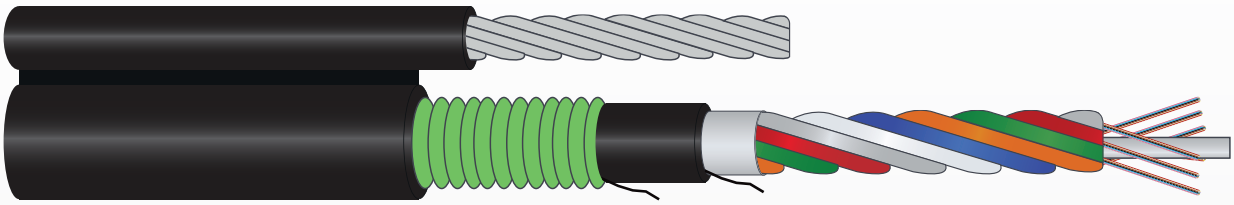
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

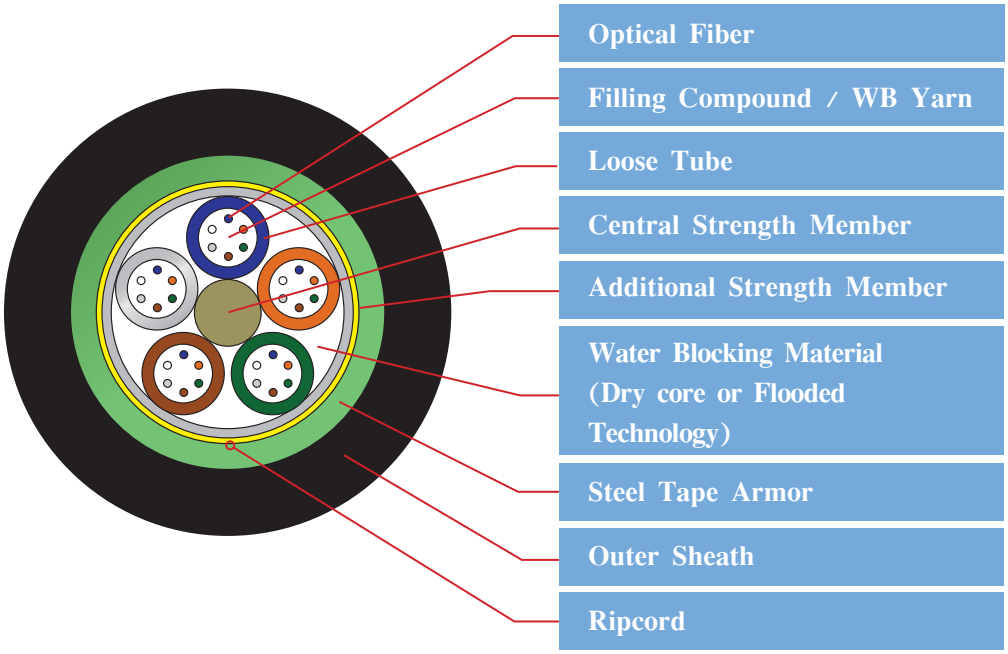
- Self-supporting design excellent for rapid one-step installation in aerial network
- Provides additional mechanical protection and squirrel/rodent resistance

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Single Jacket, Single Armor Loose Tube Fiber Optic Cable (Direct Buried Light Armored Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Steel Tape Armor (Anti-Rodent)

The armor is a corrugated tape of 0.15 electrolytic chrome coated steel (ECCS)

Outer Sheath

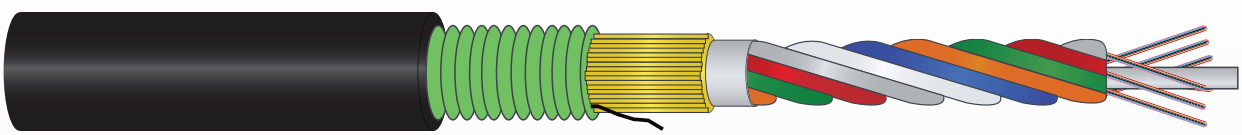
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

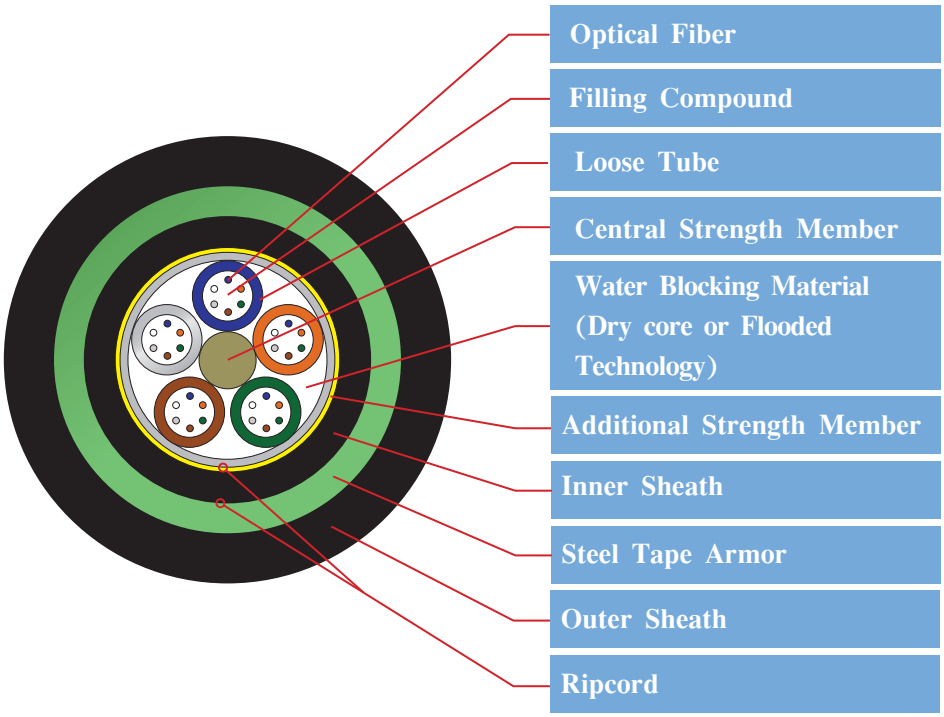
- Design for demanding duct, aerial and direct-buried installations
- Provides outstanding mechanical protection and rodent resistance

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Double Jacket, Single Armor Loose Tube Fiber Optic Cable (Direct Buried Cable)



Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Steel Tape Armor (Anti-Rodent)

The armor is a corrugated tape of 0.15 electrolytic chrome coated steel (ECCS)

Inner/Outer Sheath

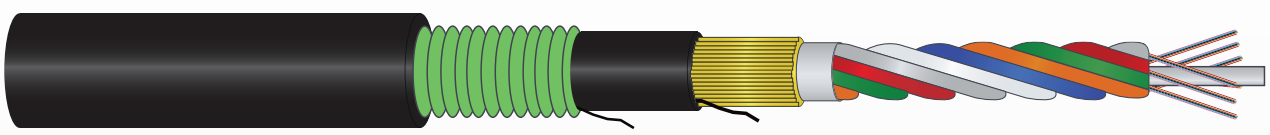
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

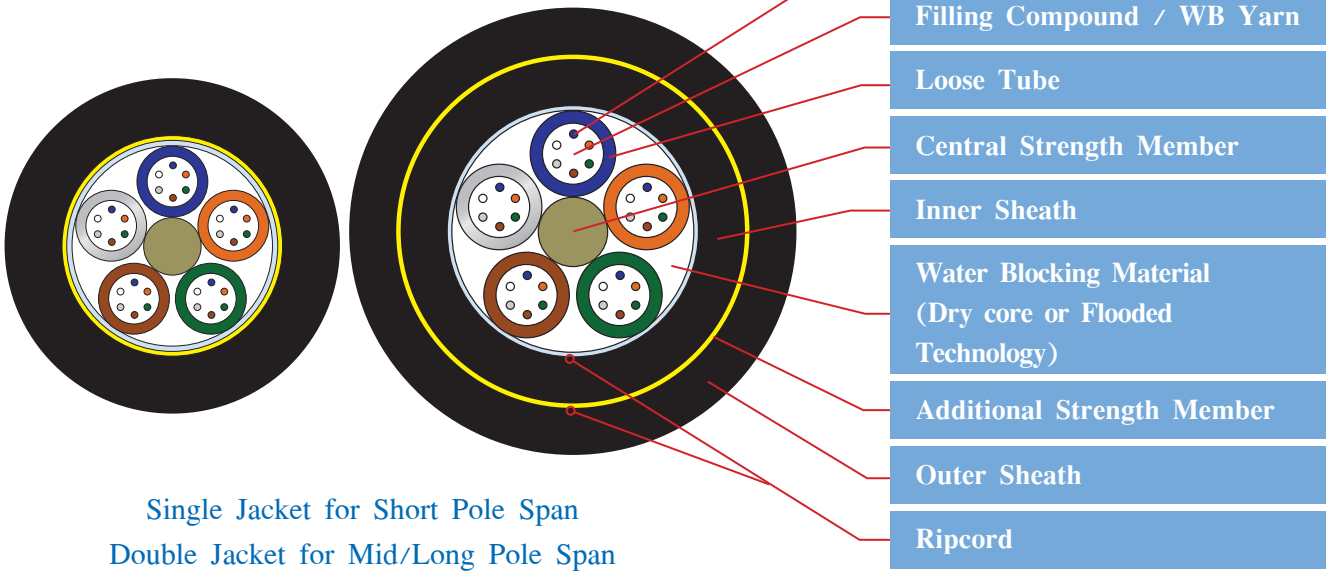
- Design for demanding duct, aerial and direct-buried installations
- Provides outstanding mechanical protection and rodent resistance

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Single/Double Jacket, All-Dielectric Self-supporting Aerial Loose Tube Fiber Optic Cable (ADSS)



Single Jacket for Short Pole Span
Double Jacket for Mid/Long Pole Span

Design/Overview

Fibers

Up to 312 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube or Gel-free PP loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Inner/Outer Sheath

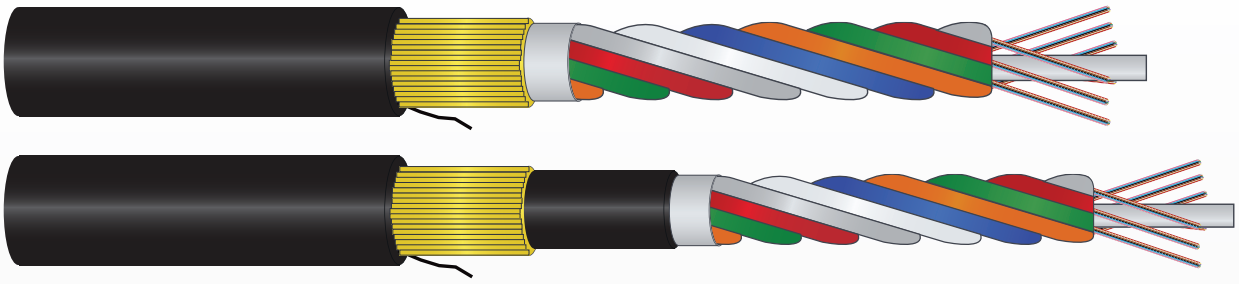
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

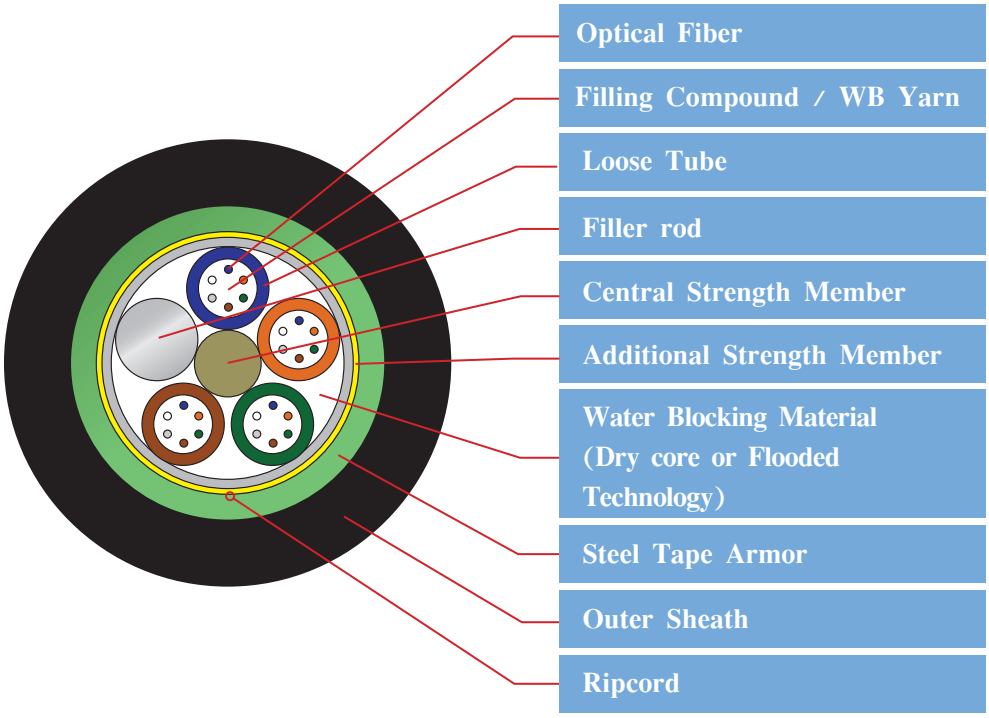
- Aerial use; self-supporting without a separate messenger
- Ideal for environments in which an all-dielectric cable is desired
- Ideal for transmission and distribution networks
- Direct use in ducts, enabling simple and cost-effective aerial-to-duct transitions

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



Anti-Rodent Self-Supporting (ARSS), Flame Retardant Self-Supporting (FRSS) Single Jacket, Single Armor, Loose Tube Fiber Optic Cable



Design/Overview

Fibers

Up to 144 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube with optical fibers

Stranding

The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member (FRP)

Longitudinal water tightness

Water swellable elements (dry-core)

Additional Strength Member

Aramid yarns (When necessary)

Anti-Rodent

The armor is a corrugated tape of 0.15 electrolytic chrome coated steel (ECCS)

Outer Sheath

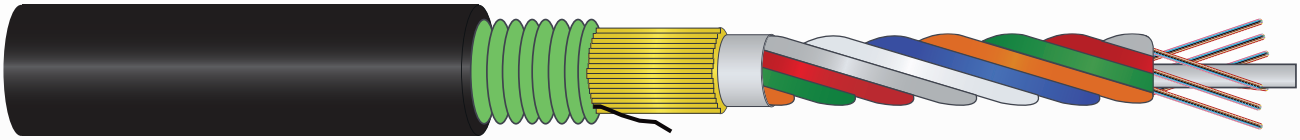
LDPE, MDPE, HDPE, LS&ZHFR with UV resistance

Applications

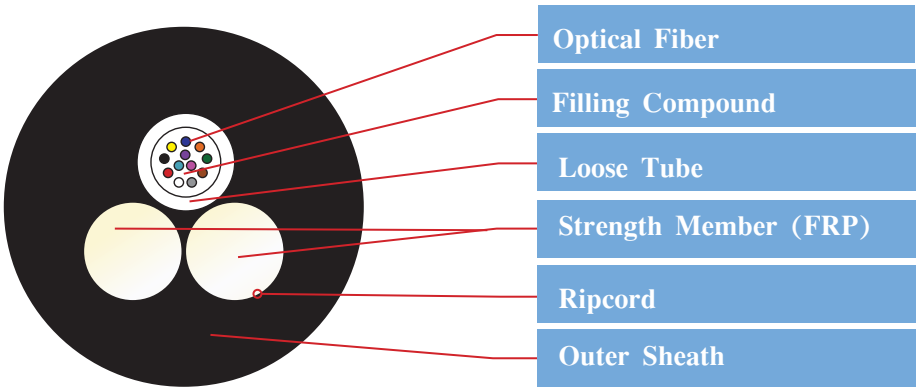
- Design for aerial installations

Features/Advantages or Optional

- Please refer to sub-heading “Features and Advantages



MINI All-Dielectric self-supporting, Optical Fiber Cable (Mini ADSS)



Design/Overview

Fibers

Up to 12 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBT loose tube with optical fibers

Stranding

Single Loose tube, two rigid elements made of fiber reinforced plastic (FRP) Optimized Size

Outer Sheath

MDPE and HDPE with UV resistance

Applications

- Design for duct and lashed aerial installations (Span up to 40 meters)
- Distribution/Access Network

Standards Compliance

- IEC 60794-1-2, EIA/TIA-455

Loose Tube : Thermoplastic tube with jelly encompassing from 2 to 12 fibers

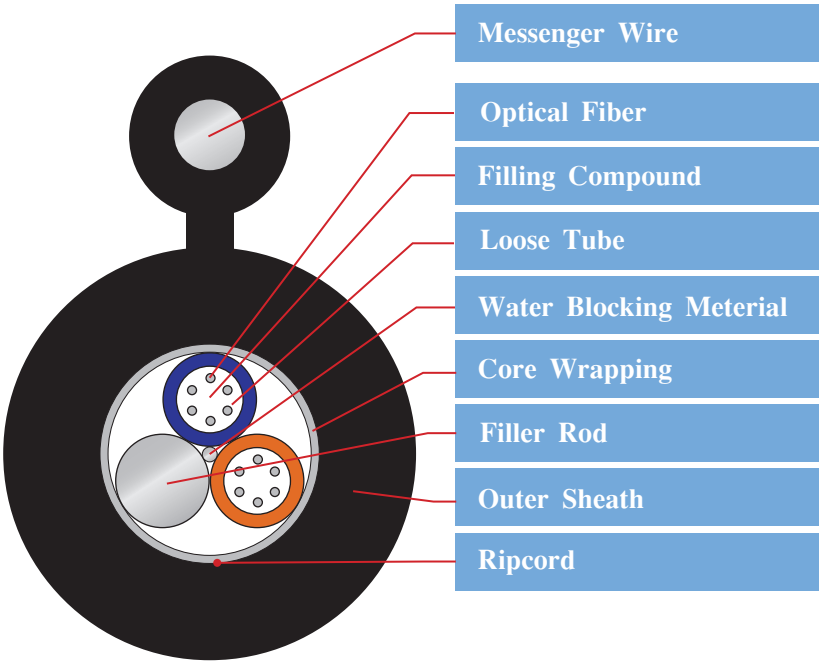
Loose tube OD/ID	2.1/1.4 mm
Strength Member (FRP)	2.0 mm
Loose Tube coloring code	White

Ripcord : A Ripcord must be inserted below the outer jacket.

Dimension :

CHARACTERISTIC	UNIT	VALUE
Number of optical fibers	Fibers	2 to 12
Nominal dimensions	mm.	6.8
Nominal weight	Kg/km	35

Optical Drop Cable



Design/Overview

Fibers

Up to 12 individual colored fibers type OM1, OM2, OM3, OM4 and Single Mode

Loose Tube

Gel filled PBI loose tube with optical fibers

Stranding

The Loose tube shall be resistant to kinking and stranded around the CSM using stranding method of Reverse Oscillating Lay (ROL) Technique (SZ direction)

Longitudinal water tightness

Water swellable element (Dry core)

Messenger Wire

Single steel wire 1.6 mm

Outer Sheath

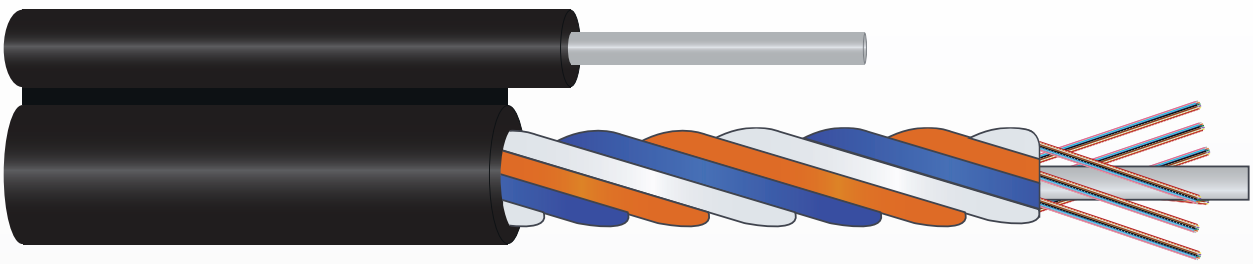
HDPE with UV resistance

Applications

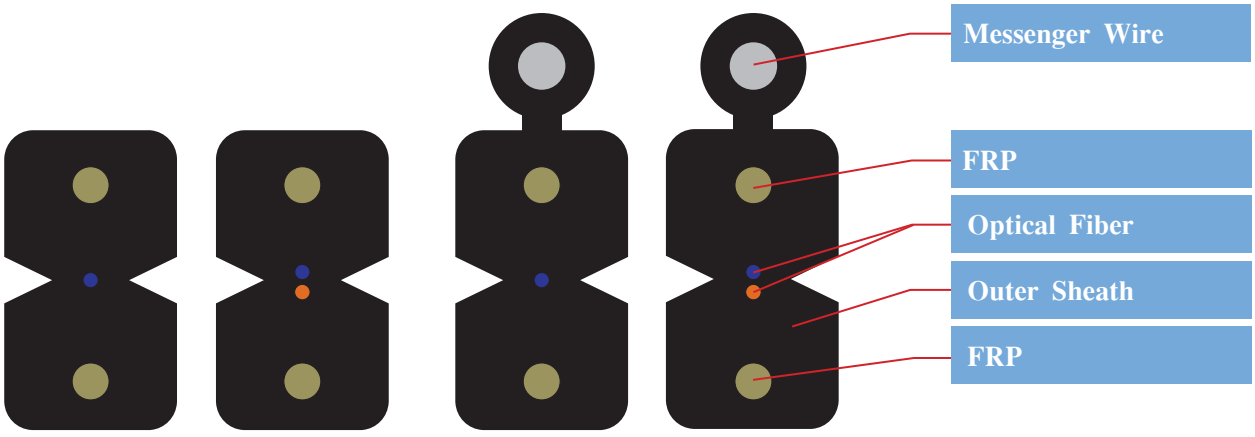
- Distribution/Access Network
- Indoor/Outdoor Cable

Features/Advantages or Optional

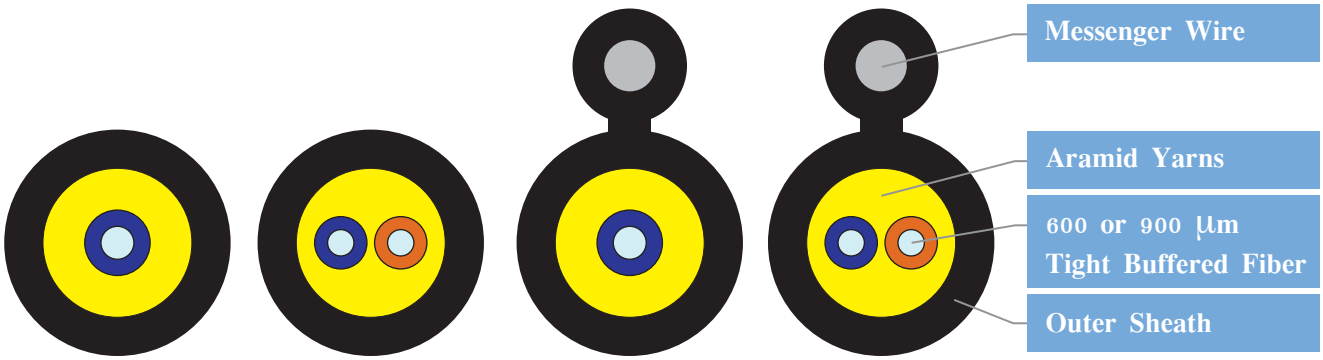
- Please refer to sub-heading "Features and Advantages"



Optical Drop Cable (FTTx Cable)



FTTx Indoor/Outdoor Cable (Flat Type)



FTTx Indoor/Outdoor Cable (Round Type)

Design/Overview

Fibers

1 or 2 Colored fibers type Single Mode G.657.A1

Strength Member

- Flat Type: Fiberglass reinforced plastic (FRP)
- Round Type: Aramid Yarns

Messenger Wire

Single steel wire 1.2 mm or 7 stranded x 0.4 mm (7/0.4 mm)

Outer Sheath

Flame retardant with UV resistance

Applications

- Distribution / Access Network
- Indoor/Outdoor Cable

Features/Advantages or Optional

- Please refer to sub-heading "Features and Advantages

Color Scheme for Fiber and Loose tube Identification (TIA/EIA-598-A)

Blue	Orange	Green	Brown	Slate/Grey	White
Red	Black	Yellow	Violet	Rose/Pink	Aque/Turquoise

Quality You Can Trust

It is our goal to consistently provide the quality products that meet the quality and value requirements of ourcustomers. So all of your cables are put through the most stringent tests to ensure that only those that meet the highest standards are delivered to our customers.

Raw Materials Test

At this stage, highly sophisticated equipment is used to measure and verify the quality of fibers and raw materials. All type of fiber and raw materials are verified and tested in accordance with International Standards, i.e. ITU, ISO, IEC, FOTP and ASTM. Besides that, our stringent raw material qualification programs and quality plan are established to ensure the best raw materials are being used to manufacture Optical Fiber Cable.

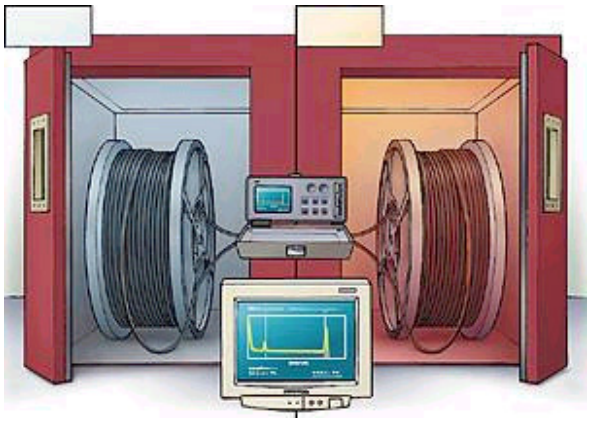
Optical Test

Considering long term performance of the optical fiber cables, routine test are conducted 100% at every stage of optical fiber cable process. Optical Time Domain Reflectometer (OTDR) is used to measure attenuation, optical loss, point discontinuity, fiber bending, and signature non-uniformity as required by ITU-T and FOTP. Tested with world class testing equipment, only optical fiber cables that meet or exceed the stringent International Standards will be delivered to our customers.

In addition, TFOC also conduct extensive test on other fiber characteristics utilizing state of the art equipment such as Fiber Analysis System, Geometry Analysis System, Dispersion Measurement System and Polarization mode dispersion.

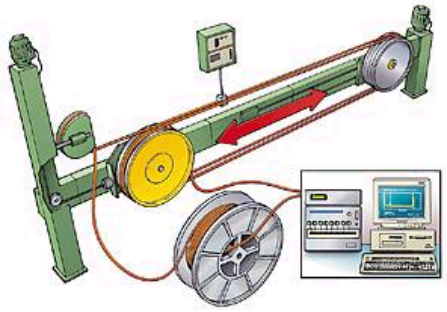
Mechanical and Environmental Test

Optical fiber cables installed in an outdoor environment are exposed to severe mechanical and environmental conditions. The Installation practices and installed system conditions can subject the cable to tensile, flexure, twisting, crush, impact, bending and extreme temperatures. To ensure maximum cable life in an outdoor environment the mechanical/ environmental testing should not be overlooked. So the extensive environmental and mechanical testing is performed on each fiber optic cable style to develop its performance characteristics and to verify compliance on a continuing basis. Independent testing and verification laboratories verify IEC, EIA and other standards compliance. The Common Mechanical and Environmental Tests that are performed include:



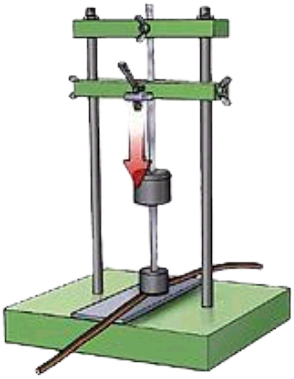
Temperature Cycling Test (EIA-455-3 or IEC 794-1-F1)

Optical cable used in the outside plant will be subjected to a wide range of temperatures. Since the thermal coefficient of expansion of glass fibers is lower than that of the composite cable structure, the dimensional changes in the cable structure may cause the fiber to move. Such movement may result in increased attenuation due to microbending



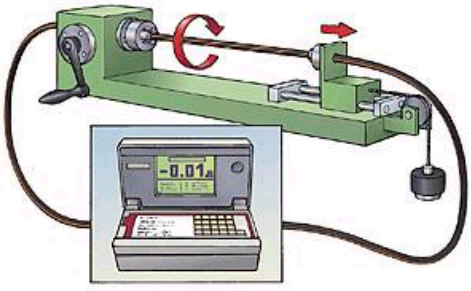
Tensile Loading Test & Fiber Strain (IEC-794-1-E1)

Optical cable used in the outside plant will be exposed to tensile load during installation and/or during service. The cable structure shall be capable of withstanding these force without fiber strain and attenuation change over its limit.



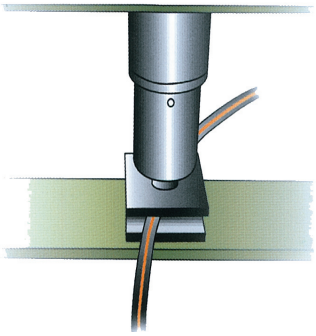
Impact Test (EIA-455-25 or IEC 794-1-E4)

The fall of a heavy tool, device, stone, etc. onto the cable is simulated here. The weight is allowed to fall vertically onto an intermediate steel piece that transmits the force to the cable sample. No damage to the cable sheath may occur.



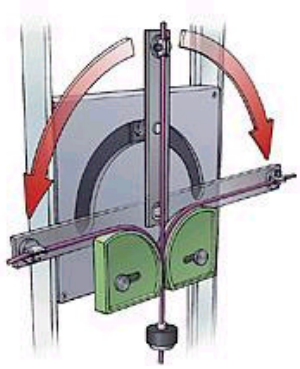
Torsion Test (EIA-455-85 or IEC 794-1-E7)

During feeding, the fiber optic cable must withstand torsion forces in addition to tension, transverse pressure and bending loads. Thus a cable sample is turned about its own axis and attenuation deviations documented during the test. Neither fiber nor sheath materials may be damaged during the test.



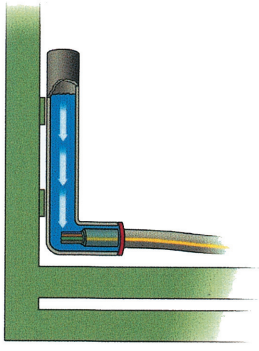
Compressive Test (EIA-455-41 or IEC 794-1-E3)

The purpose of this test is to determine the ability of a fiber optic cable to withstand transverse pressure. In addition to test pressure itself, the length of time it can be applied is decisive.



Flexing Test (EIA-455-104 or IEC 794-1-E6)

The resistance of a fiber optic cable to repeated bending is determined by a cable test sample bend forwards and backwards 180 degrees over a specific radius



Water Penetration Test (EIA-455-82 or IEC 794-1-F5)

This method checks whether all interstices of the fiber optic outdoor cable continuously filled with jelly compound or waterblocking gels to prevents water from entering the cable

ISO9001&14001
Quality Guarantee

We're an ISO 9001 and 14001 certified manufacturer that adheres to strict ISO quality management systems requirements for product design, development, manufacturing, business operations and environment.

Customer Support:

Even after our products have undergone careful scrutiny and examination within our factory, we continue to monitor product quality after shipment continuously by measuring customer satisfaction. If for some reason a product does not meet expectations, we do whatever is necessary to remedy the situation. When dealing with a customer, our service is prompt and courteous-customer suggestions, complaints or any other feedback are given the highest consideration.

Thai Fiber Optics Co., Ltd.

(ISO 9001&14001 Certified Manufacturer)

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ISO 9001 BUREAU VERITAS Certification

ISO 14001 BUREAU VERITAS Certification