

TMM
TEKNOLOJİ TELEKOM A.Ş

PRODUCTS CATALOG





TMM
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TMM Teknoloji Telekom A.S is a global leader in trading and engineering services, connecting top-quality products and solutions to clients worldwide. Our expertise spans across telecommunications, specialized fiber solutions, raw materials for the cable industry, telecom installation equipment, and other industrial sectors such as mining and metallurgy.

Our extensive range of services includes:

- Telecom Solutions: Advanced fiber optic telecommunications equipment and solutions.
- Industrial Raw Materials: Sourcing premium materials for the cable industry and beyond.
- Specialty Fibers: Decorative and industrial fibers for unique applications.
- Telecom Installation Equipment: Tools and equipment for field installations in telecommunications.

With a commitment to customer satisfaction and quality, TMM Teknoloji Telekom A.S is dedicated to providing customized OEM services, tailored to meet specific client needs, and ensuring end-to-end support. Our professional team, drawing from over 15 years of international experience, coordinates resources globally to deliver dependable, high-quality solutions that drive long-term success for our partners.

Our Services Include:

- Engineering and Consultancy: Comprehensive telecom engineering services and expert consultancy.
- Product Inspection and Auditing: Reliable inspection and auditing services for high-quality assurance.
- Technology Transfer: Specialized solutions for cable production technology transfer.

If you're looking for top-tier products, innovative solutions, or a strategic business partner, TMM Teknoloji Telekom A.S is ready to serve. Contact us or visit our website at www.tmmtelecom.az to explore our full catalog and discover how we can support your business needs.

Vision

"To become a trusted global leader in telecommunications by fostering collaboration, sharing expertise, and building lasting partnerships that elevate industry standards and drive mutual growth."

Mission

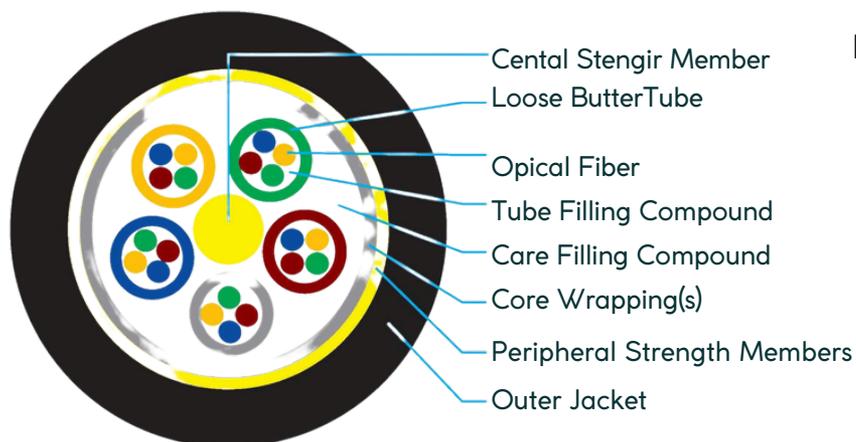
"To deliver high-quality, reliable products, services, and solutions that meet our customers' needs with precision and excellence, creating enduring value and satisfaction."



SINGLE JACKET, ALL-DIELECTRIC OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone, Local Area and Metro Networks with Duct and Lashed Aerial installation methods. Suitable for installation by Air Blowing.



Features:

- Multi Loose Tube (MLT) Design
- Light Weight Non-Metallic Design
- Flexible Design and Easy Handling
- Fast Cable Preparation and Installation
- No Grounding Issues
- Protection Against Water and Moisture
- U V Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
2700 N/890 N	2000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

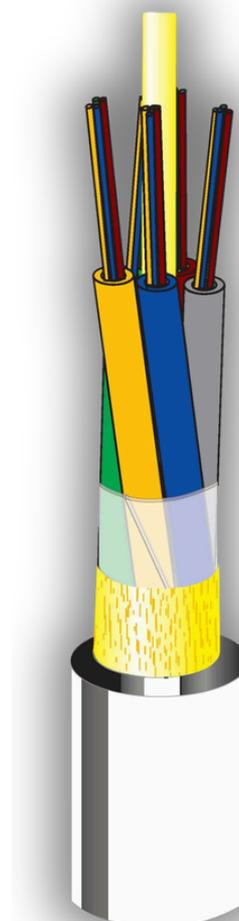
Options:

- Higher Fiber Capacities
- Single mode (Standard, Low Water Peak), Multimode (50/125, 62.5/125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs
- Metallic Central Strength Member «</ Waterproof Dry Core

Design

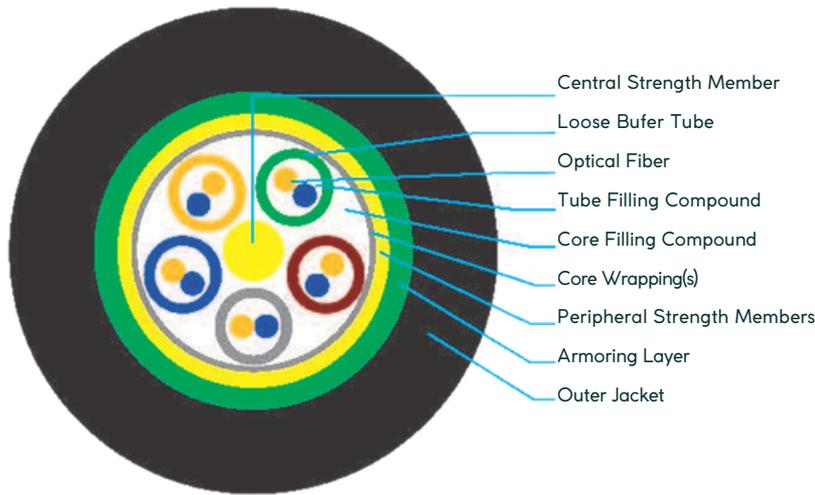
- Improved Tensile Strength
- Rodent Resistant Design
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets

Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598





SINGLE JACKET, ALL-DIELECTRIC OPTICAL FIBER CABLE



Features:

- Multi Loose Tube (MLT) Design
- Corrugated Steel Tape Armor
- Improved Compressive Strength
- Rodent Resistant
- Protection Against Water and Moisture
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

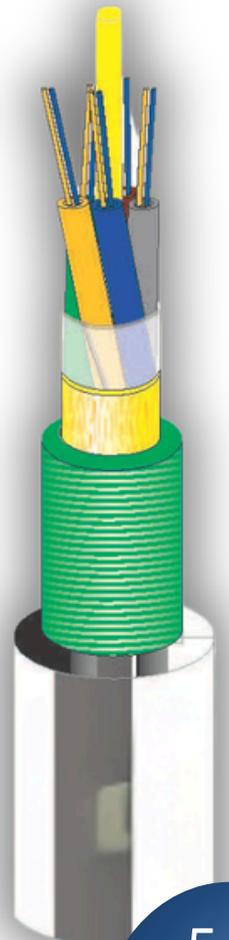
Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
2700 N/890 N	2000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Singlemode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs </ Metallic Central Strength Member
- Waterproof Dry Core Design
- Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets



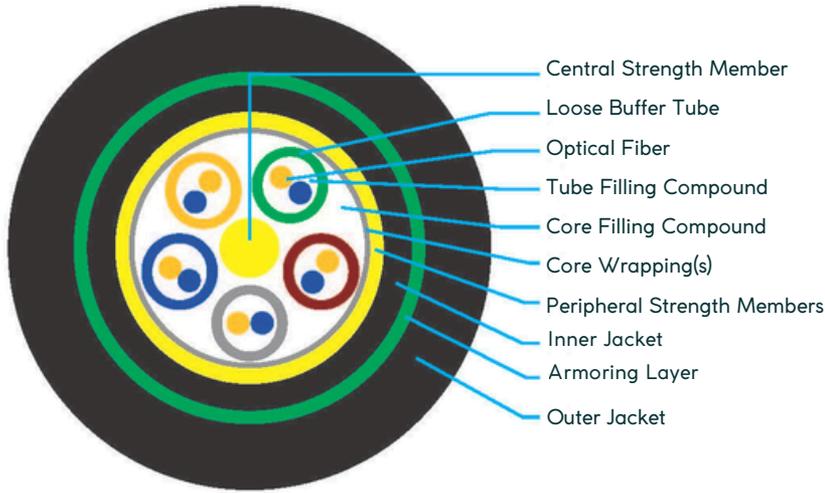
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598

DOUBLE JACKET, SINGLE ARMOR OPTICAL FIBER CABLE



Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone, Local Area and Metro Networks with Direct Burial and Duct installation methods.



Features:

- Multi Loose Tube (MLT) Design
- Corrugated Steel Tape Armor
- Improved Compressive Strength
- Rodent Resistant
- Protection Against Water and Moisture
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

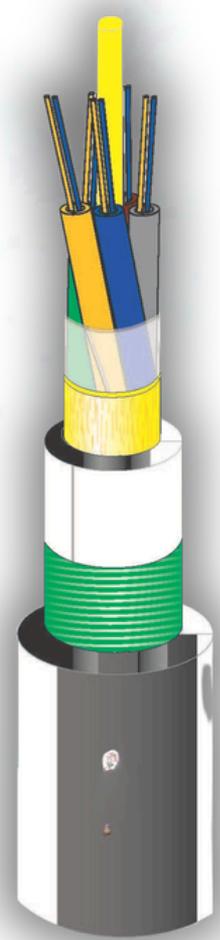
Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
2700 N/890 N	2000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-2C

Options:

- Higher Fiber Capacities
- Singlemode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs </ Metallic Central Strength Member
- Waterproof Dry Core Design
- Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets



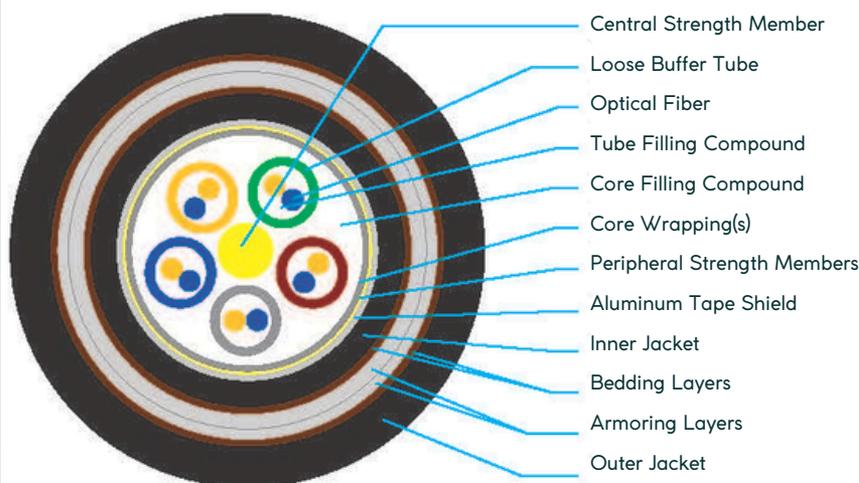
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



DOUBLE JACKET, DOUBLE STEEL TAPE ARMOR OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone and Local Area Networks with Direct Burial and Duct installation methods



Features:

- Multi Loose Tube (MLT) Design
- Double Layer Galvanized Steel Tape Armor
- Improved Compressive Strength
- Rodent Resistant Aluminum Tape Shielded
- Protection Against Water and Moisture
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled
Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C	
2700 N/890 N	4500 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70	

Options:

- Higher Fiber Capacities
- Singlemode (Standard, Low Water Peak), Multimode (50/125, 62.5/125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs
- Metallic Central Strength Member
- Waterproof Dry Core Design
- Design without Aluminum Tape Shield
- Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets

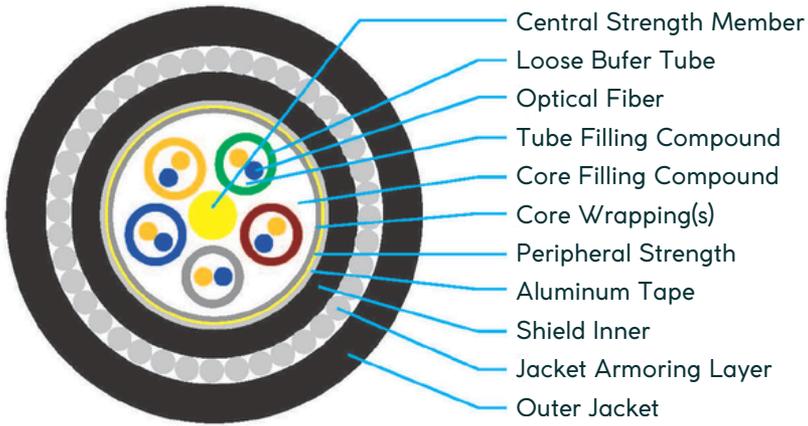


Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598

DOUBLE JACKET, STEEL WIRE ARMOR OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CAIV transmission in Long Distance and Backbone Networks with Direct Burial, Duct, Swamp and River Crossing installation methods.



Features:

- Multi Loose Tube (ML T) Design
- Steel Wire Armor
- Improved Compressive Strength
- Rodent Resistant
- Aluminum Tape Shielded
- Protection Against Water and Moisture UV Stabilized LDPE or LLDPE or MDPE or HDPE Jackett

Specification:

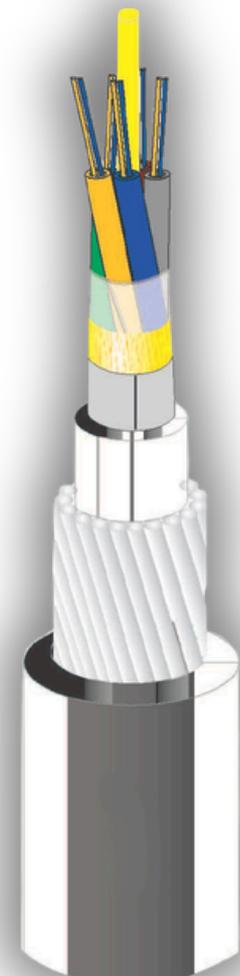
Fiber Count	No.of Tubes	No.of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min.Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
7000 N/4000 N	5000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Single mode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs
- Metallic Central Strength Member Waterproof Dry Core Design
- Designs without Aluminum Tape Shielding
- Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets

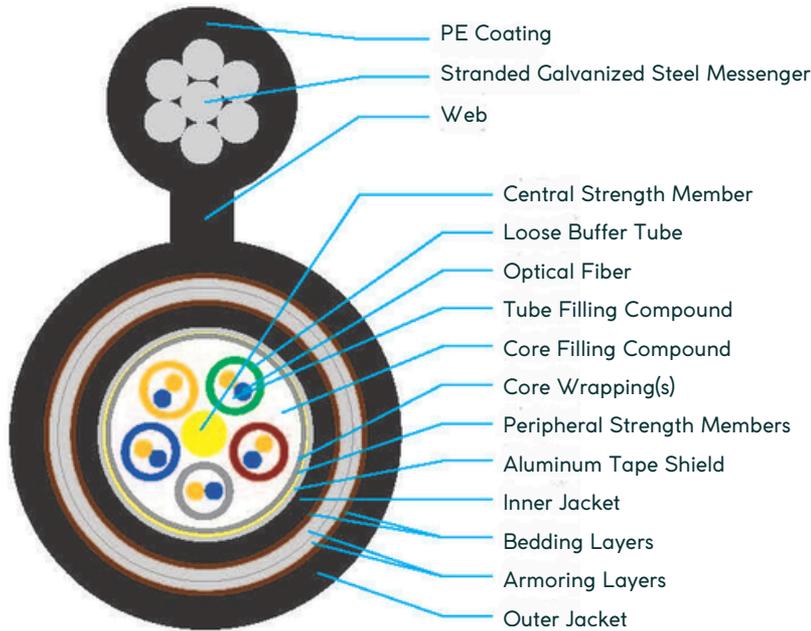
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



DOUBLE JACKET, DOUBLE STEEL TAPE ARMOR, FIGURE-8 OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone, Local Area and Metro Networks with Aerial installation method.



Features:

- Multi Loose Tube (MLT) Design
- Self Supporting Figure-8 Shape
- Double Layer Galvanized Steel Tape Armor
- Improved Compressive Strength
- Rodent Resistant Aluminum Tape Shielded
- Protection Against Water and Moisture
- Maximum 80 meters of Span Length
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
5000 N/2700 N	4500 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Single mode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125),
- Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs Metallic Central Strength Member
- Waterproof Dry Core Design
- Design without Aluminum Tape Shielding Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets
- Higher Span Length Designs
- Bitumenized or Flooded Messenger Wire

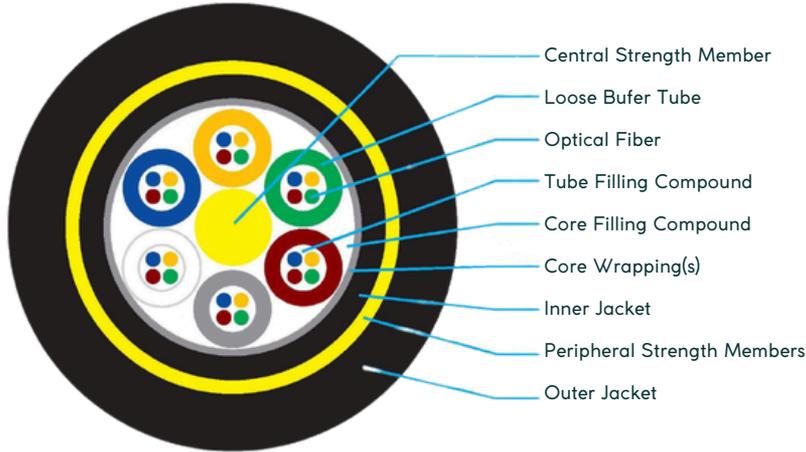
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



DOUBLE JACKET, ALL DIELECTRIC SELF SUPPORTING (ADSS) OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone and Local Area Networks with Aerial installation method. Special design suitable for installation on Power Transmission Lines and nearby Power Utilities.



Features:

- Multi Loose Tube (MLT) Design
- Non-Metallic Design
- Flexible Design and Easy Handling
- No Grounding Issues
- High Tensile Strength
- Improved Compressive Strength
- Protection Against Water and Moisture
- Designs for Different Span Lengths, Sag and Weather Conditions
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

Specification:

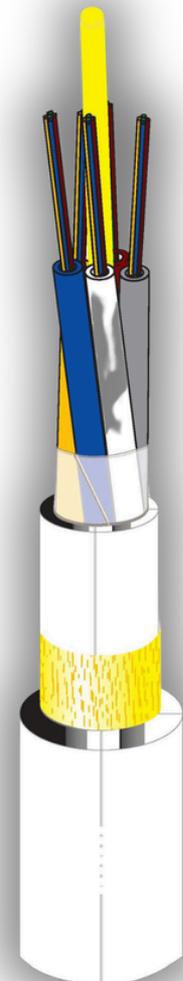
Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
According to NESC Conditions	3000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Singlemode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125), Non-
- Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs
- Waterproof Dry Core Design
- Tensile Strength according to NESC Light, Medium, Heavy Conditions and
- Different Span Lengths
- Improved Compressive Strength
- Single Jacket Design
- Rodent Resistant
- Tracking Resistant PE

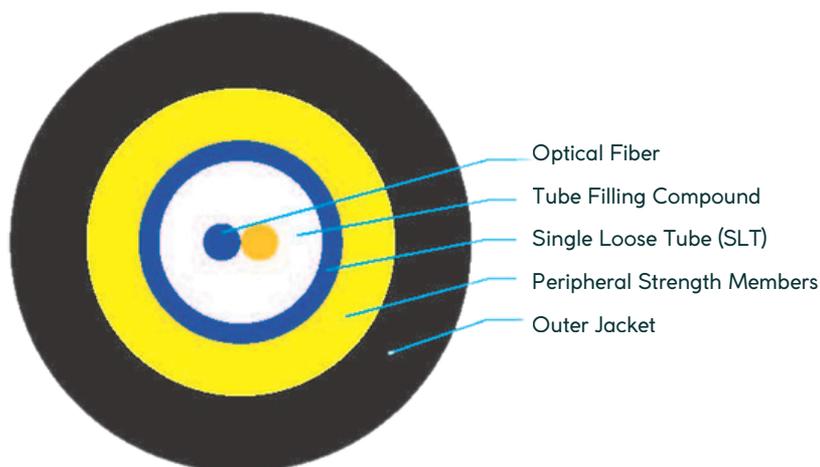
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



SINGLE JACKET, ALL DIELECTRIC SINGLE LOOSE TUBE OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone, Local Area, FTTx and Metro Networks with Indoor, Duct and Lashed Aerial installation methods. Suitable for installation by Air Blowing. This type of cable is used as Drop Cable and intended mainly for FTTx applications.



Features:

- Single Loose Tube (SLT) Design Reduced Cost
- Light Weight Non-Metallic Design
- Flexible Design and Easy Handling
- Fast Cable Preparation and Installation
- No Grounding Issues
- Protection Against Water and Moisture UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

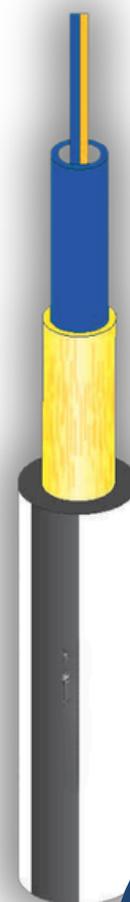
Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
1-12	1 (Central)	1-12	Not Applicable	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
1000 N/500 N	1000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Single mode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125), Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs Metallic Central Strength Member
- Waterproof Dry Core Design
- Design without Aluminum Tape Shielding Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets
- Higher Span Length Designs
- Bitumenized or Flooded Messenger Wire



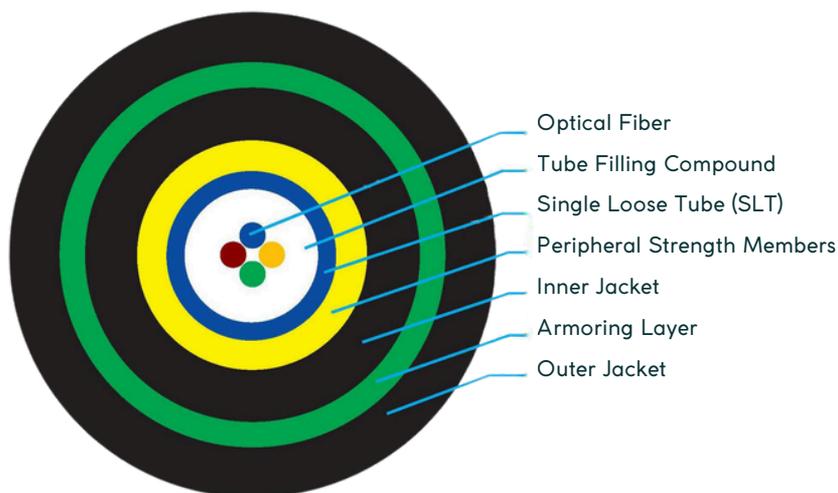
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



DOUBLE JACKET, SINGLE ARMOR, SINGLE LOOSE TUBE OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone, Local Area, FTTx and Metro Networks with Direct Burial, Duct and Lashed Aerial installation methods. The optional single jacket design is used as Drop Cable and intended mainly for FTTx applications.



Features:

- Multi Loose Tube (MLT) Design
- Non-Metallic Design
- Flexible Design and Easy Handling
- No Grounding Issues
- High Tensile Strength
- Improved Compressive Strength
- Protection Against Water and Moisture
- Designs for Different Span Lengths, Sag and Weather Conditions
- UV Stabilized LDPE or LLDPE or MDPE or HDPE Jacket

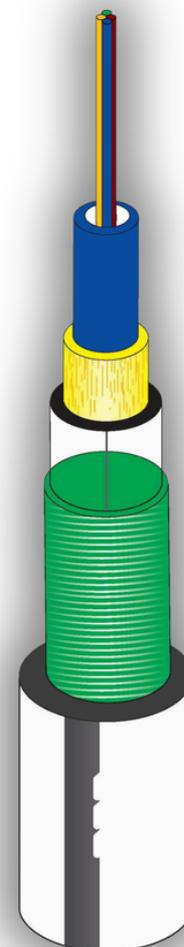
Specification:

Fiber Count	No.of Tubes	No.of Fibers/Tube	Central Strength Member	Core Filling
1-12	1 (Central)	1-12	Not Applicable	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min.Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
1500 N/ 750 N	2000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities (upto 16 Fibers)
- Singlemode (Standard, Low Water Peak), Multi mode (50/ 125, 62.5/ 125), Non-Zero Dispersion Shifted
- Tight Buffered Fiber Design
- Hybrid (Composite) Cable Designs
- Improved Tensile Strength
- Improved Compressive Strength
- Low Smoke, Zero Halogen, Flame Retardant Jackets
- Single Jacket Single Armor

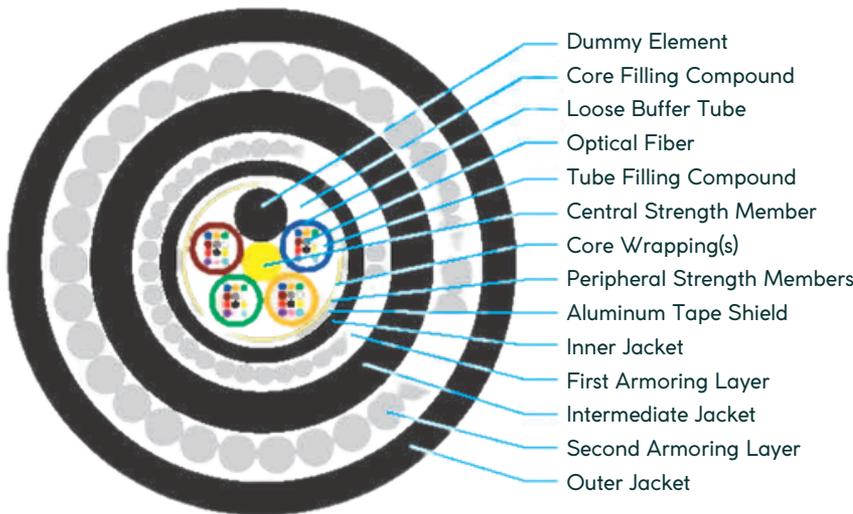


Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598

UNDERWATER / RIVER CROSSING TYPE OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone and Local Area Networks with Underwater installation method for Swamp, Lake and River Crossings.



Features:

- Multi Loose Tube (MLT) Design
- Double Layer Steel Wire Armor
- Improved Compressive Strength
- High Tensile Strength Aluminum Tape Shielded
- Protection Against Water and Moisture
- UV Stabilized HDPE Jacket

Specification:

Fiber Count	No. of Tubes	No. of Fibers/Tube	Central Strength Member	Core Filling
2-144	1-12	1-12	All Dielectric (FRP or GRP)	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min. Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
20000 N/8000 N	7000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities
- Singlemode (Standard, Low Water Peak), Multimode (50/ 125, 62.5/ 125), Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs Metallic Central Strength Member Waterproof Dry Core Design
- High Tensile Strength
- Improved Compressive Strength
- Double Jacket Single Armor Design
- Bitumenized Poly Propylene Yarns as Outer Jacket



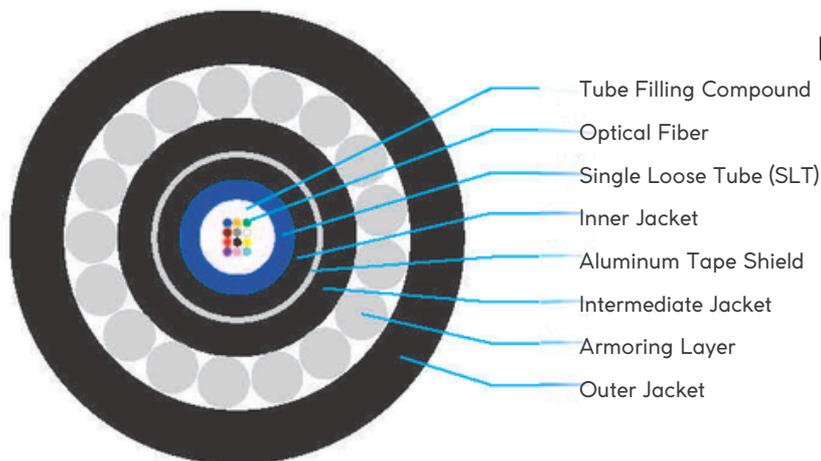
Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598



SUBMARINE TYPE SINGLE LOOSE TUBE OPTICAL FIBER CABLE

Application:

This type of optical cable is aimed to be used for voice, data, broadband and CATV transmission in Long Distance, Backbone and Local Area Networks with Underwater/Submarine installation method.



Features:

- Single Loose Tube (SLT) Design
- Light Weight Submarine Design
- One Layer Steel Wire Armor
- Improved Compressive Strength
- High Tensile Strength Aluminum Tape Shielded
- Protection Against Water and Moisture
- UV Stabilized HDPE Jacket

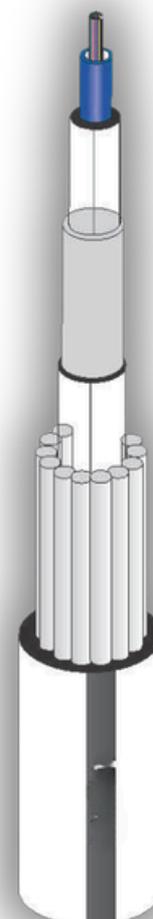
Specification:

Fiber Count	No.of Tubes	No.of Fibers/Tube	Central Strength Member	Core Filling
1-12	1 (Central)	1-12	Not Applicable	Jelly Filled

Max. Tensile Load Short/Long Term	Compressive Strength	Min.Bending Radius During After Installation	Environmental Characteristics Operation/Installation / Storage, °C
30000N/ 10000 N	7000 N/100 mm (min.)	ODx20/ODx10	-40 .. +70/-20 ... +60/-40 ... +70

Options:

- Higher Fiber Capacities (upto 16 Fibers)
- Higher Fiber Capacities with Central Steel Tube (upto 48 Fibers)
- Singlemode (Standard, Low Water Peak), Multi mode (50/125,62.5/ 125), Non-Zero Dispersion Shifted
- Hybrid (Composite) Cable Designs
- Improved Tensile Strength
- Improved Compressive Strength
- Central Steel Tube Design
- Heavy Duty Double Armor Layer Design
- Bitumenized Poly Propylene Yarns as Outer Jacket



Standards: ITU-T Recommendations, IEC 60794, IEC 60332, IEC 304 or EIA/TIA-598

Drop Cable

Application:

This type of optical drop cable is designed for last-mile fiber optic connections, providing reliable performance for FTTH (Fiber-to-the-Home), FTTB (Fiber-to-the-Building), FTTx networks, CCTV, and data transmission. It is suitable for both indoor and outdoor installations, with aerial, duct, or direct building entry methods.

Features:

- Compact and Lightweight Design for easy installation
- Excellent Bending Performance (Bend-Insensitive Fibers G.657)
- High Tensile Strength with FRP/Steel Reinforcement
- UV-Resistant HDPE Jacket for outdoor durability
- Flame-Retardant LSZH Jacket for indoor safety
- Moisture and Water Resistance with gel or dry water-blocking
- Easy Stripping and Termination for quick connectorization
- Compatible with Standard FTTH Hardware



Options:

- Fiber Counts: 1, 2, 4, 6, 8, 12 Fibers
- Singlemode (G.652.D, G.657.A1, G.657.A2 Bend-Insensitive) and Multimode (OM2, OM3, OM4)
- Self-Supporting (with FRP/Steel Messenger)
- Flat Drop Cable Design (Steel/FRP strength members)
- Indoor/Outdoor Hybrid Jacket Options
- Flame-Retardant, Low-Smoke Zero Halogen (LSZH) Outer Jacket
- Water-Blocking Elements for Outdoor Use

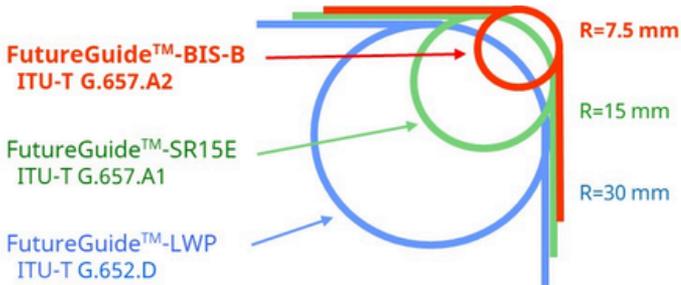


FutureGuide™-BIS-B

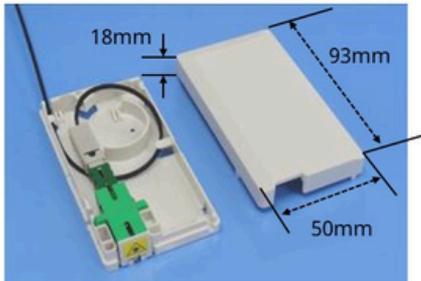


Application:

FutureGuide™-BIS-B's exceptional macrobending characteristics enable cable dimension reduction. Utilizing Fujikura's proprietary trench index profile technology, it achieves superior macrobending performance and minimal water peak attenuation, meeting G.657.A2 and G.652.D standards.



Minimum bending radii specified in ITU-T Recommendation



FutureGuide™-BIS-B enables compact and easy handling application

Features:

- Superior microband performance
- complying with ITU-T G.657.A2
- Reduced attenuation characteristics compared with conventional fibers such as ITU-T G. 652 fibers.

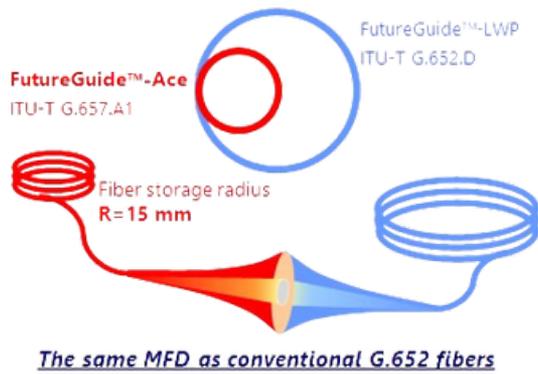
Customer's advantages

- Helps flexible wiring and to save wiring space and installation time with easy handling.
- Allows reduction of cable dimensions and high-count cables.
- Enables high fiber density in networks.
- Offers consistent and stable performance in the field.
- Produces excellent connectivity with existing access networks.
- Helps full-band CWDM by its zero(low)-water peak technology.

FutureGuide™-Ace

Application:

FutureGuide™-Ace stands out as a premier solution for its remarkable advancements in bending loss performance, maintaining the same MFD as standard single mode fibers while exhibiting reduced attenuation in comparison to conventional fiber options.

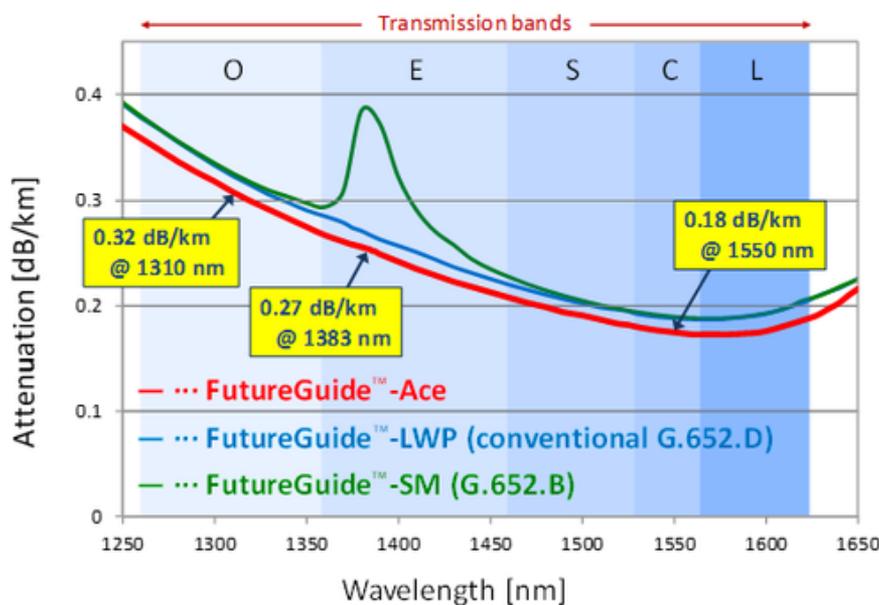


Features:

- Improved macro-bending loss exceeding ITU-T G.657.A1 and excellent micro-bending performance.
- Full compatibility with single mode fibers installed in existing optical fiber networks.
- Reduced attenuation characteristics compared with conventional fibers such as ITU-T G. 652 fibers.

Customer's advantages:

- Enables small diameter fiber storage and space saving of fiber splicing points.
- Provides consistent and stable performance in the field.
- Achieves lower splice loss with existing G.652 fibers maintaining excellent bending loss performance.
- Enables upgrading network systems to 100 Gbps or more.
- Gives more margin for optical loss budget of optical fiber networks and is suitable for advanced modulation formats or extension of the network span.



Optical Characteristics

Attenuation

- 1310 nm: ≤ 0.32 dB/km
- 1383 nm: ≤ 0.32 dB/km (*)
- 1550 nm: ≤ 0.18 dB/km
- 1625 nm: ≤ 0.20 dB/km

Macro-bending Loss

- 50 mm, 100 turns: ≤ 0.01 dB
- 30 mm, 10 turns at 1550 nm: ≤ 0.1 dB
- 30 mm, 10 turns at 1625 nm: ≤ 0.3 dB
- 20 mm, 1 turn at 1550 nm: ≤ 0.5 dB
- 20 mm, 1 turn at 1625 nm: ≤ 1.5 dB

Cut-off Wavelength

- Cable: ≤ 1260 nm

Chromatic Dispersion

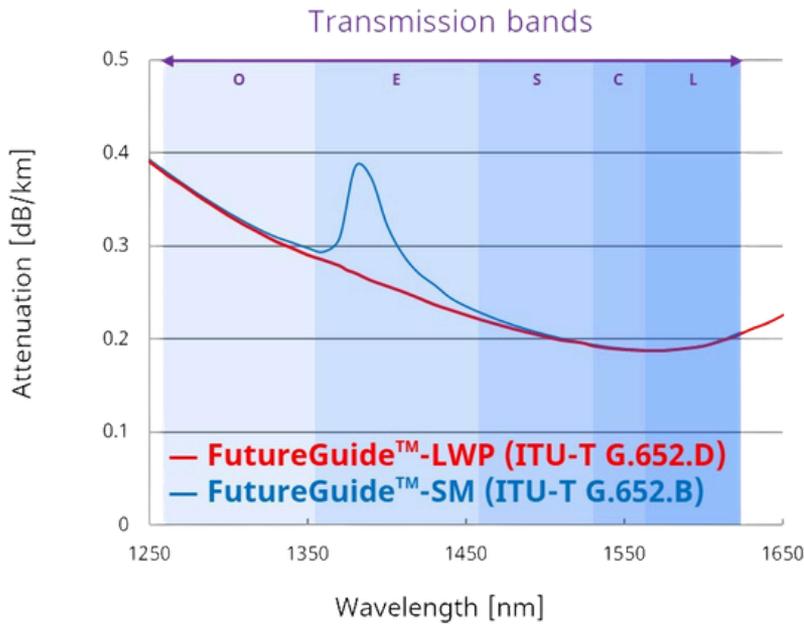
- 1285 - 1330 nm: ≤ 3.5 ps/(nm·km)
- 1550 nm: 13.3 - 18 ps/(nm·km)
- 1625 nm: 17.2 - 22 ps/(nm·km)

Structural Characteristics

- Mode Field Diameter: 1310 nm: 9.2 ± 0.4 μ m;
1550 nm: 10.4 ± 0.5 μ m
- Cladding Diameter: 125.0 ± 0.7 μ m
- Coating Diameter: Uncolored: 240 ± 5 μ m;
Colored: 250 ± 10 μ m
- Core Error: ≤ 0.5 μ m
- Cladding Non-circularity: $\leq 0.7\%$
- Coating-Cladding Error: ≤ 12 μ m
- Fiber Curl Radius: ≥ 4.0 m

Application:

Fujikura's coating technology fortifies FutureGuide™-LWP against harsh conditions, including external stresses, temperature variations, and water exposure. This enhanced durability boosts cable manufacturing efficiency and guarantees stable long-term performance in field installations.



Attenuation Spectrum of FutureGuide™-LWP

Features:

- Features
- Low(zero)-water-peak attenuation
- complying with ITU-T G.652.D
- Improved robustness against harsh environment
- by Fujikura's coating technology

Customer's advantages:

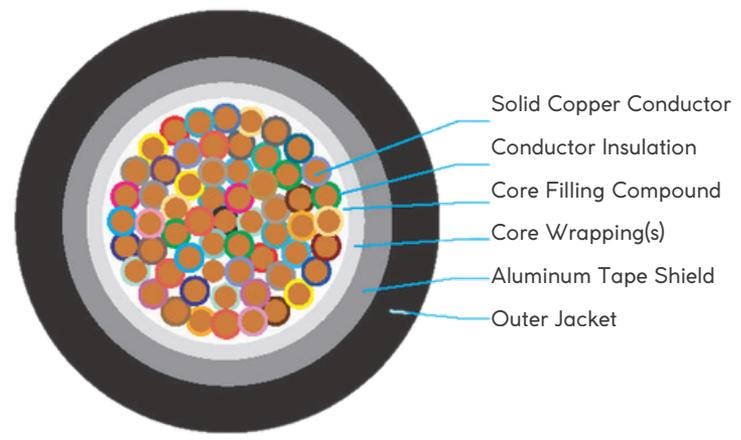
- Supports wide-range (full-band) transmission through E-band(1360 – 1460nm).
- Helps more flexible cable-designing and manufacturing.
- Enables stable performance for longer time after installation.



JELLY FILLED UNDERGROUND CABLE

Application:

This type of copper telecommunication cable is aimed to be used in Long Distance, Backbone and Distribution Networks with Duct, Direct Burial and Lashed Aerial installation methods. For aerial applications, the cable must be attached to a support messenger.



Features:

- Solid Annealed Bare Copper Conductor
- Jelly Filled Core
- Aluminum Tape Shielded
- Protection Against Water and Moisture
- Single Jacket

Specification:

- Capacity : 10 Pairs Upto 2400 Pairs
- Conductor Dia. : 0.4, 0.5, 0.6, 0.8, 0.9 mm (26, 24, 22, 19 AWG)
- Insulation Type : Foam-Skin or Solid
- Twisting Method : Pair or Quad
- Basic Units : 10 Pairs / 25 Pairs / 5 Quads
- Outer Jacket : Black PE

Electrical Characteristics:

- Conductor Resistance: 144 Ohm / km 0.4 mm
89.5 Ohm/km 0.5 mm
63 Ohm/km 0.6 mm
35.5 Ohm/km 0.8 mm
28 Ohm/km 0.9 mm
- Mutual Capacitance: 45, 50, 52, 55 nF/km or as per Customer Specification
- Insulation Resistance: 1600 MOhm.km

Options:

- Dry Core Design
- Design with Corrugated Aluminum Shield
- Mutual Capacitance Value may vary as per Customer
- Specification LDPE, LLDPE, MDPE, HDPE Jackets

Standards: IEC 708 - (1-4), ANSI / ICEA specification

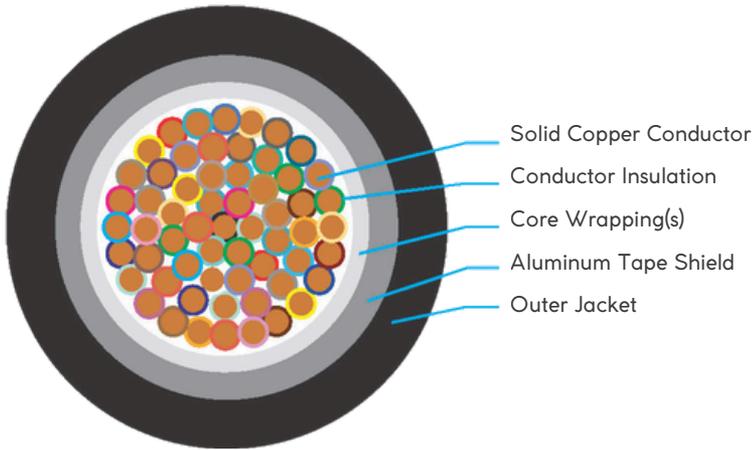


DRY CORE UNDERGROUND CABLE



Application:

This type of copper telecommunication cable is aimed to be used in Long Distance, Backbone and Distribution Networks with Duct, Direct Burial and Lashed Aerial installation methods. For aerial applications, the cable must be attached to a support messenger.



Features:

- Solid Annealed Bare Copper Conductor
- Dry Core Aluminum Tape Shielded
- Protection Against Moisture
- Single Jacket

Specification:

Capacity : 10 Pairs Upto 2400 Pairs
Conductor Dia. : 0.4, 0.5, 0.6, 0.8, 0.9 mm (26, 24, 22, 19 AWG)
Insulation Type : Foam-Skin or Solid
Twisting Method : Pair or Quad
Basic Units : 10 Pairs / 25 Pairs / 5 Quads
Outer Jacket : Black PE

Electrical Characteristics:

Conductor Resistance: 144 Ohm / km 0.4 mm
89.5 Ohm/km 0.5 mm
63 Ohm/km 0.6 mm
35.5 Ohm/km 0.8 mm
28 Ohm/km 0.9 mm

Mutual Capacitance: 45, 50, 52, 55 nF/km or as per Customer Specification

Insulation Resistance: 1600 MOhm.km

Options:

- Jelly Filled Core Design
- Design with Corrugated Aluminum Shield
- Mutual Capacitance Value may vary as per Customer Specification
- LDPE, LLDPE, MDPE, HDPE Jackets

Standards: IEC 708 - (1-4), ANSI / ICEA specification

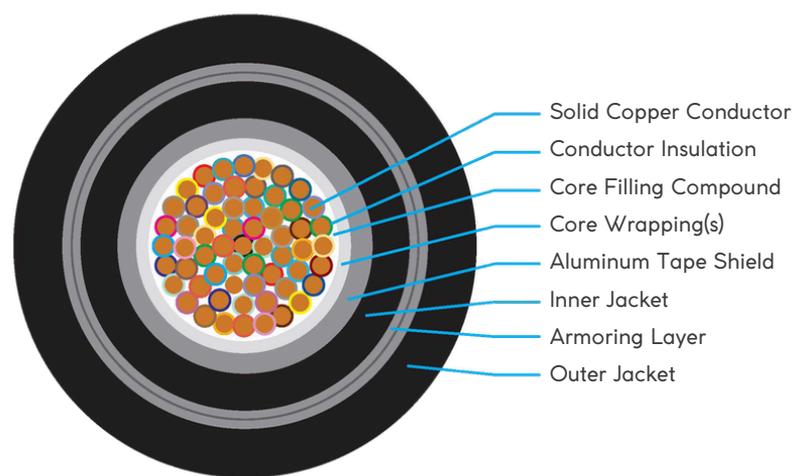




JELLY FILLED DIRECT BURIAL CABLE

Application:

This type of copper telecommunication cable is aimed to be used in Long Distance, Backbone and Distribution Networks with Direct Burial installation method.



Features:

- Solid Annealed Bare Copper Conductor
- Jelly Filled Core Aluminum Tape Shielded
- Protection Against Water and Moisture
- Double Layer Galvanized Steel Tape Armor
- Rodent Resistant
- Double Jacket

Specification:

Capacity : 10 Pairs Upto 2400 Pairs
 Conductor Dia. : 0.4, 0.5, 0.6, 0.8, 0.9 mm (26, 24, 22, 19 AWG)
 Insulation Type : Foam-Skin or Solid
 Twisting Method : Pair or Quad
 Basic Units : 10 Pairs / 25 Pairs / 5 Quads
 Outer Jacket : Black PE

Electrical Characteristics:

Conductor Resistance: 144 Ohm / km 0.4 mm
 89.5 Ohm/km 0.5 mm
 63 Ohm/km 0.6 mm
 35.5 Ohm/km 0.8 mm
 28 Ohm/km 0.9 mm

Mutual Capacitance: 45, 50, 52, 55 nF/km or as per Customer Specification

Insulation Resistance: 1600 MOhm.km

Options:

- Design with Corrugated Aluminum Shield
- Corrugated Steel Tape Armor Design
- Steel Wire Armor Design (special design for water crossing purpose)
- Mutual Capacitance Value may vary as per Customer
- Specification LDPE, LLDPE, MDPE, HDPE Jackets

Standards: IEC 708 - (1-4), ANSI / ICEA specification

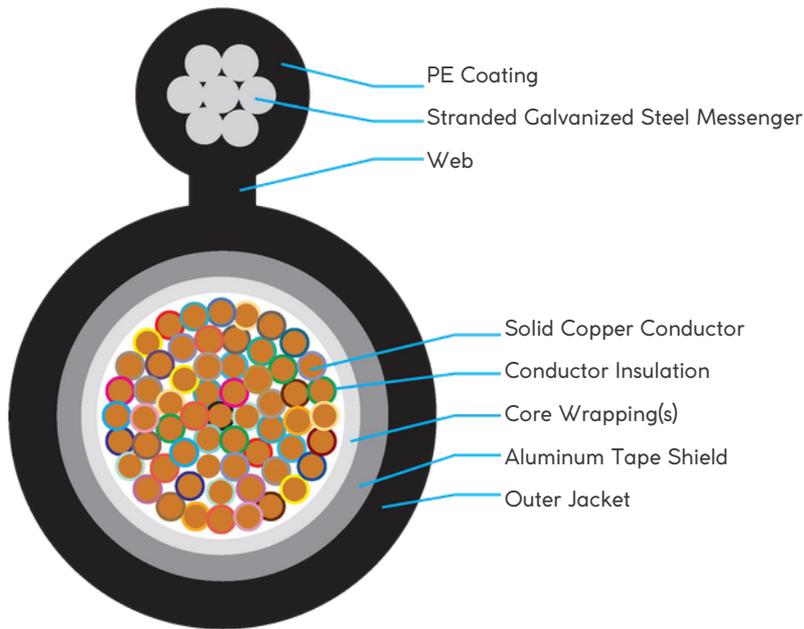


DRY CORE FIGURE-8 CABLE



Application:

This type of copper telecommunication cable is aimed to be used in Long Distance, Backbone, Distribution Networks and Subscriber Extensions with Aerial installation method.



Features:

- Solid Annealed Bare Copper Conductor
- Dry Core Aluminum Tape Shielded
- Protection Against Moisture
- Single Jacket
- Stranded Galvanized Steel Messenger

Specification:

Capacity : 2 Pairs Upto 400 Pairs
Conductor Dia. : 0.4, 0.5, 0.6, 0.8, 0.9 mm (26, 24, 22, 19 AWG)
Insulation Type : Foam-Skin or Solid
Twisting Method : Pair or Quad
Basic Units : 10 Pairs / 25 Pairs / 5 Quads
Outer Jacket : Black PE

Electrical Characteristics:

Conductor Resistance: 144 Ohm / km 0.4 mm
89.5 Ohm/km 0.5 mm
63 Ohm/km 0.6 mm
35.5 Ohm/km 0.8 mm
28 Ohm/km 0.9 mm

Mutual Capacitance: 45, 50, 52, 55 nF/km or as per Customer Specification

Insulation Resistance: 1600 MOhm.km

Options:

- Jelly Filled Core Design
- Design without Aluminum Tape Shielding
- Design with Corrugated Aluminum Shield
- Mutual Capacitance Value may vary as per Customer Specification
- LDPE, LLDPE, MDPE, HDPE Jackets

Standards: IEC 708 - (1-4), ANSI / ICEA specification

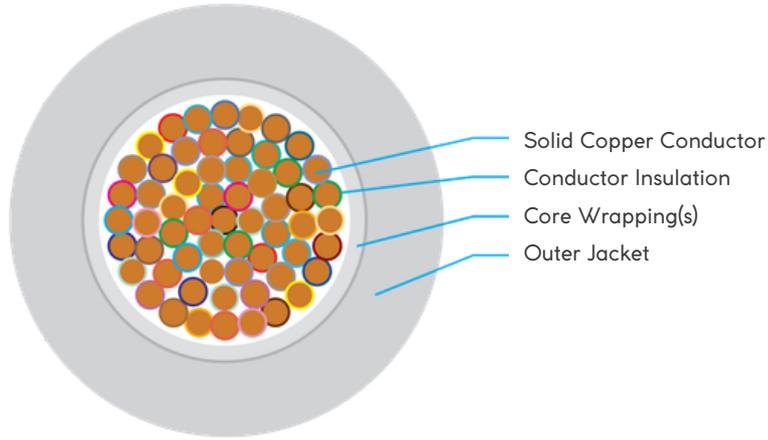




DRY CORE INDOOR CABLE

Application:

This type of copper telecommunication cable is aimed to be used for Indoor and Local Area Network applications.



Features:

- Solid Annealed Bare Copper Conductor
- Dry Core
- Flame Retardant Jacket

Specification:

Capacity : 10 Pairs Upto 200 Pairs
 Conductor Dia. : 0.4, 0.5, 0.6, mm (26, 24, 22 AWG)
 Insulation Type : PVC
 Twisting Method : Pair or Quad
 Basic Units : 10 Pairs / 25 Pairs / 5 Quads
 Outer Jacket : PVC

Electrical Characteristics:

Conductor Resistance: 144 Ohm / km 0.4 mm
 89.5 Ohm/km 0.5 mm
 63 Ohm/km 0.6 mm

Mutual Capacitance: 90 nF/km

Insulation Resistance: 200 MOhm.km

Options:

- Tinned Copper Conductor
- Tinned Copper Drain Wire Conductor
- PE (Foam-skin or Solid) Insulation
- Aluminum Tape Shielded
- Mutual Capacitance Value may vary as per Customer Specification
- Halogen Free Flame Retardant (HFFR) Jacket

Standards: IEC 708 - (1-4), ANSI / ICEA specification

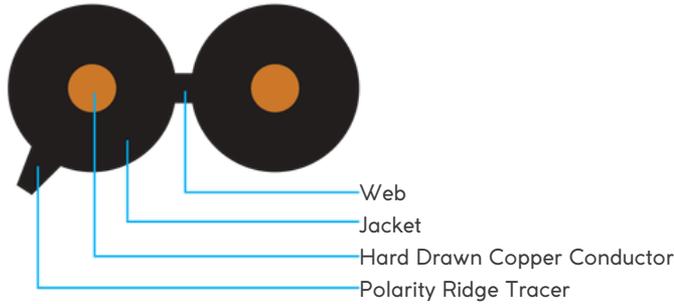




DROP WIRE

Application:

This type of copper telecommunication wire is aimed to be used for extension to subscriber premises.



Features:

- Hard Drawn Copper Conductor
- One Raised Ridge Tracer to Identify the Polarity Black PE Jacketed

Specification:

Conductor Dia.: 0.8, 0.9, 1.0, 1.2 mm (18.5, 19 AWG)

Insulation Type : HDPE

Coil Length : 500 ± 100 m

Electrical Characteristics:

Conductor Resistance: 36.78 Ohm/km 0.8 mm
 28.96 Ohm/km 0.9 mm
 23.39 Ohm/km 1.0 mm

Insulation Resistance : 10000 MOhm.km

Options:

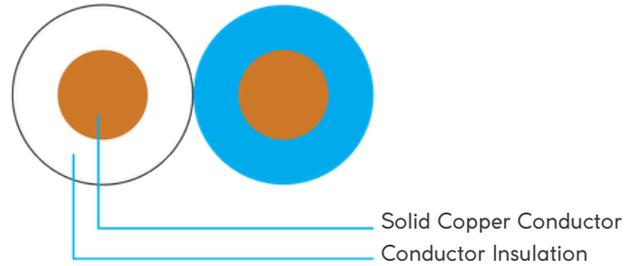
- Copper Cladded Steel Wire Conductor
- Halogen Free Flame Retardant (HFFR) Insulation
- Steel Support Messenger for Aerial Applications

Standards: IEC 708 - (1-4), ANSI / ICEA specification

JUMPER WIRE

Application:

This type of copper telecommunication wire is aimed to be used for cross-connections in telephone switch, cabinets and subscriber's premises.



Features:

- Solid Annealed Copper Conductor
- Semi Rigid Polyvinyl Chloride (PVC) Insulated
- Each Conductor is Colored for Identification
- Twisted to Form a Pair

Specification:

Conductor Dia. : 0.5, 0.6 mm (24, 22 AWG)

Insulation Type: PVC

Coil Length : 500 ± 100 m

Electrical Characteristics:

Conductor Resistance: 36.78 Ohm/km 0.5 mm
 66 Ohm/km 0.6 mm
 Insulation Resistance: 200 MOhm.km

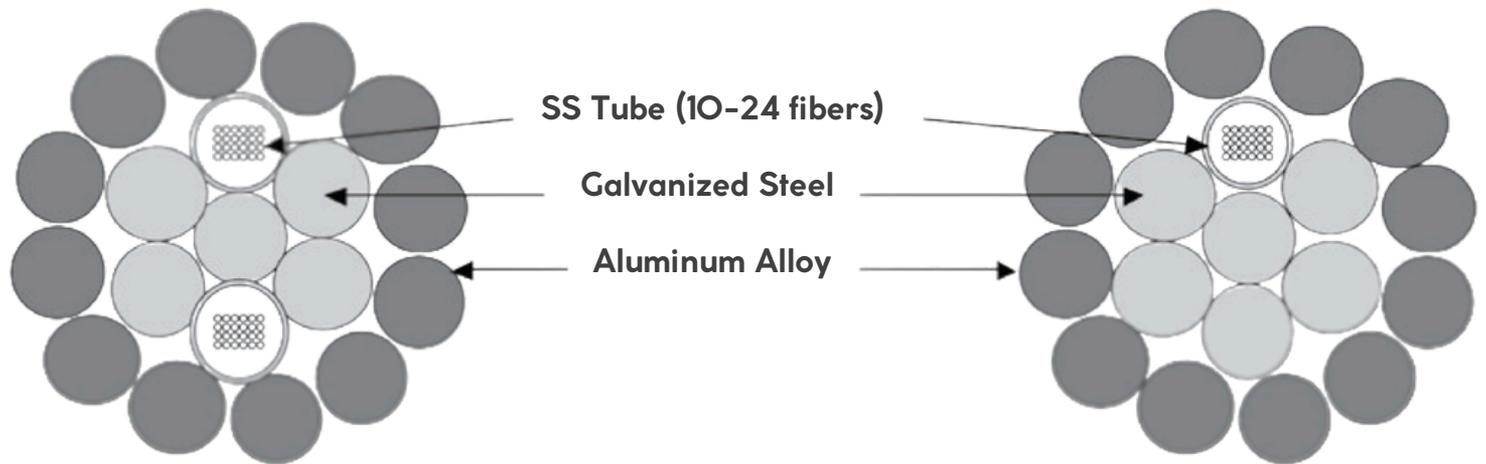
Options:

- Solid Tinned Copper Wire Conductor
- Halogen Free Flame Retardant (HFFR) Insulation
- 0.8 and 0.9 mm Conductor Diameter

Standards: IEC 708 - (1-4), ANSI / ICEA specification

COMPOSITE FIBER OPTIC OVERHEAD GROUND WIRE OPGW

- IEC 61089** Application: Overhead electrical stranded conductors for power transmission and distribution.
- IEC 60794-4** Application: Optical fiber cables for use along power lines, including Optical Ground Wire (OPGW) and All-Dielectric Self-Supporting (ADSS) cables.
- IEEE Std 1138** Application: Optical fiber cables for use along power lines, including Optical Ground Wire (OPGW) and All-Dielectric Self-Supporting (ADSS) cables.



Conductor with galvanized steel wires with one or two optical ground wire tubes stranded and protected by one aluminum alloy.

Electrical and Construction Data of OPGW

Designation Code	Area (mm ²)			Composition						Diameter		Linear Mass kg/km	Rated Strength kN	Resistance at 20°C (D.C.) Ohm/km
				Number			Diameter (mm)			Steel	Total			
	Alloy	Steel	Total	Alloy	Steel	SS Tube	Alloy	Steel	Tube	mm	mm			
85/42	84,82	42,41	127,23	12	6	1	3	3	3	9	15	595	85,2	0,393
91/45	90,57	45,29	135,86	12	6	1	3,05	3,05	3	9,15	15,25	617	88,1	0,368
85/35	84,82	35,34	120,16	12	6	2	3	3	3	9	15	558	75,2	0,393
91/38	90,57	37,74	128,31	12	6	2	3,05	3,05	3	9,15	15,5	615	77,2	0,368
97/48	96,5	48,3	144,8	12	6	1	3,2	3,2	3,2	9,6	16	678	81,6	0,344

Reference Standards

- IEC 61089 (IEC 60812) Round wire concentric lay overhead electrical stranded conductors
- IEC 60794-4 Optical fiber composite overhead ground wire
- IEEE Std 1138 IEEE Standard construction of optical fiber composite overhead ground wire (OPGW) for use on electric utility power lines

Raw Material

- ITU T G. 652-G. 655 Characteristics of single mode fibers
- EN 50183 Conductors for overhead lines-Aluminum-Magnesium-Silicon alloy wires
- EN 50189 Conductor for overhead lines. Zinc coated steel wires
- IEC 61394 Overhead lines-characteristics of greases for Al. alloy and steel bore conductors



AQ7280

Multi task touch module

One OTDR



Features:

- Multi-tasking Enhancing productivity
- Smart Mapper
- Dual-operation Mode, Touch screen and hard-key buttons
- Multi-Fiber Measurement
- Lightning Startup Time Under 10 seconds!
- Wireless Connectivity, Remote control. Remote data transfer
- 15 Hours Battery Operation
- Eagle Eye: Hunt down your breakpoint precisely and promptly

Specifications

Applicable	Wavelength	Dynamic range	Model
Fiber	1310/1550nm	38/36dB	AQ7282A
SMF	1310/1550nm	42/40dB	AQ7283A
	1310/1550nm	46/45dB	AQ7284A
	1310/1550nm	50/50dB	AQ7285A
	1310/1550 Filtered with 165 Onm	42/40/40dB	AQ7283F
	1310/1550/1625nm	42/40/39dB	AQ7283H
	1310/1550/1625nm	46/45/44dB	AQ7284H
	1310/1490/1550/1625nm	42/38/40/40dB	AQ7283K
	MMF	850/1300nm	25/27dB





YOKOGAWA AQ1210

Features:

- Seven models ideal for installation and maintenance of various optical communication access networks
- Footprint approx. size of A5 paper, weight of 1 kg (2.2 Lbs.)
- 10 hours battery operation
- The AQ1210 features a capacitive multi-touch touchscreen, 5.7-inch LCD, and a “field use” friendly rotary dial.
- Data transfer and remote control via Wi-Fi or ETHERNET connection.
- Measurement of PON systems with up to 128 splits
- Hi-Speed real-time measurement
- Multi-fiber measurement, Smart mapper function, PDF reporting
- A variety of optional features for multi-tasking.

Specifications

Wavelength (nm)	1310 ±25/1550 ±25/1625 ±10
Dynamic range (dB)	37/35/35
Number of optical ports	1
Distance range (km)	0.1 to 256
Pulse width (ns)	5 to 20000
Event dead zone (m)	0.75
Attenuation dead zone (m)	4
PON dead zone (m)	35
Number of sampling points	256.000
Display	5.7-inch color TFT LCD

90S+

FUJIKURA Fusion Splicer



FUJIKURA

Features:

- Active Blade Management Technology (ABMT): Maximizes cleaver blade life and ensures consistent high-quality splicing.
- Core Alignment Technology: Provides accurate core alignment for low splice loss and high performance.
- Fully Automated Splicing: Simplifies operations with automated wind protector, fiber clamps, and heater operations.
- Fast Operation: Splicing time of 6 seconds and heating time of 9 seconds for efficient workflows.
- Robust Design: Shock-resistant, water-resistant, and dustproof for reliable field use.
- User-Friendly Interface: Large LCD screen with easy-to-navigate menu for quick setup and operation.
- Multiple Fiber Types Supported: Single-mode (SM), multimode (MM), and specialty fibers.
- Wireless Connectivity: Bluetooth-enabled for real-time blade management and maintenance tracking.
- Enhanced Battery Life: Supports up to 300 splice and heat cycles per charge.
- Storage Capacity: Internal memory for storing up to 20,000 splice results.

Splicing Performance

- Splice Time: 6 seconds (SM fiber, Quick mode).
- Heating Time: 9 seconds (60 mm sleeve).
- Typical Splice Loss:
 - Single-mode (SM): 0.02 dB
 - Multimode (MM): 0.01 dB
- Alignment Method: Core-to-core alignment using high-precision LID-SYSTEM technology.
- Fiber Compatibility
- Supported Fiber Types:
 - Single-mode (ITU-T G.652, G.657)
 - Multimode (ITU-T G.651)
 - Specialty fibers.
- Fiber Count: Single fiber.
- Fiber Dimensions: Cladding diameter: 125 μm ; Coating diameter: 160 μm –1,000 μm .
- User Interface and Connectivity
- Screen: 4.9-inch color LCD with touch panel.
- Connectivity:
 - Bluetooth for wireless communication.
 - USB for data transfer and software updates.
- Power and Battery
- Battery Type: Rechargeable lithium-ion.
- Battery Capacity: Up to 300 splices and heat cycles per charge.
- Power Supply: AC adapter (100–240 V, 50/60 Hz).
- Environmental Durability
- Shock Resistance: Drop-tested from 76 cm height.
- Water Resistance: IPX2-rated.
- Dust Resistance: IP5X-rated.
- Operating Temperature: -10°C to +50°C.
- Memory and Storage
- Splice Result Storage: Up to 20,000 results.
- Heater Program: 100 customizable programs.



FUJIKURA CT-50

FIBER CLEAVER

HIGH-PRECISION FIBER CLEAVER DESIGNED FOR SINGLE FIBER SPLICING IN TELECOMMUNICATIONS, DATA CENTERS, AND POWER NETWORKS.

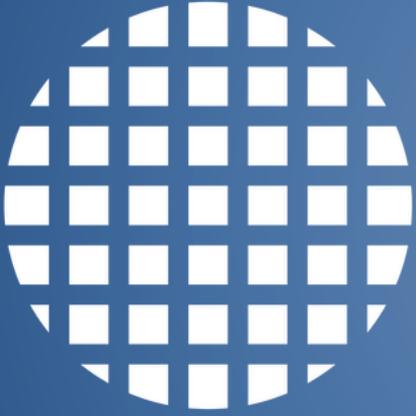


Features:

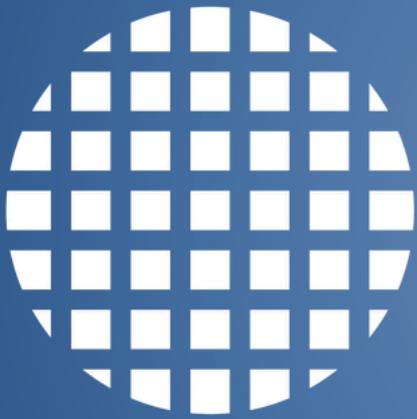
- Automatic Blade Rotation:
 - Extends blade life by ensuring even wear.
 - Supports Active Blade Management Technology (ABMT) when paired with compatible fusion splicers (e.g., Fujikura 9OS+).
- One-Step Operation:
 - Cleaving and off-cut collection are completed in one action for efficiency.
- Durable Design:
 - Shock-resistant and robust for use in demanding field environments.
- Wireless Connectivity:
 - Bluetooth-enabled for integration with compatible splicers to monitor and adjust blade position.
- Replaceable Parts:
 - Easily replaceable blade and components for reduced downtime.

Technical Specifications:

- Fiber Type Compatibility:
 - Single-mode (SM) and multimode (MM) fibers.
- Fiber Dimensions:
 - Cladding Diameter: 125 μm .
 - Coating Diameter: 160–1,000 μm .
- Cleave Angle Accuracy:
 - Typical cleave angle: $\leq 0.5^\circ$.
- Blade Life:
 - Up to 60,000 cleaves (when used with ABMT).
- Weight:
 - Approximately 300 g.
- Dimensions:
 - 96 mm \times 98 mm \times 54 mm.



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