

OPTICAL FIBER CABLE





COMPANY PROFILE

Jiangsu Tongguang Communication Co., Ltd., herein after "the Company", founded in 1991, is one of the earliest optical communication cable manufacturers in China. The company restructured into joint-stock enterprise in 2003. After two large-scale expansions, it has turned into a modern enterprise specializing in optical communication cable, and is registered as one of the top ten cable production bases.

The company is registered in Haimen of Jiangsu Province in East of China, with registered capital of hundreds million RMB. It covers over 100,000 square meters and has over 500 employees.

The company has passed ISO9001 international quality system certification, the ISO14001 Environmental Management System certification and OHSMS18001 Occupational Health and Safety Management System Certification. Introducing complete sets of advanced production and testing equipment from the United States, Britain, Austria and Japan, the company's has annual production capability of over 10 million f-km. TG Communication's sales, for many years, have been in the forefront of the industry.

Research and products

Combined with several senior experts in optical communications cable industry and hundreds of professional engineers, TG Communication's technical team has strong R & D capacity and is dedicated to the research and development of innovative products. The company has obtained dozens of patents, and has its own intellectual property rights for the products.

The company strictly implement relevant international standards and participation in the formulation and implementation of national standard and the relevant industry standards.

The company's products cover indoor/outdoor optical communication cable and special application optical cable with central loose tube, concentric stranded loose tube optical unit. Including conventional underground cable, lightning protected direct buried cable, conventional duct optical cable, conventional aerial optical cable, Figure-8 optical cable, mining optical cable, logging optical cable, strain sensing optical cable, security alert optical cable and non-metallic optical cable, flame retardant optical cable, rodent/termite protected cable, indoor and outdoor flexible optical cable, bow-shape optical cable, bow-shape self-supporting optical cable, optical composite cable etc. It also offers relevant accessories and fittings. TG Communication is one of the most company varieties of optical cable manufacturers in China. The company also provides comprehensive optical cable solutions under customers' requirements.

Business and Services

The company applies policies of strict selection of raw materials and fine workmanship, sustainable development; customers' stratification first, pursuit for win-win situation; dedicating to provide customers with world-class quality level of fiber optic cable, TG Communication's products have won the users approval, and been widely used in various fields of telecommunication, broadcasting, railway system, oil transmission system, express way system; and been exported to Sudan, Ethiopia, Oman, Nigeria, Russia and etc.

The sales network covers all provinces and cities in China; TG Communication also sets representative offices in Asia and Europe. Through the after-sales service center worldwide, the company is able to provide its customers with best products and professional services day in and day out.

The 21st century is an era of rapid development for information industry, Jiangsu Tongguang Communication Co.,Ltd., is dedicated to work closely with customers and create value for them, by providing professional services. TG Communication is also reparing to cooperate with counterparts to create the future of optical communication.

GYXTW Optical Fiber Cables

Description:

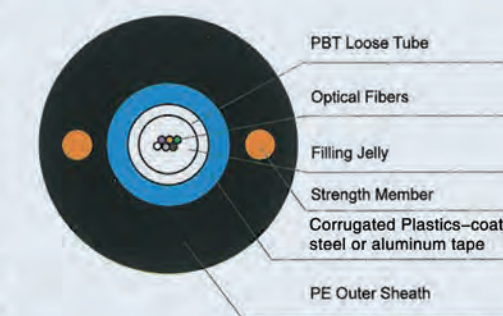
The structure of the cables is like that: a PBT loose tube is put in the center of cable, the tube is overlap-wrapped with a layer of double corrugated plastics-coated steel tape or aluminum tape, and two steel wires are placed among PE sheath parallel with each other as strength member. The loose tube is made up of materials with good temperature performance in which several single-mode or multi-mode fibers with proper excess length are put in. The tube is also full of water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances	
1	Allowable tensile force (N)	short-term	1500
		long-term	600
2	Allowable crash pressure(N/10cm)	short-term	1000
		long-term	300
3	Impact: 5 points, 3 times per point (N•m)	5	
4	Application	Aerial and duct Application	

Structure Diagram

Cross Section Drawing:



GYXTS Optical Fiber Cables / GYXTA Optical Fiber Cables

Description:

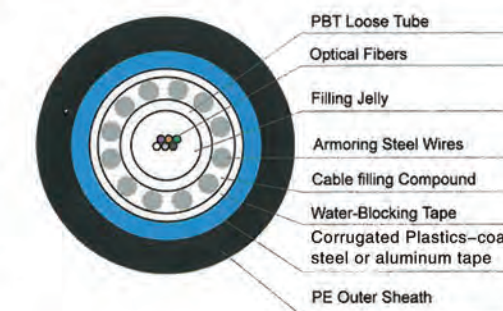
The structure of this kind of cables is like that: one PBT loose tube is put in the center of cable, the tube is wrapped with some medium carbon phosphated steel wires outside, and the gaps between these wires are filled with water-proof filling compound. Then the outside of those steel wires are wrapped with water-swellable tapes and overlap-wrapped with a layer of double side plastics-coated, corrugated plastics-coated steel or aluminum tape. Finally, a PE sheath is extruded outside. The loose tube is made up of materials with good temperature performance in which several single-mode or multi-mode fibers with proper excess length are put in. The tube is also full of water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances	
1	Allowable tensile force (N)	short-term	1500
		long-term	600
2	Allowable crash pressure(N/10cm)	short-term	1000
		long-term	300
3	Impact: 5 points, 3 times per point (N•m)	5	
4	Application	Aerial, direct-burial, and duct Application	

Structure Diagram

Cross Section Drawing:



GYTA Optical Fiber Cables

Description:

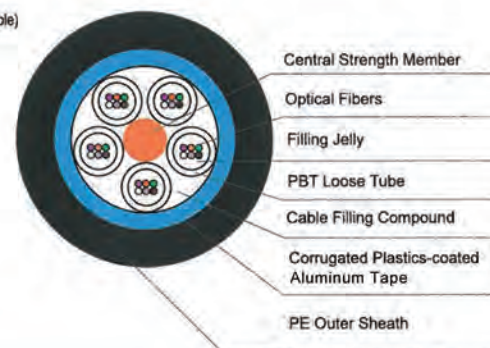
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is overlapped with plastics-coated aluminum tape, and a PE sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500or20.8G(Notes:G is the weight of 1 km cable)
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



GYTA53 Optical Fiber Cables

Description:

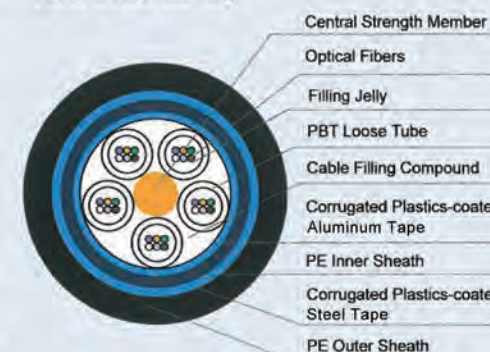
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is overlapped with aluminum tape, and a PE inner sheath is extruded outside, then a corrugated plastics-coated steel tape is applied outside, and another PE sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 3000
		long-term 1000
2	Allowable crash pressure(N/10cm)	short-term 3000
		long-term 1000
3	Impact: 5 points, 3 times per point (N·m)	10
4	Application	Direct-burial Application

Structure Diagram

Cross Section Drawing:



GYTS Optical Fiber Cables

Description:

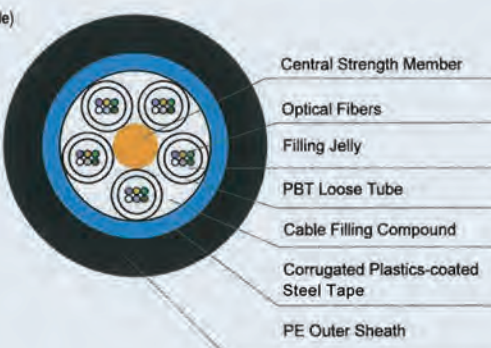
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is applied with corrugated plastics-coated steel tape, and a PE sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500or20.8G(Notes:G is the weight of 1 km cable)
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



GYTA5333 Optical Fiber Cables

Description:

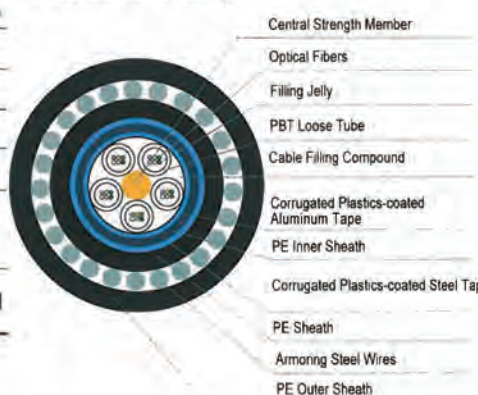
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is overlap-wrapped with aluminum tape, and a PE inner sheath is extruded outside, then a corrugated plastics-coated steel tape is wrapped outside, and another PE sheath is extruded outside, a layer of small steel wires are stranded outside the sheath, and a PE outer sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances Requirement for Type II	Performances Requirement for Type III	Performances Requirement for Type I
1	Allowable tensile force (N)	short-term 10000	20000	40000
		long-term 4000	8000	16000
2	Allowable crash pressure(N/10cm)	short-term 5000	6000	6000
		long-term 3000	4000	4000
3	Impact: 5 points, 3 times per point (N·m)	10	10	10
4	Application	Direct-burial	Direct-burial	Direct-burial

Structure Diagram

Cross Section Drawing:



GYTA33 Optical Fiber Cables

Description:

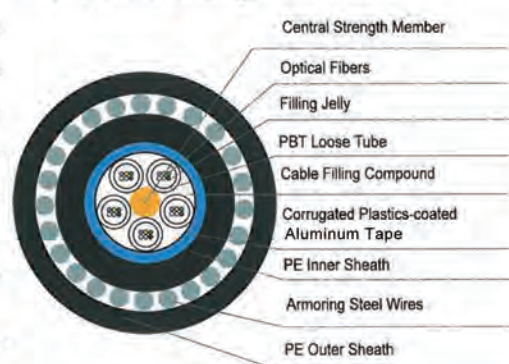
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is overlap-wrapped with aluminum tape, and a PE inner sheath is extruded outside, then a layer of small steel wires are stranded, and a PE outer sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 10000
		long-term 4000
2	Allowable crash pressure(N/10cm)	short-term 5000
		long-term 3000
3	Impact: 5 points, 3 times per point (N·m)	10
4	Application	Direct-burial Application

Structure Diagram

Cross Section Drawing:



GYTY53 Optical Fiber Cables

Description:

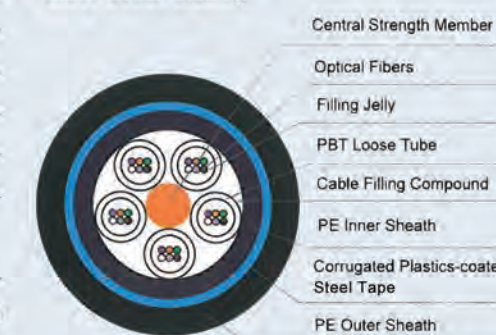
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is extruded a PE inner sheath, then a corrugated plastics-coated steel tape is applied outside, and a PE sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 3000
		long-term 1000
2	Allowable crash pressure(N/10cm)	short-term 3000
		long-term 1000
3	Impact: 5 points, 3 times per point (N·m)	10
4	Application	Direct-burial Application

Structure Diagram

Cross Section Drawing:



GYFTY Fiber Cables

Description:

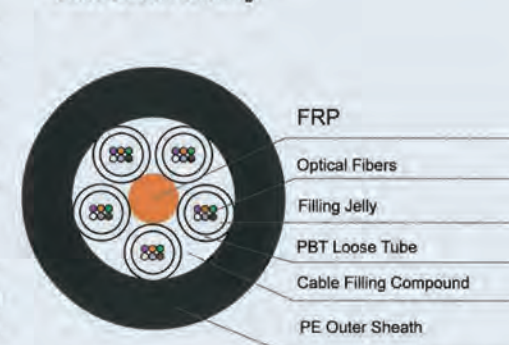
The structure of this kind of cables is like that: a nonmetallic strength member is put in the center of cable, several loose tubes (or partially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound, and a PE sheath is extruded outside finally. For cables with large fiber count, usually an additional layer of PE sheath is extruded outside the central strength member. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fibers with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500 or > 0.8G*
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



*Note:G is the weight of 1km cable

GYDXTW Optical Fiber Cables

Description:

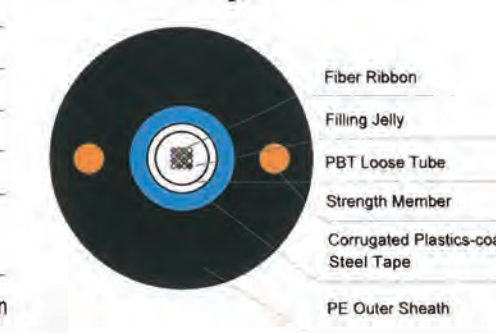
The structure of the cables is like that: a PBT loose tube is put in the center of cable, the tube is overlap-wrapped with a layer of double side plastics-coated corrugated steel tape, and two steel wires are placed among PE sheath parallel with each other as strength member. The loose tube is made up of materials with good temperature performance in which several single-mode or multi-mode fiber ribbons with proper excess length are put in. The tube is also full of water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



GYDTA Optical Fiber Cables

Description:

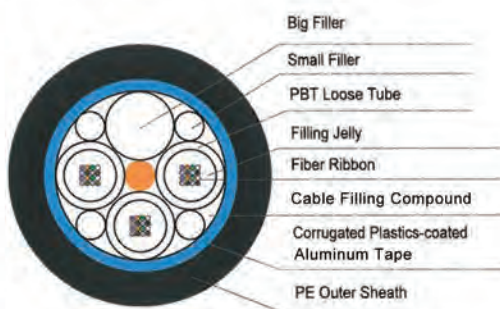
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or patrially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is overlapped with plastics-coated aluminum tape, and a PE sheath is extruded outside finally. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fiber ribbons with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500 or > 0.8G *
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



*Note G is the weight of 1km cable

GYDTS Optical Fiber Cables

Description:

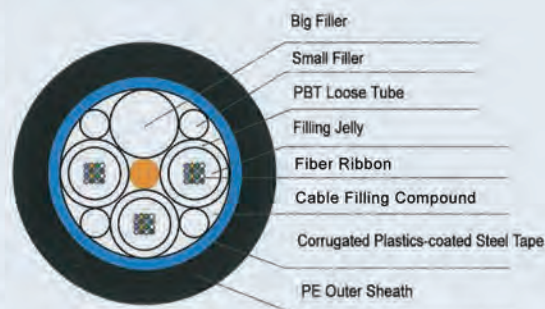
The structure of this kind of cables is like that: a metal strength member is put in the center of cable, several loose tubes (or patrially fillers) are stranded outside of the central strength member and the gaps between loose tubes are filled with water-proof filling compound. The outside of the cable core is applied with corrugated plastics-coated steel tape, and a PE sheath is extruded outside finally. The loose tube is extruded from materials with good temperature performance and several single-mode or multi-mode fiber ribbons with proper excess length are put in the tube which is filled with water-proof filling jelly for fiber protection.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500 or > 0.8G *
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial and duct Application

Structure Diagram

Cross Section Drawing:



*Note G is the weight of 1km cable

GYXTC8S Micro Figure-8 Aerial Optical Fiber Cables

Application:

Suitable for FTTH, MAN, Access Network application.

Designed for quick self-support aerial installation without the need of messenger wires and pothooks.

Main Mechanical Characteristics and Application:

No.	Item	Performances
1	Allowable tensile force (N)	short-term 1500
		long-term 600
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial Application
5	Operational temperature range	-40°C ~ +70°C

Structure Diagram

Cross Section Drawing:



GYTC8S Strengthen Figure-8 Aerial Optical Fiber Cables

Application:

Suitable for FTTH, MAN, Access Network application.

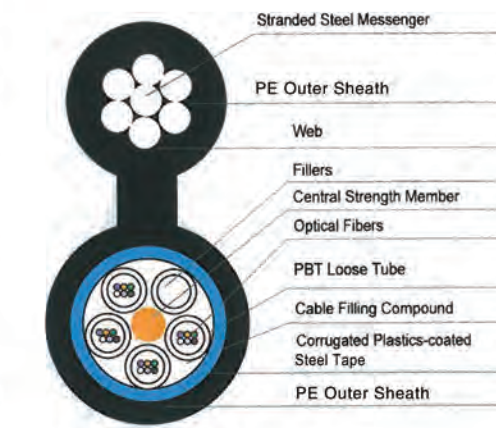
Designed for quick self-support aerial installation without the need of messenger wires and pothooks.

Structure Diagram

Cross Section Drawing:

Main Mechanical Characteristics and Application:

No.	Item	Performances Requirement for Type II
1	Allowable tensile force (N)	short-term 5000
		long-term 3000
2	Allowable crash pressure(N/10cm)	short-term 1000
		long-term 300
3	Impact: 5 points, 3 times per point (N·m)	5
4	Application	Aerial Application
5	Operational temperature range	-60°C ~ +60°C



All Dielectric Central Tube Micro Optical Fiber Cables

Application:

Suitable for FTTH, MAN, Access Network and Trunk Network installation by air-blowing and indoor distribution with fiber count below 48.

Especially suitable for strong electro-magnetic field environment where insulation is of great importance

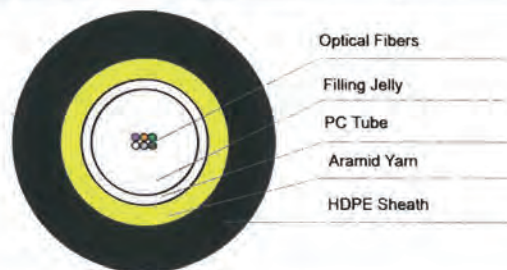
According to route situation, normally one time blowing distance is about 1.2 to 6 km

Main Mechanical Characteristics and Application:

Fiber Count	Cable Outer Diameter (mm)	Cable Weight (mm)	Size of Micro Cable (mm)	Operational Temperature Range	Allowable Tensile Force (N)	Allowable crash pressure(N/10cm)
2~12	4.0	13.0	10/8	-40℃~+70℃	200	1000
14~18	4.2	13.8				
20~24	4.5	16.5				
26~36	4.9	19.5				
38~48	5.2	22.5				

Structure Diagram

Cross Section Drawing:



All Dielectric stranded Micro Optical Fiber Cables

Application:

Suitable for FTTH, MAN, Access Network and Trunk Network installation by air-blowing and indoor distribution with fiber count below 72.

Especially suitable for strong electro-magnetic field environment where insulation is of great importance.

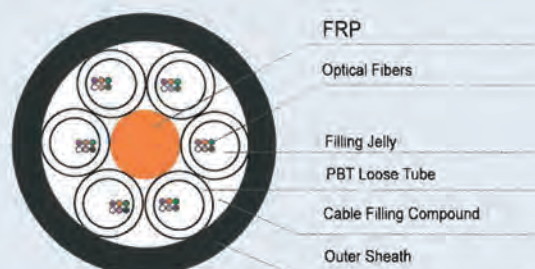
One time blowing distance is about 1.5 to 5 km

Main Mechanical Characteristics and Application:

Fiber Count	Cable Outer Diameter (mm)	Cable Weight (mm)	Size of Micro Cable (mm)	Operational Temperature Range	Allowable Tensile Force (N)	Allowable crash pressure(N/10cm)
48~60	5.6	24.5	10/8	-40℃~+70℃	500	600
62~72	6.1	30.0				

Structure Diagram

Cross Section Drawing:



BOW-TIE Shape Self-Supporting Optical Cable for Access Network — metal enhanced type

Application of product

BOW-TIE shape self-supporting optical cable is used for cabling in FTTH network, for outdoor dropping in access network

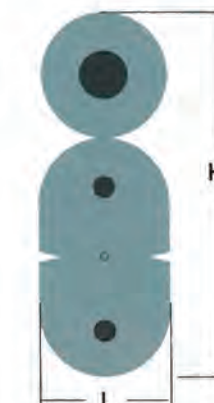
Cable structure parameters

No.	Fiber count	Size (L×H) mm	Weight (kg/km)
1	1	2×5.2±0.1	22
2	2	2×5.2±0.1	22
3	4	2×6.2±0.2	25



Typical product

No.	Type	Performances
1	GJYXCH	Metal strength member, LSZH, BOW-TIE shape self-supporting optical fiber drop cable
2	GJYXDCH	Metal strength member, LSZH, BOW-TIE shape self-supporting optical fiber ribbon drop cable



Applicable standard: YD/T 1997-2009

Main mechanic characteristics

No.	Item	Technical specification
1	Tensile	Under long term tension of 300N, fiber strain not large than 0.2% , no obvious additional fiber loss; Under short term tension of 600N, fiber strain not large than 0.4%, no obvious residual fiber loss, no any visible cracks in cable sheath.
2	Crash	Under long term crash of 1000N/10cn, no obvious additional fiber loss; Under short term crash of 2200 N/10cm, additional loss of fiber not large than 0.4dB at 1550nm, no any visible cracks in cable sheath.
3	Impact	1N.m, at least 3 times
4	Repeated bending	Testing load of 20N, 300times, 30H
5	Torsion	Testing load of 20N, ±180°, 20 times

no any visible damages and cracks in cable sheath, the residual loss of any fibers not large than 0.4dB at 1550nm after testing

BOW-TIE Shape Self-Supporting Optical Cable for Access Network

— nonmetal enhanced type

Application of product

BOW-TIE shape self-supporting optical cable is used for cabling in FTTH network, for outdoor dropping in access network

Cable structure parameters

No.	Fiber count	Size (L×H) mm	Weight (kg/km)
1	1	2×5.2±0.1	21
2	2	2×5.2±0.1	21
3	4	2×6.2±0.2	24



Typical product

No.	Type	Performances
1	GJYXFCH	Nonmetal strength member, LSZH, BOW-TIE shape self-supporting optical fiber drop cable
2	GJYXFDCH	Nonmetal strength member, LSZH, BOW-TIE shape self-supporting optical fiber ribbon drop cable



Applicable standard: YD/T 1997-2009

Main mechanic characteristics

No.	Item	Technical specification
1	Tensile	Under long term tension of 300N, fiber strain not large than 0.2% , no obvious additional fiber loss; Under short term tension of 600N, fiber strain not large than 0.4%, no obvious residual fiber loss, no any visible cracks in cable sheath.
2	Crash	Under long term crash of 1000N/10cm, no obvious additional fiber loss; Under short term crash of 2200 N/10cm, additional loss of fiber not large than 0.4dB at 1550nm, no any visible cracks in cable sheath.
3	Impact	1N.m, at least 3 times
4	Repeated bending	Testing load of 20N, 300times, 30H
5	Torsion	Testing load of 20N, ±180°, 20 times

no any visible damages and cracks in cable sheath, the residual loss of any fibers not large than 0.4dB at 1550nm after testing

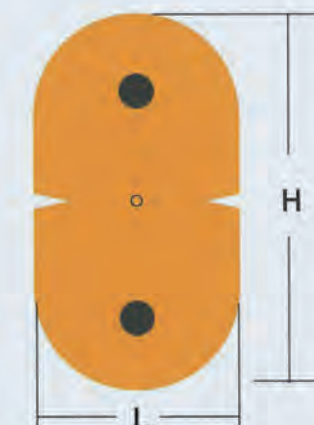
BOW-TIE Shape Optical Fiber Drop Cable for Access Network metal enhanced type

Application of product

This kind of optical cable is used for cabling in FTTH network, for indoor cabling in access network.

Cable structure parameters

No.	Fiber count	Size (L×H) mm	Weight (kg/km)
1	1	2×3±0.1	10
2	2	2×3±0.1	10
3	4	2×4±0.2	13



Typical product

No.	type	Performances
1	GJXH	Metal strength member, LSZH, BOW-TIE shape optical fiber drop cable
2	GJXDH	Metal strength member, LSZH, BOW-TIE shape optical fiber ribbon drop cable
3	GJXV	Metal strength member, PVC sheath, BOW-TIE shape optical fiber drop cable
4	GJXDV	Metal strength member, PVC sheath, BOW-TIE shape optical fiber ribbon drop cable



Main mechanic characteristics

No.	Item	Technical specification
1	Tensile	Under long term tension of 100N, fiber strain not large than 0.2% , no obvious additional fiber loss, Under short term tension of 200N, fiber strain not large than 0.4%, no obvious residual fiber loss, no any visible cracks in cable sheath.
2	Crash	Under long term crash of 1000N/10cm, no obvious additional fiber loss; Under short term crash of 2200N/10cm, additional loss of fiber not large than 0.4dB at 1550nm, no any visible cracks in cable sheath.
3	Impact	1N.m, at least 3 times
4	Repeated bending	Testing load of 20N, 300times, 30H
5	Torsion	Testing load of 20N, ±180°, 20 times

no any visible damages and cracks in cable sheath, the residual loss of any fibers not large than 0.4dB at 1550nm after testing

Round drop cable

BOW-TIE Shape Optical Fiber Drop Cable for Access Network

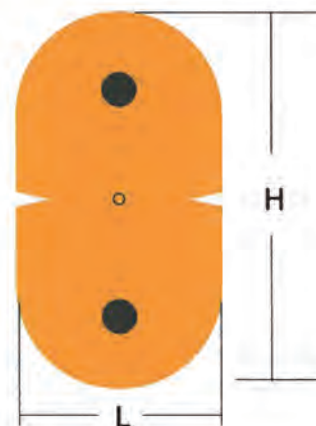
— nonmetal enhanced type

Application of product

This kind of optical cable is used for cabling in FTTH network, for indoor cabling in access network.

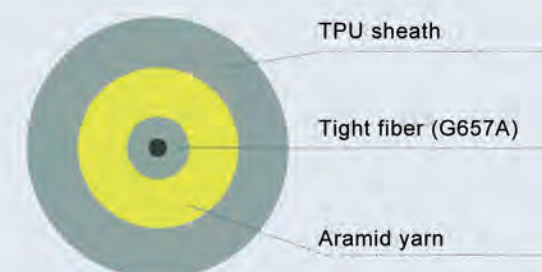
Cable structure parameters

No.	Fiber count	Size (L×H) mm	Weight (kg/km)
1	1	2×3±0.1	9
2	2	2×3±0.1	9
3	4	2×4±0.2	11.5



Applications

1. Fiber to the table;
2. The minimum bending value 15mm, suitable for indoor wiring at right angle;
3. For alert wiring, contact site sensing.



Typical product

No.	type	Performances
1	GJXFH	Nonmetal strength member, LSZH, BOW-TIE shape optical fiber drop cable
2	GJXFDH	Nonmetal strength member, LSZH, BOW-TIE shape optical fiber ribbon drop cable
3	GJXFV	Nonmetal strength member, PVC sheath, BOW-TIE shape optical fiber drop cable
4	GJXFDV	Nonmetal strength member, PVC sheath, BOW-TIE shape optical fiber ribbon drop cable



Main mechanic characteristics

No.	Item	Technical specification
1	Tensile	Under long term tension of 50N, fiber strain not large than 0.2% , no obvious additional fiber loss; Under short term tension of 100N, fiber strain not large than 0.4%, no obvious residual fiber loss, no any visible cracks in cable sheath.
2	Crash	Under long term crash of 1000N/10cm, no obvious additional fiber loss; Under short term crash of 2200N/10cm, additional loss of fiber not large than 0.4dB at 1550nm, no any visible cracks in cable sheath.
3	Impact	1N.m, at least 3 times
4	Repeated bending	Testing load of 20N, 300times, 30H
5	Torsion	Testing load of 20N, ±180°, 20 times

no any visible damages and cracks in cable sheath, the residual loss of any fibers not large than 0.4dB at 1550nm after testing

Typical product

No.	Outer diameter(mm)	Optical unit specification(mm)	Aramid yarn(mm)	Sheath thickness(mm)	Net weight(mm)
1	2.4±0.15	0.6/0.9	1110dtex×8	0.4	9.4
2	3.0±0.15	0.6/0.9	1110dtex×8	0.4	12
3	3.5±0.15	0.9	1110dtex×8	0.4	14
4	4.0±0.15	0.9	1110dtex×8	0.4	16

Main mechanical properties

No.	Item	Testing requirements	Characteristic index
1	Tensile	100N (Long-term)	Optical fiber strain ≤0.2%, additional attenuation ≤0.03Db
		200N (Short-term)	Optical fiber strain ≤0.4%, no residual additional attenuation
2	Crush	300N (Long-term)	Additional attenuation ≤0.03dB
		1000N (Short-term)	No fiber breakage, without sheath cracking
3	Repeated bending	Load 40N; 40H; bent 500 times	Additional attenuation ≤0.03dB, without sheath cracking
4	Impact	5N.m, each point three times	No fiber breakage, without sheath cracking
5	Twist	Load 40N, torsion length 250mm, torsion angle ± 90°, twisting 10 times	No fiber breakage, without sheath cracking

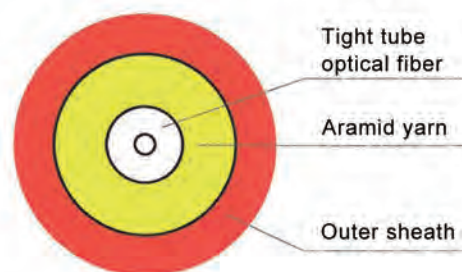
General single core optical cable for indoor application

Structure description

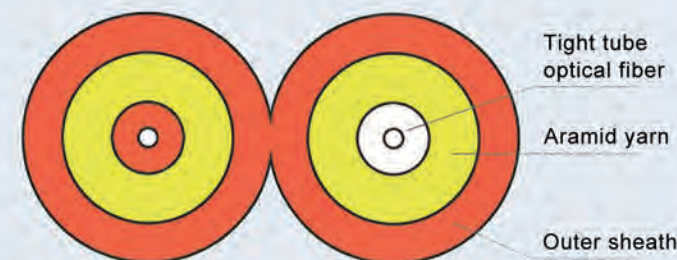
Tight, wrapped with aramid yarn and extruded sheath, without grease, no second pollution for structure design. There is a buffer layer between the fiber and tight sheath, which can meet the extreme environment requirements.

Application

1. Jumpers and wiring for all terminal equipment
2. Interior LAN wiring
3. Wiring of all kinds of single core jumpers and pigtails



General double-core optical cable for indoor application



Structure description

Tight structure design, aramid yarn reinforced, extruded connecting sheath. Without grease, no second pollution for construction environment. There is a buffer layer in between the fiber and tight coating, which can meet the extreme environment requirements. The cable is easy to be separated for use.

Application

1. Jumper and distribution for all terminal equipment
2. Interior LAN wiring
3. Distribution of all kinds of single core jumpers and pigtails

Structure and performance

Fiber number	Structure of the core	Cable dimension(mm)	Short-term tensile strength	Packaging specification	Unit weight(kg/km)
1	0.6 mm tight	1.6±0.10	60N	Φ340×300	4.0
1	0.9 mm tight	1.8±0.10	60N	Φ340×300	4.5
1	0.9 mm tight	2.0±0.10	60N	Φ340×300	5.0
1	0.9 mm tight	2.4±0.10	100N	Φ420×300	5.5
1	0.9 mm tight	2.8±0.10	100N	Φ420×300	6.5
1	0.9 mm tight	3.0±0.10	100N	Φ420×300	6.5

Typical types

GJFJV:

Nonmetallic reinforced, PVC sheath, excellent flame resistant performance can meet the requirements of OFNR and OFNP

GJFJU:

Nonmetallic reinforced, PU sheath, excellent flame resistant performance, soft flexible with environment adaptability.

GJFJH:

Nonmetallic reinforced, low smoke, non-halogen flame resistant sheath. Common fire proof performance, hard surface and eco-friendly.

Structure and performance

Fiber number	Structure of the core	Cable dimension(mm)	Short-term tensile strength	Packaging specification	Unit weight(kg/km)
2	0.6 mm tight	1.6×2±0.10	120N	Φ420×300	8
2	0.9 mm tight	1.8×2±0.15	120N	Φ420×300	9
2	0.9 mm tight	2.0×2±0.15	120N	Φ420×300	10
2	0.9 mm tight	2.4×2±0.15	200N	Φ420×300	11
2	0.9 mm tight	2.8×2±0.15	200N	Φ420×300	12
2	0.9 mm tight	3.0×2±0.15	200N	Φ420×300	13

Typical types

GJFJV:

Double-core chain type, nonmetallic reinforced, PVC sheath, excellent fire proof performance, meets the requirements of OFNR and OFNP.

GJFJU:

Double-core chain type, nonmetallic reinforced, PU sheath, good fire proof performance, flexible with environment adaptability.

GJFJH:

Double-core chain type, nonmetallic reinforced, low smoke, non-halogen fire proof sheath. Common fire proof performance, hard surface and eco-friendly.

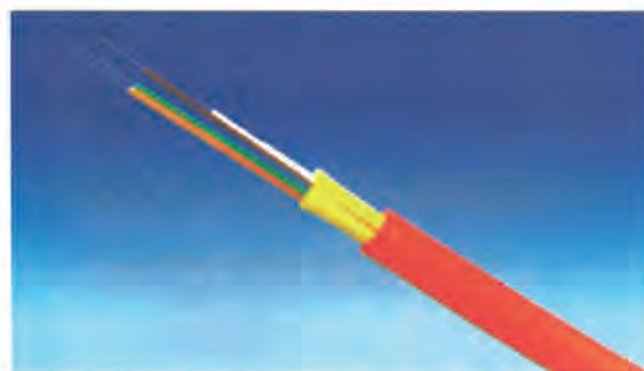
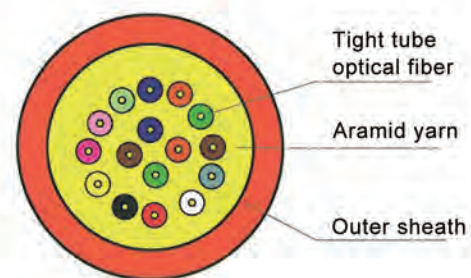
Single layer multi-core cable for indoor wiring

Discription

Tight structure design, "S" stranded. AFRP wrapped around, jacket outside. Aramid yarn reinforced and extruded sheath without grease, no secondary pollution to the construction environment. All chromatographic tight set of sheath, Stable structure ,good seismic performance.

Application

- 1.Horizontal wiring for FTTH project;
- 2.Equipment interconnection;
- 3.Used as pigtails and jumper;
- 4.For all kinds of horizontal wiring condition.



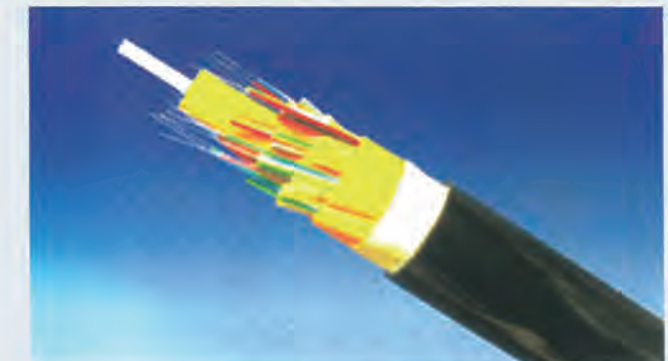
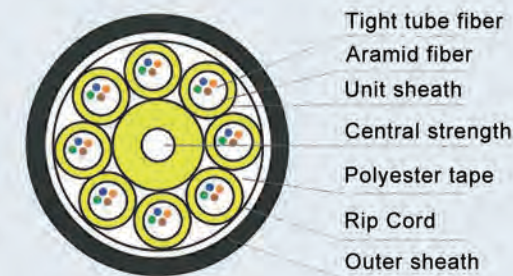
Double layer multi-core cable for indoor wiring

Discription

Tight jacket structure design, some bunchy core under "S" stranded, wrapped with non-woven fabrics, extruded sheath. Subelement digital identification for construction convenience. FRP core central strength prevent electrostatic effect, Direct use after cabling.

Application

- 1.All kinds of terminal equipment connected
- 2.Horizontal wiring for FTTH project
- 3.Used as pigtails fibers and jumper
- 4.Pigtails equipment optical transmission connection



Structure performance

Fiber count	Core Structure	Cable size(mm)	Short term tensile strength	Package size	Unit weight(kg/km)
4	0.9 mm tight	4.0	440N	Φ560×400	14
6	0.9 mm tight	4.5	440N	Φ560×400	20
8	0.9 mm tight	5.0	440N	Φ560×400	24
12	0.9 mm tight	6.5	440N	Φ560×400	40
16	0.9 mm tight	8.0	660N	Φ800×500	55
24	0.9 mm tight	9.0	660N	Φ800×500	64

Typical product

GJPFJV:

Distribution Cable, Non-metallic strengthen, PVC outer sheath, excellent flame retardant performance, meet OFNR and OFNP fire-proof requirement

GJPFJH:

Distribution Cable, Non-metallic strengthen, Low Smoke Zero Halogen flame retardant sheath , Flame retardant performance in general, safe and environmental-friendly protection.

Structure performance

Fiber count	Core Structure	Cable size(mm)	Short term tensile strength	Package size	Unit weight(kg/km)
36	6mm×6	16.4	660N	Φ800×500	250
48	8mm×8	18.2	660N	Φ800×500	355
72	12mm×6	22.6	660N	Φ1000×700	430
96	12mm×8	27.0	660N	Φ1000×700	530

Typical product

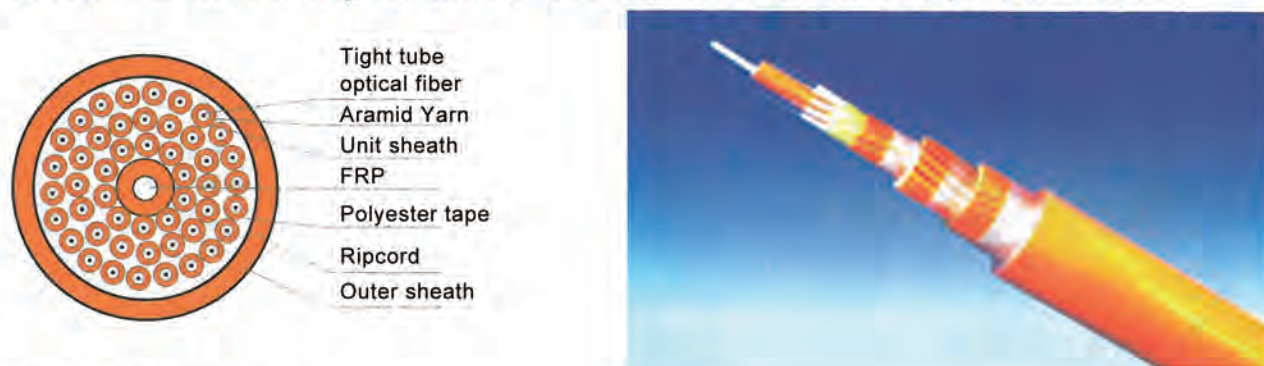
GJPFJV:

Distribution Cable, Non-metallic strengthen, PVC unit sheath ,PVC outer sheath, excellent flame retardant performance , meet OFNR and OFNP fire-proof requirement.

GJPFJH:

Distribution Cable, Non-metallic strengthen, Halogen-free flame retardant core sheath, Halogen-free flame retardant outer sheath , security and environmental-friendly, good low temperature resistance.

Multi-Stranded layer, multi-core indoor branch optical cable



Application of product

The structure of this kind of cables is like that: Adopting 2.0mm single core, "S" stranded, wrapped with non Woven Fabric and then extruded the outer sheath on the Non Woven Fabric. The cores are distinguished by digital identification, so it is easy to identify when the construction is carried out. FRP can prevent optical devices from static electricity in optical-electrical hybrid wiring environment. The structure is stable and the performance is excellent. You can connect the fiber without cutting it, reducing the joint loss under construction.

Scope of application

1. Vertical wiring FTTH project.
2. It can be used directly as jumper.
3. Horizontal wiring for various condition.

结构性能

Fiber number	Cable core structure	Cable size(mm)	Short-term tensile strength	Package size	Unit weight(kg/km)
12	3+9	9.2	660N	Φ800×500	92
16	5+11	12.0	660N	Φ800×500	128
24	9+15	15.0	660N	Φ1000×700	196
32	5+11+17	15.8	660N	Φ1000×700	230
36	6+12+18	17.0	660N	Φ1000×700	254
48	10+16+22	19.2	660N	Φ1000×700	320

Typical type

GJBFJHH:

Branching type, Non-metallic reinforced, Halogen free flame retardant core sheath, halogen free flame retardant sheath, safety and environment.

GJBFJW:

Branching, Non-metallic reinforced, PVC unit sheath, PVC outer sheath. It can meet the requirements of OFNR and OFNP flame retardant.

Optical Fiber Characteristic

- 652B fiber characteristics (ITU-G.652)

Category	Description	Specifications
Optical Specifications	Attenuation @1310 nm	≤0.34 dB/km
	Attenuation @1550 nm	≤0.21 dB/km
	Attenuation Non-uniformity @1310 nm, 1550 nm	≤0.05dB
	Point Discontinuity @1310 nm, 1550 nm	≤0.05 dB
	Attenuation vs. Wavelength @1288 nm~1330 nm	≤0.05dB/km
	@1525~1575 nm	≤0.05 dB/km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤0.092 ps/nm ² ·km
	Dispersion @1288~1339 nm	≤3.5 ps/nm·km
	@1271~1360 nm	≤5.3 ps/nm·km
	@ 1550 nm	≤18 ps/nm·km
	Polarization Mode Dispersion (PMD)	≤0.2 ps/√km
	PMD Link Design value	≤0.2 ps/√km
	Cable Cutoff Wavelength (λ _{cc})	≤1260 nm
	Dimensional Specifications	Macro bending Loss (100 turns; Φ50 mm) @1550 nm
(100 turns; Φ50 mm) @1625 nm		≤ 0.10 dB
Mode Field Diameter @1310 nm		9.2±0.4μm
@1550 nm		10.4±0.8μm
Fiber Curl Radius		≥4.0 m
Cladding Diameter		125 ±1μm
Mechanical Specifications	Core / Clad Concentricity	≤0.6μm
	Cladding Non-Circularity	≤1.0%
	Coating Diameter	245± 10μm
	Coating / Cladding Concentricity	≤12μm
Mechanical Specifications	Coating Non-Circularity	≤6.0%
	Proof Test	≥100kspi (0.69GPa)
	Fatigue Resistance Parameter (N _a)	≥ 20
Mechanical Specifications	Peak Coating Strip Force	1.3~8.9 N

• 652D fiber characteristics (ITU-G.652)

Category	Description	Specifications
Optical Specifications	Attenuation @1310 nm	≤0.34 dB/km
	Attenuation @1383 nm (after aged)	≤0.34 dB/km
	Attenuation @1550 nm	≤0.20 dB/km
	Attenuation Non-uniformity @1310 nm, 1550 nm	≤0.05dB
	Point Discontinuity @1310 nm, 1550 nm	≤0.05 dB
	Attenuation vs. Wavelength @1288 nm~1330 nm	≤0.05dB/km
	Attenuation vs. Wavelength @1525~1575 nm	≤0.05 dB/km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤0.093 ps/nm ² ·km
	Dispersion @1288~1339 nm	≤3.5 ps/nm·km
	Dispersion @1271~1360 nm	≤5.3 ps/nm·km
	Dispersion @ 1550 nm	≤18 ps/nm·km
	Polarization Mode Dispersion (PMD)	≤0.2 ps/√km
	PMD Link Design value	≤0.2 ps/√km
	Cable Cutoff Wavelength (λ _{cc})	≤1260 nm
	Dimensional Specifications	Macro bending Loss (100 turns; Φ50 mm) @1550 nm
Macro bending Loss (100 turns; Φ50 mm) @1625 nm		≤ 0.10 dB
Mode Field Diameter @1310 nm		9.2±0.4μm
Mode Field Diameter @1550 nm		10.4±0.8μm
Mechanical Specifications	Fiber Curl Radius	≥4.0 m
	Cladding Diameter	125 ±1μm
	Core / Clad Concentricity	≤0.6μm
	Cladding Non-Circularity	≤1.0%
	Coating Diameter	245± 10μm
	Coating / Cladding Concentricity	≤12μm
	Coating Non-Circularity	≤6.0%
Mechanical Specifications	Proof Test	≥100kspi (0.69GPa)
	Fatigue Resistance Parameter (N _d)	≥ 20
	Peak Coating Strip Force	1.3~8.9 N

• Low water peak and low attenuation loss fiber characteristics (ITU-G.652)

Category	Description	Specifications
Optical Specifications	Attenuation @1310 nm	≤0.32 dB/km
	Attenuation @1383 nm (after aged)	≤0.32 dB/km
	Attenuation @1550 nm	≤0.18 dB/km
	Attenuation @1625 nm	≤0.20 dB/km
	Attenuation Non-uniformity @1310 nm, 1550 nm	≤0.05dB
	Point Discontinuity @1310 nm, 1550 nm	≤0.05 dB
	Attenuation vs. Wavelength @1288 nm~1330 nm	≤0.05dB/km
	Attenuation vs. Wavelength @1525~1575 nm	≤0.05 dB/km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤0.093 ps/nm ² ·km
	Dispersion @1288~1339 nm	≤3.5 ps/nm·km
	Dispersion @1271~1360 nm	≤5.3 ps/nm·km
	Dispersion @ 1550 nm	≤18 ps/nm·km
	Polarization Mode Dispersion (PMD)	≤0.2 ps/√km
	PMD Link Design value	≤0.2 ps/√km
	Dimensional Specifications	Cable Cutoff Wavelength (λ _{cc})
Macro bending Loss (100 turns; Φ50 mm) @1550 nm		≤ 0.05 dB
Macro bending Loss (100 turns; Φ50 mm) @1625 nm		≤ 0.10 dB
Mode Field Diameter @1310 nm		9.2±0.4μm
Mechanical Specifications	Mode Field Diameter @1550 nm	10.4±0.8μm
	Fiber Curl Radius	≥4.0 m
	Cladding Diameter	125 ±1μm
	Core / Clad Concentricity	≤0.64μm
	Cladding Non-Circularity	≤1.0%
	Coating Diameter	245± 10μm
	Coating / Cladding Concentricity	≤12μm
Mechanical Specifications	Coating Non-Circularity	≤6.0%
	Proof Test	≥100kspi (0.69GPa)
	Fatigue Resistance Parameter (N _d)	≥ 20
Mechanical Specifications	Peak Coating Strip Force	1.3~8.9 N

• Easy bend fiber characteristics (ITU-G.657A1)

Category	Description	Specifications
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km
	Attenuation @1383 nm(After aging hydrogenation)	≤0.35 dB/km
	Attenuation @1550 nm	≤0.21 dB/km
	Attenuation @1625 nm	≤0.23 dB/km
	Dispersion coefficient	@1288~1339nm ≤3.5ps/nm·km @1271~1360nm ≤5.3ps/nm·km @1550nm ≤18ps/nm·km @1625nm ≤22ps/nm·km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤ 0.092 ps/nm ² ·km
	PMD Link value (M=20cables Q=0.01%) maximum PMDQ	≤ 0.1 ps/√km
	Cable Cutoff Wavelength (λ _{cc})	≤1260 nm
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm (10 turns; Φ30 mm) @1625 nm (1 turns; Φ20 mm) @1550 nm (1 turns; Φ20 mm) @1625 nm	≤ 0.2 dB ≤ 0.5 dB ≤ 0.3 dB ≤ 1.0 dB
Mode Field Diameter @1310 nm	8.8±0.4μm	
Dimensional Specifications	Cladding Diameter	125±0.7μm
	Cladding non circularity	≤1.0%
	Coating diameter	245±7μm
	Coating non circularity	≤6%
	Cladding / coating concentricity error	≤12μm
	Core/clad concentricity error	≤0.54μm
	Cladding Non-Circularity	≤1.0%
	Fiber curl radius	≥4m
Mechanical Specifications	Proof stress	≥1.05%
	Fatigue Resistance Parameter (Nd)	≥22
	Peak Coating Strip Force	1.3~8.9N
Environment Specification	Fiber temperature dependence (-60℃ +85℃)	≤0.05dB/km
	Fiber temperature and humidity(+85±2℃ , 85% R.H. for 30 days)	≤0.05dB/km
	Heat Aging Induced Attenuation (85±2℃ ,for 30 days)	≤0.05dB/km
	Water Immersion Induced (23±2℃ ,for 30 days)	≤0.05dB/km

• Easy bend fiber characteristics (ITU-G.657A2)

Category	Description	Specifications
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km
	Attenuation @1383 nm(After aging hydrogenation)	≤0.35 dB/km
	Attenuation @1550 nm	≤0.21 dB/km
	Attenuation @1625 nm	≤0.23 dB/km
	Dispersion coefficient	@1288~1339nm ≤3.5ps/nm·km @1271~1360nm ≤5.3ps/nm·km @1550nm ≤18ps/nm·km @1625nm ≤22ps/nm·km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤ 0.092 ps/nm ² ·km
	PMD Link value (M=20cables Q=0.01%) maximum PMDQ	≤ 0.1 ps/√km
	Cable Cutoff Wavelength (λ _{cc})	≤1260 nm
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm (10 turns; Φ30 mm) @1625 nm (1 turns; Φ20 mm) @1550 nm (1 turns; Φ20 mm) @1625 nm (1 turns; Φ15 mm) @1550 nm (1 turns; Φ15 mm) @1625 nm	≤ 0.03 dB ≤ 0.1 dB ≤ 0.1 dB ≤ 0.2 dB ≤ 0.5 dB ≤ 1.0 dB
Mode Field Diameter @1310 nm	8.6±0.4μm	
Dimensional Specifications	Cladding Diameter	125±0.7μm
	Cladding non circularity	≤1.0%
	Coating diameter	245±7μm
	Coating non circularity	≤6%
	Cladding / coating concentricity error	≤12μm
	Core/clad concentricity error	≤0.54μm
	Cladding Non-Circularity	≤1.0%
	Fiber curl radius	≥4m
Mechanical Specifications	Proof stress	≥1.05%
	Fatigue Resistance Parameter (Nd)	≥22
	Peak Coating Strip Force	1.3~8.9N
Environment Specification	Fiber temperature dependence (-60℃ +85℃)	≤0.05dB/km
	Fiber temperature and humidity (+85±2℃ , 85% R.H. for 30 days)	≤0.05dB/km
	Heat Aging Induced Attenuation(85±2℃ ,for 30 days)	≤0.05dB/km
	Water Immersion Induced (23±2℃ ,for 30 days)	≤0.05dB/km

• Non-zero dispersion shifted fiber characteristics (ITU-G.655)

Fiber Attributes		
Attribute	Detail	Value
Mode field diameter	Wavelength	1550 nm
	Range of nominal values	8~11 μ m
	Tolerance	$\pm 0.7 \mu$ m
Cladding Diameter	Nominal	125 μ m
	Tolerance	$\pm 1 \mu$ m
Core concentricity error	Maximum	0.8 μ m
Cladding noncircularity	Maximum	2.0%
Cable cut-off wavelength	Maximum	1480 nm
Macrobend loss	Radius	37.5 mm
	Number of turns	100
	Maximum at 1550 nm	0.50 dB
Proof stress	Minimum	0.69 Gpa
Chromatic dispersion coefficient	λ min & λ max	1530 nm & 1565 nm
	Minimum value of Dmin	0.1 ps/nm.km
	Maximum value of Dmax	6.0 ps/nm.km
	Sign	Positive or negative
Cable attributes		
Attribute	Detail	Value
Attenuation coefficient	Maximum at 1550 nm	0.35dB/km

• Multi-mode fiber characteristics (IEC 60793-2-10)

Category	Description	Specifications	
Optical Specifications	Attenuation @ 850 nm	≤ 2.3 dB/km	
	Attenuation @1300 nm	≤ 0.7 dB/km	
	Attenuation @1380 nm	≤ 2.0 dB/km	
	Numerical Aperture (NA)	0.200 \pm 0.015	
	Zero Dispersion Wavelength	1295~1340 nm	
	Zero Dispersion Slope	≤ 0.105 ps/nm ² ·km	
	Macro bending Loss (10 turns; Φ 75 mm) @ 850 nm (10 turns; Φ 75 mm) @1300 nm	≤ 0.5 dB ≤ 0.5 dB	
	Effective Group Index of Refraction @ 850nm @ 1300nm	1.483 1.478	
	Transmission Specification	Standard bandwidth @ 850 nm @1300 nm	OM2
≥ 700 MHz.km			≥ 1500 MHz.km
Effective Bandwidth		≥ 500 MHz.km	≥ 500 MHz.km
1 Gb/s Ethernet link length		≥ 950 MHz.km	≥ 2000 MHz.km
10 Gb/s Ethernet link length		750m	1000m
Dimensional Specifications	Core diameter	50 \pm 2.5 μ m	
	Core non circularity	$\leq 5\%$	
	Cladding Diameter	125 \pm 1 μ m	
	Cladding non circularity	$\leq 1\%$	
	Core/clad concentricity error	$\leq 1.0\mu$ m	
	Coating diameter	245 \pm 10 μ m	
	Coating non circularity	$\leq 5\%$	
	Cladding / coating concentricity error	$\leq 8.0\mu$ m	
Mechanical Specifications	Proof stress	≥ 100 Kpsi	
	Fatigue Resistance Parameter (Nd)	≥ 20	
	Coating Strip Force	≥ 1.9 N	
Environment Specification	Fiber temperature dependence (-60 $^{\circ}$ C +85 $^{\circ}$ C)	≤ 0.1 dB/km	
	Fiber temperature and humidity cycling (-10~+85 $^{\circ}$ C , 4%~85% R.H.)	≤ 0.1 dB/km	
	Fiber temperature and humidity (+85 \pm 2 $^{\circ}$ C , 85% R.H. for 30 days)	≤ 0.2 dB/km	
	Heat Aging Induced Attenuation(85 \pm 2 $^{\circ}$ C ,for 30 days)	≤ 0.2 dB/km	
	Water Immersion Induced (23 \pm 2 $^{\circ}$ C , for 30 days)	≤ 0.2 dB/km	