

POLYCAB

IDEAS. CONNECTED.



For Faster Communication

OPTICAL FIBER CABLES & FRP RODS

Telephones | Internet | LAN - Local Area Network | WAN - Wide Area Network | CATV

Utilities - Management of Power Grid | Security - Closed Circuit

TV and Intrusion Sensors | Military - Everywhere

POLYCAB

IDEAS. CONNECTED.



Company Profile

Polycab an ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 company is India's no. 1 Cables & Wires Company with a glorious track record of over 4 decades. Our manufacturing facilities at Halol (Vadodara), Daman, Nashik & Roorkee in India, addresses to the specific needs with state-of-the-art machinery and technology.

Polycab's turnover has crossed ₹ 5300 crores (US\$ 883.3 million) in the fiscal year 2014-15 and is projected to cross ₹ 7000 crores (US\$ 1166 million) in fiscal year 2015-2016.

Polycab derives its strength from its customers and those being in sectors like Utilities, Power Generation, Transmission & Distribution, Petroleum & Oil Refineries, OEMs, EPC contractors, Steel & Metal, Cement, Chemical, Atomic Energy, Nuclear Plants, as well as Government partners like BSNL, Railways and Private Telecom Operators like Reliance, Vodafone, Airtel, Aircel, Tata, Idea and many more.

Polycab offers a variety of services:

- Commercially reasonable prices
- Reliable & consistent quality
- Product development as per market
- A target stocking policy
- Technical support for application

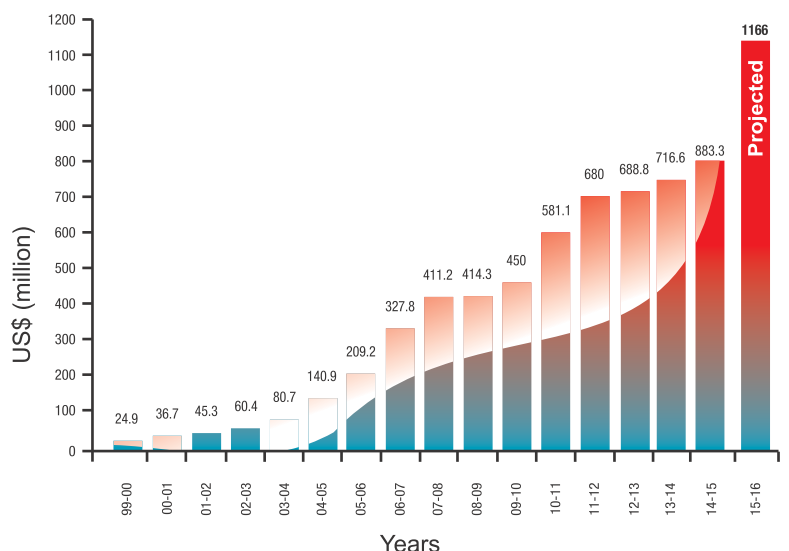
THINGS YOU DIDN'T KNOW ABOUT POLYCAB

Between its facilities in Daman, Halol (Vadodara), Nashik and Roorkee the company has 3.5 million square feet of manufacturing space.

Polycab manufactures enough cables each year to circumnavigate the earth three and a half times and enough wire to go to the moon and come back- four times.

Polycab has increased its turnover 100 times in sixteen years.

Over 300 Authorised distributors service its India needs and its overseas interests.



POLYCAB

IDEAS. CONNECTED.

Chairman's Message

The journey of over four decades would not have been as exciting and fulfilling without the unconditional support of all our customers & our sales partners, I would like to express our deep gratitude to you, as you have made Polycab one of the outstanding companies in our industry.

The advent of the second millennium has brought in its wake a transformation in the mind-set of the customers. The expectation of customer has risen exponentially. This trend is here to stay and we have to gear up towards keeping our customers totally satisfied.

Despite our rapid growth and elevation to the leadership position in the industry, the simplicity in Polycab's flexibility and openness to new market trends and changing technology continue to be our driving force. The core values of, simplicity, team work, trust amongst people, customer focus and meeting commitments have given us a unique position and respectability among the Indian industry.

Gearing up for the future and to keep winning in tomorrow's world, we have a well recognized market presence with a strong product & portfolio, streamlined and efficient manufacturing capabilities to withstand the winds of change. But we will need to be even more proactive, agile and customer centric. We will need to anticipate the future and be ready with solutions, even before the customer asks for them.

There are many new challenges the cable industry is facing with new market opportunities and product developments. Due to thrust in renewable energy sector, we have enthusiastically achieved success towards developing and delivering products for this segment and at the same time ensured to be internationally competitive.

Polycab's business model is evolving. We are enhancing our key internal operations to ensure a consistent and positive experience for our customers. Our business processes will begin and end with the customers. We have identified focus areas of growth over the next 5 years and beyond. Polycab aspires to be a Rs. 10000+ crore company within the next 4-5 years.

We take this opportunity to thank you and convey our gratitude for the unabated support and trust you have always reposed on Polycab and encouraged it to move ahead confidently. We are confident that this will keep us ahead in our constant endeavour to be the preferred brand.

We hope to improve each day to serve you better.

HAPPY CABLING!!!



INDER T. JAISINGHANI
Chairman & Managing Director



“ A customer is the most important visitor on our premises.
He is not dependent on us. We are dependent on him.
He is not an interruption in our works. He is the purpose of it.
He is not an outsider in our business. He is part of it.

We are not doing him a favor by serving him he is doing us a favor by giving us an opportunity to do so.”
- Mahatma Gandhi



VISION

“ Our vision is to improve the quality of life and bring greater happiness to our customers. We will do so through reliable, safe sustainable and best in class products and services, while enhancing stake holder value continuously.”



CORE VALUES

Trust | Teamwork | Customer Delight | Action
Commitment | Excellence | Sustainability



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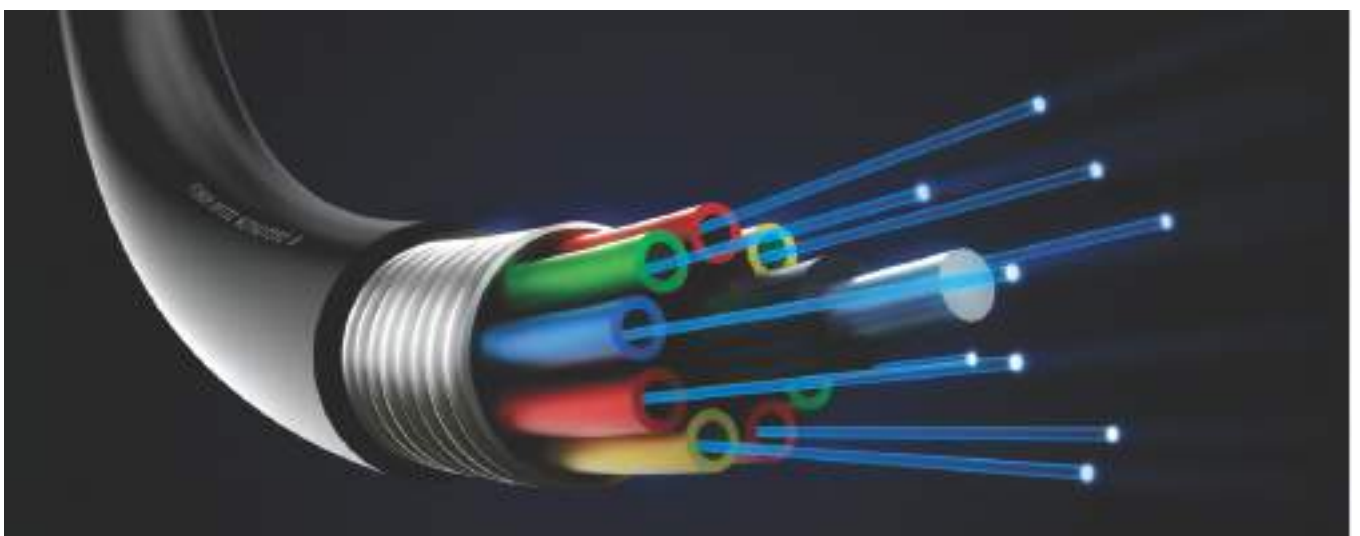
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What is Optical Fiber?

Optical Fiber is a unique transmission medium. It has some unique advantages over conventional communication media such as copper wire, microwave or co-axial cables. The major advantage is its high transmission capacity i.e. optical fiber can carry information at higher data rates over very long distance. Since fibers are made of a dielectric material, they are immune to radiated and conducted interference. It is nearly impossible to tap an optical fiber; therefore optical fiber transmission is very secure. Optic fiber is small and light weight which is an evident issue whenever weight and bulk are a practical concern. Fiber Optics is the least expensive, most reliable method for high speed and/or long distance communications. The medium used in Fiber optic transmission is glass or plastic. Optical fiber can be seen as dielectric circular medium with a core and cladding. The core has a slightly higher index of refraction and light is guided by total internal reflection at the boundary between core and cladding. Fiber Optics is the communications medium that works by sending optical signals down hair-thin strands of extremely pure glass or plastic fiber. The light is "guided" down the center of the fiber called the "core".

The core is surrounded by a optical material called the "cladding" that traps the light in the core using an optical technique called "total internal reflection." The fiber itself is coated by a "buffer" as it is made to protect the fiber from moisture and physical damage. The buffer is what one strips off the fiber for termination or splicing. The carrier of information signal is light. Light is an electromagnetic radiation. It can be viewed either as photons or waves and travels at the speed of 3,00,000 kms/sec. Both view points are valid and valuable. The term 'light' is commonly used to refer to visible light that occupies a tiny portion of the electromagnetic spectrum from 391 to 770 nm. However, because of the transmission properties of optic fibers, light wave systems use radiation with wavelengths ranging from approximately 800 to 1600 nm. These wavelengths belong to the Infrared Ray (IR) portion of the electromagnetic spectrum, but the term light wave is commonly used when referring to them.

The light wave used as carrier in optical transmission systems is an electromagnetic wave with a wavelength around 1 μm and oscillation frequency of about 300 Hz. The typical fiber optic wavelengths are 850 nm, 1310 nm & 1550 nm; all being located in the near infrared range of the electromagnetic spectrum. These 3 wavelengths result from the attenuation characteristics of glass as well as from the availability of semiconductor type sources and receivers. They are referred to as the three wavelength windows in fiber.



Applications:

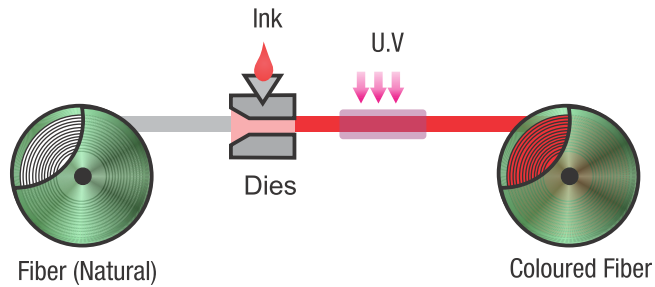
LAN: Local Area Network & Fiber To The Home (FTTH) **CATV:** for video, voice and internet connections

Utilities: Management of power grid **Security:** closed circuit TV and intrusion sensors **Military:** everywhere

Manufacturing Process

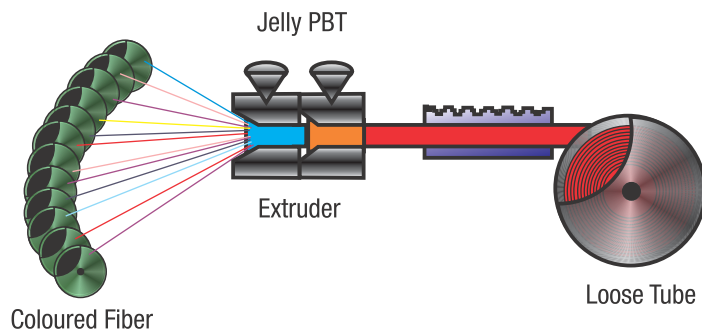
Colouring

The fibers are coloured as per the requirement of the customers. The standard colours are Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink and Aqua as per Munsell colour standards.



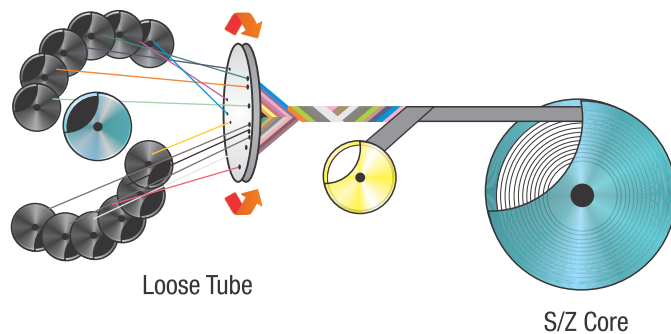
Buffering

The individually coloured fibers are buffered into loose tube according to the cable design.



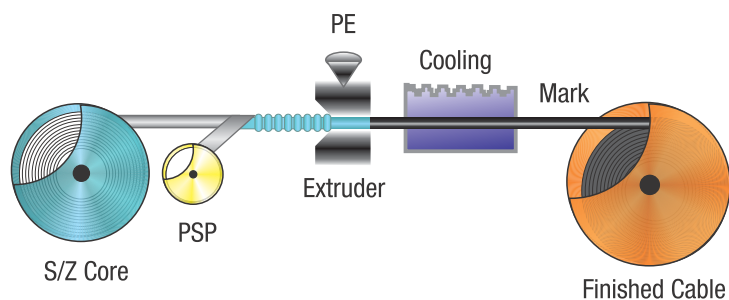
Stranding

The loose tube stranded to form the core around a strength member which is usually made of fiber reinforced plastic rod in a S/Z pattern to avoid strain on fiber. The core is wrapped by a non-hygroscopic polyester tape, which acts as a moisture barrier.



Sheathing / Jacketing

The core is sheathed or armoured according to the cable design and specifications. The cable is finally sheathed or jacketed as per the customer specification. The sheathing is usually of black HDPE in case of Direct/Duct buried cable and also be of Nylon PA-12 in specific cases.

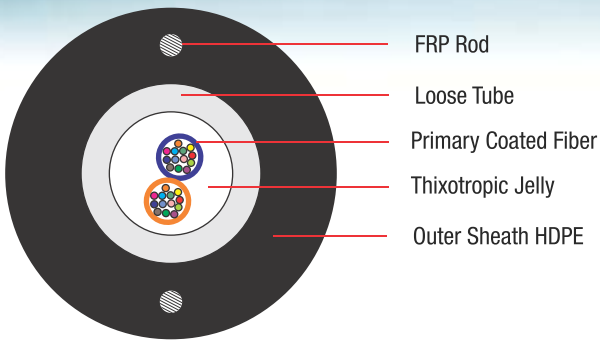


Duct/Unarmoured Cables

UNI-TUBE UNARMoured CABLE (2F-24F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



- FRP Rod
- Loose Tube
- Primary Coated Fiber
- Thixotropic Jelly
- Outer Sheath HDPE

APPLICATIONS & FEATURES

- Suitable for duct installation
- Used for CATV and other networks
- Light in weight
- Small cable diameter
- Ease of installation
- Available upto 24 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA/ NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP Rod as strength member embedded in sheath
- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-24F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Metallic strength members/Composite fibers/Customized designs/Aramid or Glass Yarns /LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657 ; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

* In Case of 24 Fibers, 2 bundles of 12 colour each with colour thread binders (Blue & Orange)

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-6F	6.0 mm (0.24 in)	30	350	175	15D	20D
8F-12F	6.5 mm (0.26 in)	35	350	175	15D	20D
24F	8.0 mm (0.31 in)	50	350	175	15D	20D

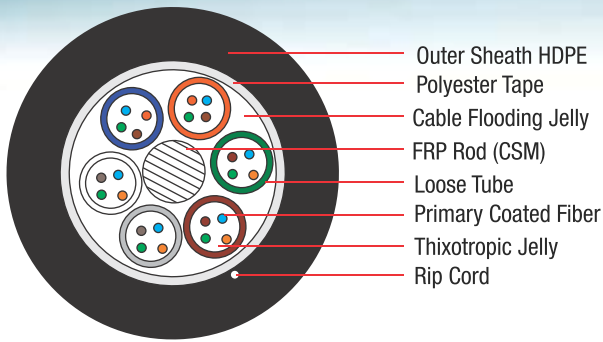
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE SINGLE SHEATH UNARMoured CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for blowing in ducts
- Suitable for installation alongside power lines
- Local Loop, metro, long-haul and broadband network
- Light Weight and flexible
- Available upto 144 Fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as central strength member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z Core wrapped with polyester tape
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/Customized designs/Metallic CSM/Aramid or Glass Yarns/Rip Cord(s)/FR PVC/LSZH

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657 ; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	9.8 mm (0.39 in)	75	1000	500	15D	20D
48F-72F	11.3 mm (0.44 in)	100	1600	800	15D	20D
96F	12.7 mm (0.5 in)	125	1600	800	15D	20D
144F	15.8 mm (0.62 in)	187	1600	800	15D	20D

Fiber Transmission Performance

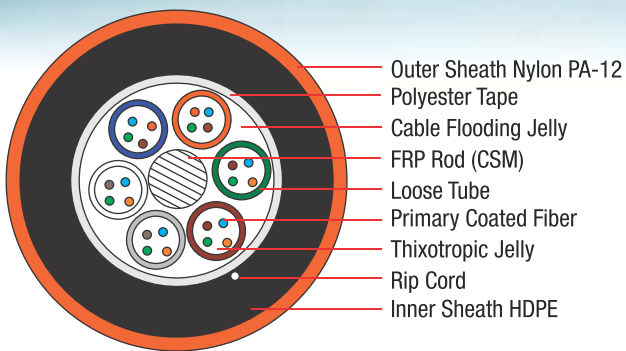
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Duct/Unarmoured Cables

MULTI-TUBE DOUBLE SHEATH UNARMOURED CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for blowing in ducts
- Termite resistance
- Local loop, metro, long-haul and broadband network
- Light weight and flexible
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z Core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- Termite resistance nylon PA-12 orange outer sheath
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarns/Rip Cord(s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto-36F	11.1 mm (0.44 in)	97	1000	500	15D	20D
48F-72F	12.6 mm (0.50 in)	124	1600	800	15D	20D
96F	14.0 mm (0.55 in)	152	1600	800	15D	20D
144F	17.1 mm (0.67 in)	222	1600	800	15D	20D

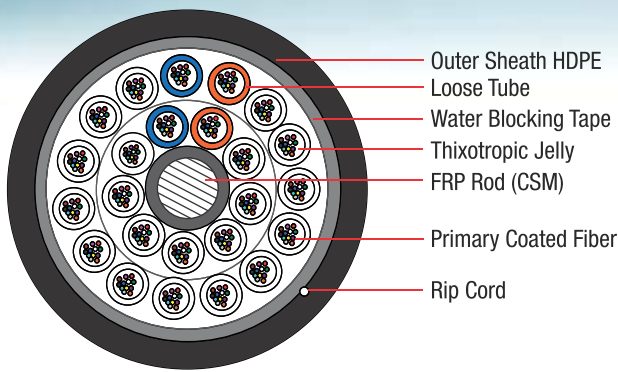
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE DOUBLE LAYER SINGLE SHEATH UNARMoured CABLE (192F-288F)



CONSTRUCTION DIAGRAM OF 288 FIBERS



APPLICATIONS & FEATURES

- Suitable for blowing in ducts
- Suitable for installation alongside power lines
- Local loop, metro, long-haul and broadband network
- Double layer S/Z stranded
- Available 288 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

* Tube colour coding :- Blue (Marker), Orange (Tracer), remaining are natural tubes.

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Dry core design
- S/Z Core wrapped with water blocking tape
- Outer Sheath with UV Stabilized HDPE compound
- Fiber count 192F-288F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Wet core (filled with jelly)/Composite fibers/Customized designs/Aramid or Glass Yarns/Rip Cord(s)/FR PVC/LSZH

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
192F	15.7 mm (0.62 in)	167	1500	750	15D	20D
288F	17.8 mm (0.70 in)	221	1500	750	15D	20D

Fiber Transmission Performance

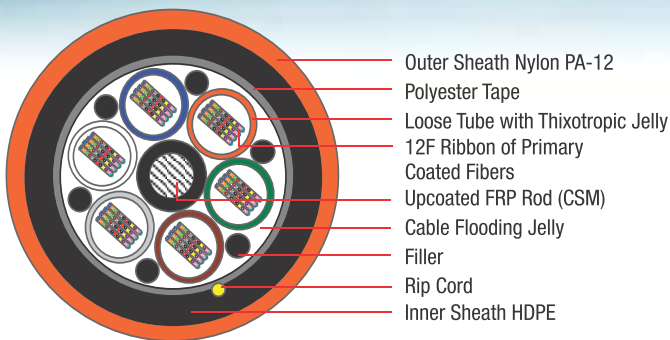
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Duct/Unarmoured Cables

MULTI-TUBE DOUBLE SHEATH RIBBON TYPE UNARMOURED CABLE (48F-576F)



CONSTRUCTION DIAGRAM OF 288 FIBERS



- Outer Sheath Nylon PA-12
- Polyester Tape
- Loose Tube with Thixotropic Jelly
- 12F Ribbon of Primary Coated Fibers
- Upcoated FRP Rod (CSM)
- Cable Flooding Jelly
- Filler
- Rip Cord
- Inner Sheath HDPE

APPLICATIONS & FEATURES

- Suitable for blowing in ducts
- Termite resistance
- Local loop, metro, long-haul and broadband network
- Available upto 576 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Ribbon is identified as 1RIBBON1, 2RIBBON2, 3RIBBON3, 4RIBBON4 and so on.

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing ribbon fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- Termite resistance Nylon PA-12 orange outer sheath
- Fiber count 48F-576F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarns/ Rip Cord(s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto-96F	19mm (0.75 in)	280	3000	1500	15D	20D
144F	20.5 mm (0.81 in)	340	3000	1500	15D	20D
288F	24 mm (0.94 in)	525	3000	1500	15D	20D
576F	30 mm (1.18 in)	740	3000	1500	15D	20D

Fiber Transmission Performance

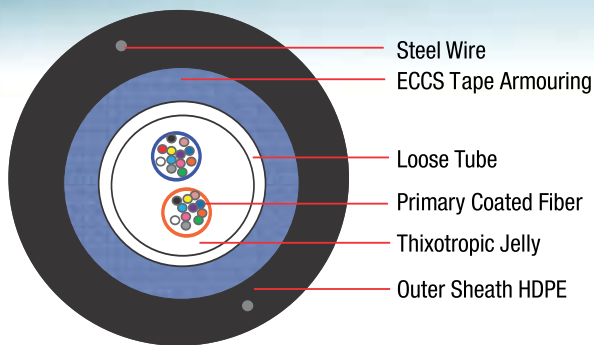
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Armoured Cables

UNI-TUBE STEEL TAPE ARMoured CABLE (2F-24F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial and inside duct installation
- ECCS Tape armouring provide excellent protection against rodent
- ECCS Tape armouring provide high crush resistance & tensile strength
- Robust construction
- Light weight to easy installation
- Available upto 24 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

* In Case of 24 Fibers, 2 bundles of 12 colour each with colour thread binders (Blue & Orange)

CONSTRUCTION DETAILS

- Metallic, anti-buckling steel wire as strength member embedded in sheath
- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Electrolyte chrome plated, corrugated steel tape armoured
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-24F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

OPTIONS AVAILABLE ON REQUEST

- Non- Metallic FRP Rods/Composite fibers/Customized designs/Aramid or Glass Yarns/Rip Chord(s)/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-12F	8.4 mm (0.33 in)	75	1000	500	15D	20D
24F	10.0 mm (0.39 in)	95	1000	500	15D	20D

Fiber Transmission Performance

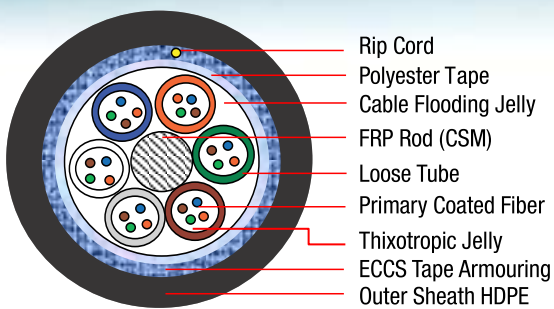
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Armoured Cables

MULTI-TUBE SINGLE SHEATH STEEL TAPE ARMoured CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- Local loop, metro, long-haul and broadband network
- Robust construction
- Light weight and flexible
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Electrolyte chrome coated corrugated steel tape armouring
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarn/Rip Cord(s)/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	10.7 mm (0.42 in)	125	2000	1000	15D	20D
48F-72F	12.2 mm (0.48 in)	154	2500	1250	15D	20D
96F	13.6 mm (0.54 in)	188	2500	1250	15D	20D
144FF	16.7 mm (0.66 in)	268	2500	1250	15D	20D

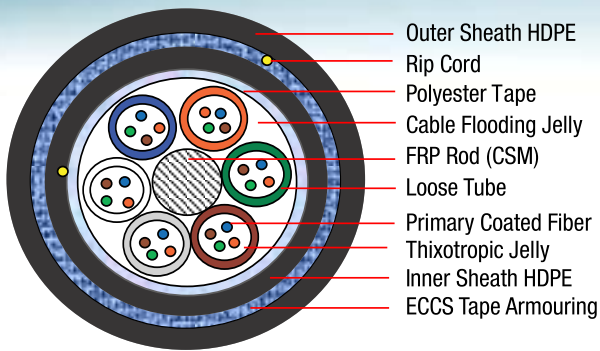
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE DOUBLE SHEATH STEEL TAPE ARMoured CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- It provides additional protection against crush & impact
- Local loop, metro, long-haul and broadband network
- Robust construction
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Inner sheath with UV Stabilized HDPE compound
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Electrolyte chrome coated corrugated steel tape armouring
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarns/Rip Cord(s)/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	13.0 mm (0.51 in)	166	2000	1000	15D	20D
48F-72F	14.4 mm (0.57 in)	204	2500	1250	15D	20D
96F	15.8 mm (0.62 in)	234	2500	1250	15D	20D
144F	18.9 mm (0.74 in)	333	2500	1250	15D	20D

Fiber Transmission Performance

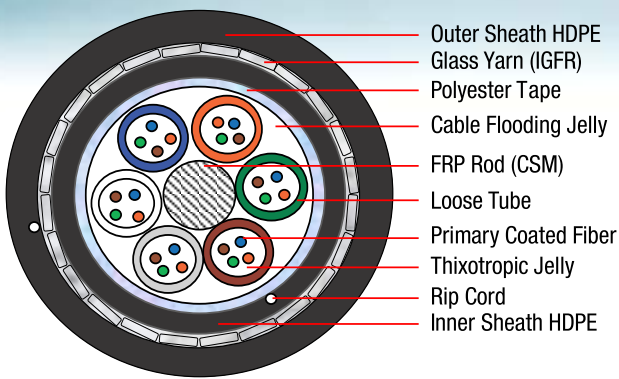
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Armoured Cables

MULTI-TUBE DIELECTRIC ARMoured CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & ducts installation
- Suitable for installed in areas with high risk of rodent presence
- Dielectric armour provides rodent retardant protection
- Local loop, metro, long-haul and broadband network
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- Glass Yarns (IGFR) as dielectric armour
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Rip Cord (s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

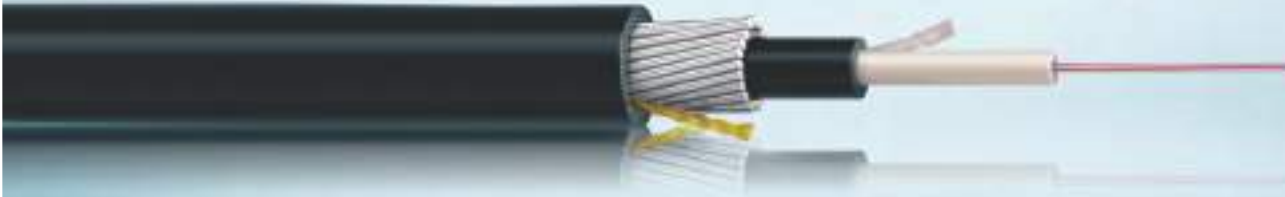
Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	13.2 mm (0.52 in)	145	6000	3000	15D	20D
48F-72F	14.7 mm (0.58 in)	178	6000	3000	15D	20D
96F	16.1 mm (0.63 in)	210	6000	3000	15D	20D
144F	19.2 mm (0.76 in)	293	6000	3000	15D	20D

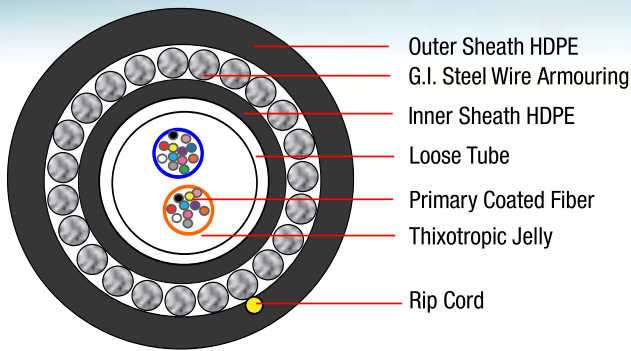
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

UNI-TUBE STEEL WIRE ARMoured CABLE (2F-24F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- Designed for installing in areas where mechanical impact is expected
- Excellent mechanical features
- Available upto 24 fibers

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs/Aramid or Glass Yarns/Rip Cord (s)/HDPE/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

* In Case of 24 Fibers, 2 bundles of 12 colour each with colour thread binders (Blue & Orange)

CONSTRUCTION DETAILS

- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Inner sheath with LSZH compound
- Galvanized steel wire armoured
- Outer sheath with LSZH compound
- Fiber count 2F-24F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-24F	11.8 mm (0.46 in)	257	7000	3500	15D	20D

Fiber Transmission Performance

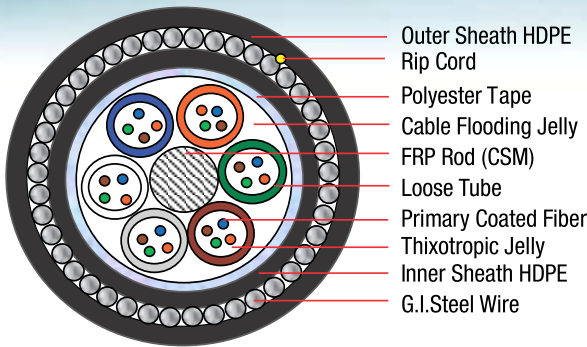
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Armoured Cables

MULTI-TUBE STEEL WIRE ARMoured CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- Designed for installation in areas where mechanical impact is expected
- Excellent mechanical features
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- Galvanized steel wire armouring
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarns/ Rip Cord(s)/ LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	14.5 mm (0.57 in)	305	15000	7500	15D	20D
48F-72F	16.0 mm (0.63 in)	365	21000	10500	15D	20D
96F	17.5 mm (0.69 in)	423	21000	10500	15D	20D
144F	20.5 mm (0.81 in)	560	24000	12000	15D	20D

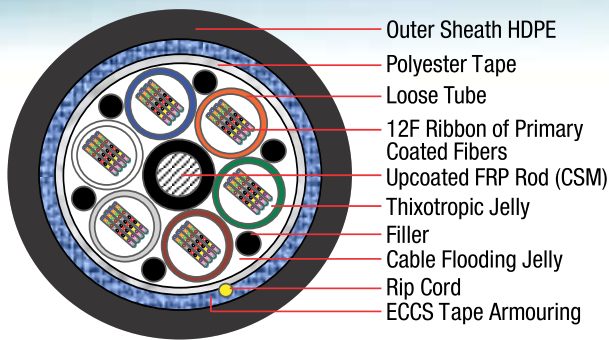
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE SINGLE SHEATH RIBBON TYPE ARMOURED CABLE (48F-576F)



CONSTRUCTION DIAGRAM OF 288 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- Local loop, metro, long-haul and broadband network
- Robust construction
- Available upto 576 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Ribbon is identified as 1RIBBON1, 2RIBBON2, 3RIBBON3, 4RIBBON4 and so on.

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Electrolyte chrome coated corrugated steel tape armouring
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 48F-576F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Aramid or Glass Yarns/ Rip Cord(s)/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 96F	18.6 mm (0.73 in)	325	4000	2000	15D	20D
144F	20.0 mm (0.79 in)	375	4000	2000	15D	20D
288F	24.3 mm (0.96 in)	569	4000	2000	15D	20D
576F	29.3 mm (1.18 in)	785	4000	2000	15D	20D

Fiber Transmission Performance

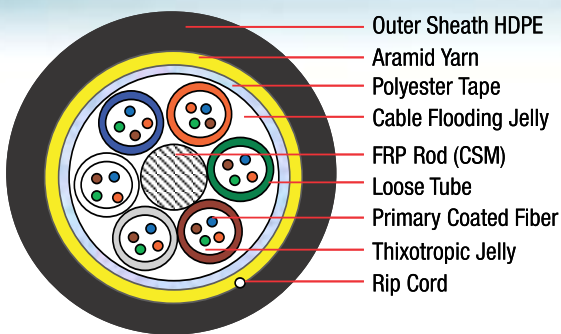
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

All Dielectric Self Supporting Cables (ADSS)

MULTI-TUBE ADSS SINGLE SHEATH AERIAL CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for self supporting aerial installation
- Cable can be installed parallel with power lines
- Local loop, metro, long-haul and broadband network
- Dielectric design eliminates grounding issues
- Light weight and flexible
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Aramid yarns are used as a Peripheral Strength Member (PSM)
- Outer Sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Different Span Lengths/ Anti-Tracking sheath/Rip Cord (s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	10.3 mm (0.41 in)	95	5000	2500	15D	20D
48F-72F	12.0 mm (0.47 in)	120	5000	2500	15D	20D
96F	13.4 mm (0.53 in)	148	5000	2500	15D	20D
144F	16.5 mm (0.65 in)	217	5000	2500	15D	20D

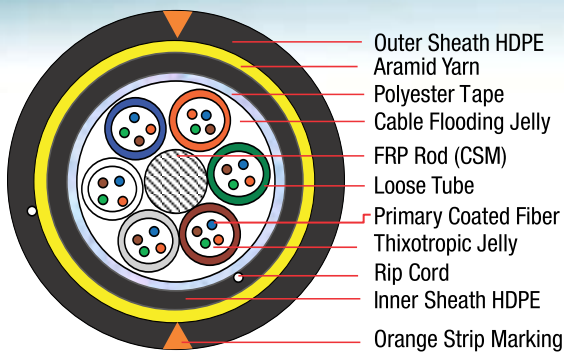
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE ADSS DOUBLE SHEATH AERIAL CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- Aramid yarns are used as a Peripheral Strength Member (PSM)
- Outer sheath with UV Stabilized HDPE compound
- Two orange colour marking strips diametrically opposite to each other
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

APPLICATIONS & FEATURES

- Suitable for self supporting aerial installation
- Cable can be installed parallel with power lines
- Local loop, metro, long-haul and broadband network
- Dielectric design eliminates grounding issues
- Light weight and flexible
- Available upto 144 fibers

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free) / Composite fibers / customized design / different span lengths / anti tracking sheath / Rip Cord(s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	12.0 mm (0.47 in)	120	5000	2500	15D	20D
48F-72F	13.4 mm (0.53 in)	147	5000	2500	15D	20D
96F	14.8 mm (0.58 in)	180	5000	2500	15D	20D
144F	18.0 mm (0.71 in)	255	5000	2500	15D	20D

Fiber Transmission Performance

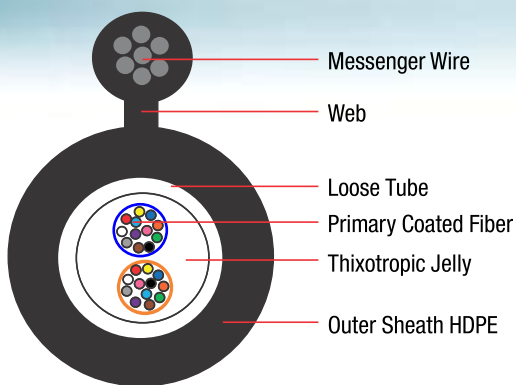
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Figure-8 Cables

UNI-TUBE FIGURE-8 AERIAL CABLE (2F-24F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



CONSTRUCTION DETAILS

- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Galvanized, stranded steel wire used as integrated messenger wire
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-24F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for aerial installation except on power lines
- Messenger wire provides required tensile strength recommended for aerial application
- Light weight cable construction design for ease of handling & installation
- Local loop, metro, long-haul and broadband network
- Available upto 24 fibers

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs/Aramid or Glass Yarns/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA/ NATURAL

* In Case of 24 Fibers, 2 bundles of 12 colour each with colour thread binders (Blue & Orange)

Technical Data

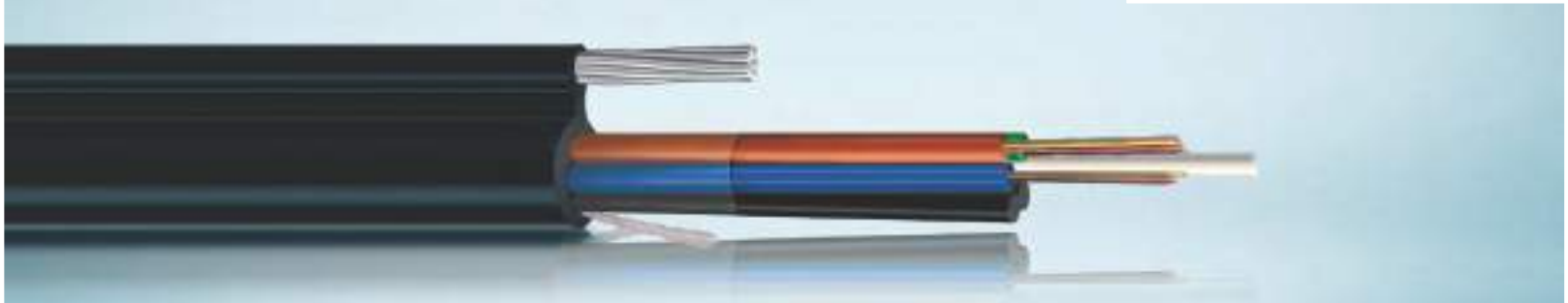
Fiber Count	Outer Diameter *HxW(Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-12F	13.0 X 6.4 mm (0.51 X 0.25 in)	87	2500	1250	15D	20D
24F	14.0 X 7.4 mm (0.55 X 0.29 in)	98	2500	1250	15D	20D

* H= Height of Cable ; W= Width of Cable

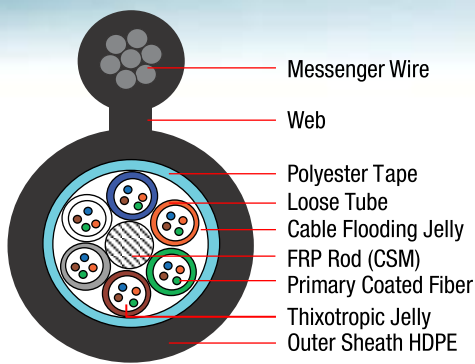
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE FIGURE-8 AERIAL CABLE (2F-144F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for aerial installation except on power lines
- Messenger wire provides required tensile strength recommended for aerial application
- Light weight cable construction design for ease of handling & installation
- Local loop, metro, long-haul and broadband network
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Galvanized, stranded steel wire used as integrated messenger wire
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Aramid or Glass Yarns/Rip Cord (s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter *HxW(Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	16.8 X 9.7 mm (0.66 X 0.38 in)	135	5000	2500	15D	20D
48F-72F	18.3 X 11.2 mm (0.72 X 0.44 in)	163	5000	2500	15D	20D
96F	19.7 X 12.6 mm (0.78 X 0.50 in)	197	5000	2500	15D	20D
144F	22.8 X 15.7 mm (0.90 X 0.62 in)	258	5000	2500	15D	20D

* H= Height of Cable ; W= Width of Cable

Fiber Transmission Performance

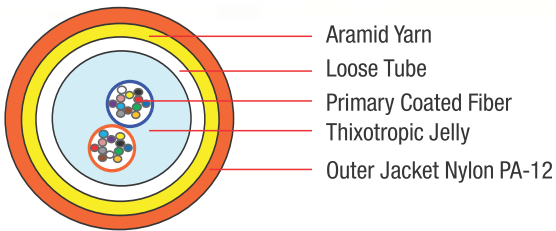
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Micro Duct Cables

UNI-TUBE MICRO DUCT CABLE (2F-24F)



CONSTRUCTION DIAGRAM OF 24 FIBERS



- Aramid Yarn
- Loose Tube
- Primary Coated Fiber
- Thixotropic Jelly
- Outer Jacket Nylon PA-12

CONSTRUCTION DETAILS

- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Aramid yarns as Peripheral Strength Member (PSM)
- Termite resistance Nylon PA-12 orange outer sheath
- Fiber count 2F-24F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for micro duct installation
- All dielectric design
- Light in weight
- Small cable diameter
- Ease of installation
- Available upto 24 fibers

OPTIONS AVAILABLE ON REQUEST

- HDPE/ LSZH /Composite Fibers/Customized designs

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

* In Case of 24 Fibers, 2 bundles of 12 colour each with colour thread binders (Blue & Orange)

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-12F	3.8 mm (0.15 in)	11	500	250	10D	15D
24F	5.6 mm (0.22 in)	24	800	400	10D	15D

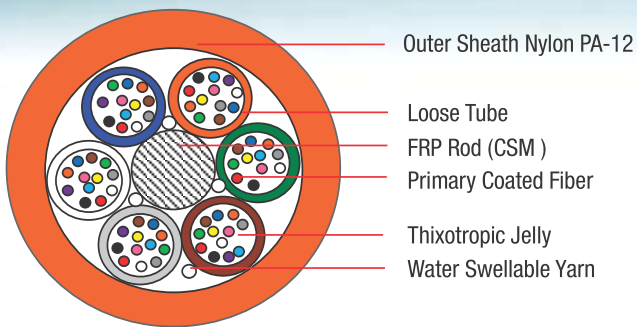
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE MICRO DUCT CABLE (6F-144F)



CONSTRUCTION DIAGRAM OF 72 FIBERS



- Outer Sheath Nylon PA-12
- Loose Tube
- FRP Rod (CSM)
- Primary Coated Fiber
- Thixotropic Jelly
- Water Swellable Yarn

APPLICATIONS & FEATURES

- Suitable for blowing in micro ducts
- Local loop, metro, long-haul and broadband network
- Light weight and flexible
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Dry core construction with Water Swellable (WS) yarn
- Termite resistance Nylon PA-12 orange outer sheath
- Fiber count 24F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Wet core construction/Composite fibers/Customized designs/Aramid Yarns/Rip Cord (s) / HDPE/LSZH

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 72F	5.8 mm (0.23 in)	27	500	250	15D	20D
96F	6.8 mm (0.27 in)	40	1000	500	15D	20D
144F	9.0 mm (0.35 in)	73	1500	750	15D	20D

Fiber Transmission Performance

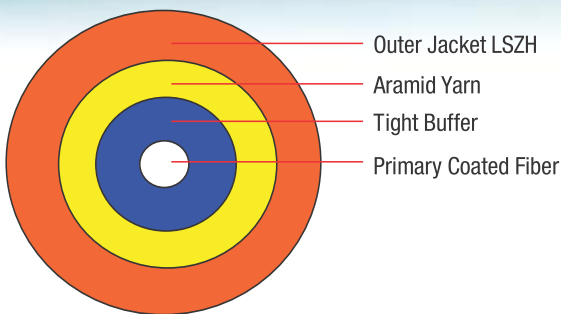
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Interconnect Cables

SIMPLEX CABLE















CONSTRUCTION DIAGRAM OF 1 FIBER



APPLICATIONS & FEATURES

- Suitable for building inter-connections (Campus LAN)
- Fiber patch panels within communications closets
- Link between electronic equipment & fiber patch panels
- Connectorized patchcords
- Gel free design
- Easy to strip & terminate

TIGHT BUFFER COLOUR CODING

-  BLUE
-  ORANGE
-  GREEN
-  BROWN
-  SLATE
-  WHITE
-  RED
-  BLACK
-  YELLOW
-  VIOLET
-  PINK
-  AQUA

CONSTRUCTION DETAILS

- Tight buffer diameter 900 micron /600 micron
- Tight buffered fiber coated with LSZH compound
- Aramid yarn reinforcement
- Outer jacket with LSZH compound
- Fiber count 1F (SM Fiber G.652D, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Tight buffered coating material PVC/ Customized designs/Outer jacket of different colours/ Outer jacket with PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
1F	2.0 mm (0.08 in)	4	200	100	30	60
1F	3.0 mm (0.12 in)	10	300	150	30	60

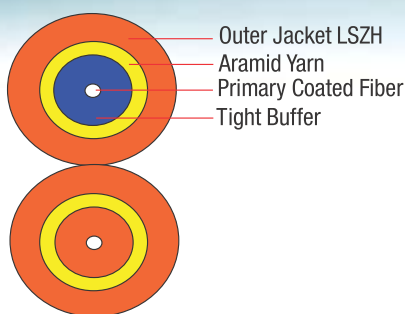
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

DUPLEX CABLE



CONSTRUCTION DIAGRAM OF 2 FIBERS



CONSTRUCTION DETAILS

- Tight buffered fiber coated with LSZH compound
- Tight buffer diameter 900 micron /600 micron
- Aramid yarn reinforcement
- Outer jacket with LSZH compound
- Fiber count 2F (SM Fiber G.652D, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for building inter-connections (Campus LAN)
- Fiber patch panels within communications closets
- Link between electronic equipment & fiber patch panels
- Connectorized patchcords
- Gel free design
- Easy to strip & terminate

OPTIONS AVAILABLE ON REQUEST

- Tight buffered coating material PVC/Customized designs/Outer jacket of different colours/Outer jacket with PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

TIGHT BUFFER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VOILET
- PINK
- AQUA

Technical Data

Fiber Count	Outer Diameter *HxW(Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F (Maxi-Zip)	3.0 X 6.0 mm (0.12 X 0.24 in)	16	600	300	30	60
2F (Mini-Zip)	2.0 X 4.0 mm (0.08 X 0.16 in)	8	400	200	30	60

* H= Height of Cable ; W= Width of Cable

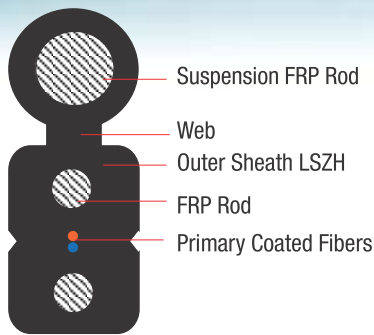
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

FTTH Cables

FLAT DROP OUTDOOR CABLE (1F-2F)

CONSTRUCTION DIAGRAM OF 2 FIBERS



CONSTRUCTION DETAILS

- Fiber embedded in LSZH Sheath between 2 FRP as Peripheral Strength Member (PSM)
- Outer sheath with LSZH compound
- FRP Rod for self supporting
- Fiber count 1F-2F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for outdoor installation
- Suitable for aerial installation, to the end Connectivity up to home
- Easy installation
- Broadband network
- Gel free design
- Available upto 2 fibers

OPTIONS AVAILABLE ON REQUEST

- ARP Rod as a peripheral strength member/ Customized designs/Steel Wire as a suspension

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

FIBER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Technical Data

Fiber Count	Outer Diameter *HxW(Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
1F-2F	2.0 X 5.0 mm (0.08 X 0.2 in)	25	1000	500	30	60

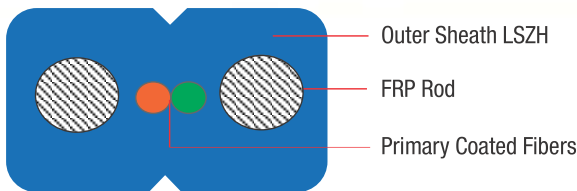
* H= Height of Cable ; W= Width of Cable

Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

FLAT DROP INDOOR CABLE (1F-4F)

CONSTRUCTION DIAGRAM OF 2 FIBERS



APPLICATIONS & FEATURES

- Suitable for indoor installation in any type of civil structures
- Suitable for aerial installation to the end connectivity up to home
- Easy installation
- Broadband network
- Gel free design
- Available upto 4 fibers

FIBER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Fiber embedded in LSZH Sheath between 2 FRP Peripheral Strength Member (PSM)
- Outer sheath with LSZH compound
- Fiber count 1F-4F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- ARP Rod/Steel wire as a peripheral strength member/ Composite fibers/Customized designs

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter *HxW(Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F	2.0 X 3.0 mm (0.08 X 0.12 in)	8	50	25	30	60
4F	2.2 X 3.5 mm (0.09 X 0.14 in)	10	50	25	30	60

* H= Height of Cable ; W= Width of Cable

Fiber Transmission Performance

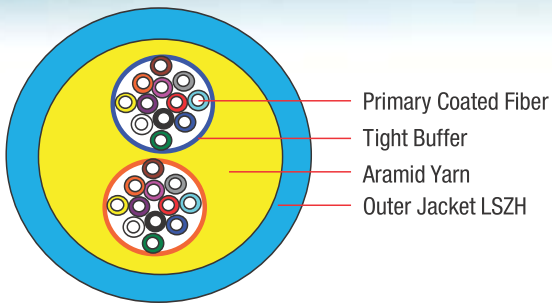
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Indoor Cables

PREMISES DISTRIBUTION CABLE



CONSTRUCTION DIAGRAM OF 24 FIBERS



CONSTRUCTION DETAILS

- Tight Buffered fiber coated with LSZH compound
- Aramid yarn reinforcement
- Outer jacket with LSZH compound
- Fiber count 2F-24F (SM Fiber G.652D, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for building inter connections
- Easy access to the fiber
- Good bending performance
- High tensile strength & light weight
- Gel free design
- Easy to strip & terminate
- Available upto 24 fibers

OPTIONS AVAILABLE ON REQUEST

- Tight buffered coating material PVC/Composite fibers/ Customized designs/Different colours of outer jacket/ Outer jacket with PVC compound

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

TIGHT BUFFER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VOILET
- PINK
- AQUA

* In Case of 24 & 16 Fibers, 2 bundles of 12 & 8 colour each with colour identification binders (Blue & Orange)

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
4F	5.0 mm (0.20 in)	27	1000	500	15D	20D
6F	5.8 mm (0.23 in)	34	1000	500	15D	20D
8F	6.0 mm (0.24 in)	40	1000	500	15D	20D
12F	7.0 mm (0.28 in)	50	1000	500	15D	20D
16F	7.8 mm (0.31 in)	60	1200	600	15D	20D
24F	8.5 mm (0.33 in)	72	1200	600	15D	20D

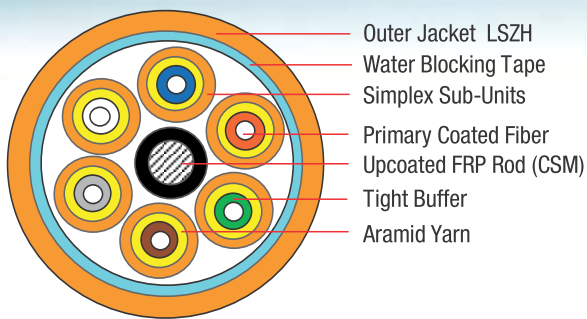
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

BREAKOUT TIGHT BUFFER UNARMoured CABLE (4F-12F)



CONSTRUCTION DIAGRAM OF 6 FIBERS



- Outer Jacket LSZH
- Water Blocking Tape
- Simplex Sub-Units
- Primary Coated Fiber
- Upcoated FRP Rod (CSM)
- Tight Buffer
- Aramid Yarn

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Individual fiber jacket outer diameter 2.5 mm (Simplex sub units)
- S/Z core wrapped with water blocking tape
- Aramid yarn reinforcement in sub units
- Outer jacket with LSZH compound
- For easy identification all the tight buffers are colour coated
- Fiber count 4F-12F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Low to medium fiber count requirement
- In-building backbone or horizontal deployment
- Factory floor automation and harsh environment installation
- Office wiring
- Compatible with all standard fiber optic connectors
- Available upto 12 fibers

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs/Higher fiber count on request/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

TIGHT BUFFER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VOILET
- PINK
- AQUA

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
4F-6F	10.4 mm (0.41 in)	96	800	400	15D	20D
8F	12.1 mm (0.48 in)	126	800	400	15D	20D
12F	15.1 mm (0.59 in)	186	800	400	15D	20D

Fiber Transmission Performance

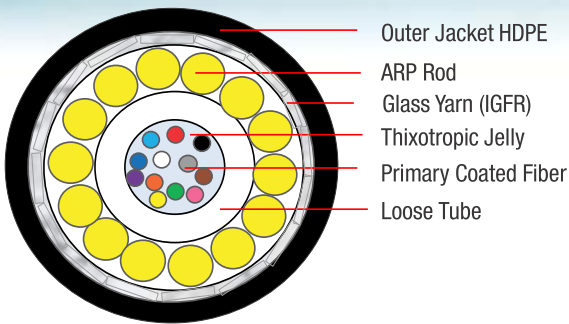
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Special Cables

UNI-TUBE ARP ARMoured CABLE (2F-12F)



CONSTRUCTION DIAGRAM OF 12 FIBERS



APPLICATIONS & FEATURES

- Suitable for indoor & outdoor applications
- Ideal for FTTH applications
- High crush resistance
- Excellent rodent proof
- Very light in weight
- Available upto 12 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Armouring with aramid reinforced plastic rod
- Glass yarn (IGFR) as a Peripheral Strength Member (PSM)
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-12F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs/ Higher fiber count on request/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-12F	8.0 mm (0.31 in)	54	1000	500	15D	20D

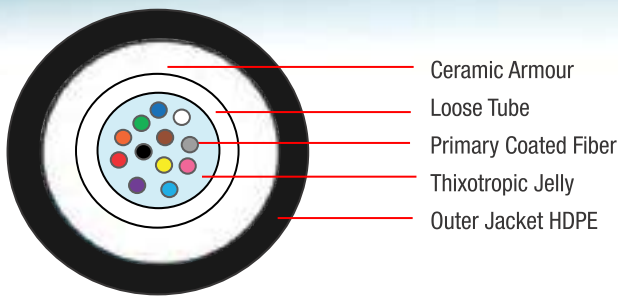
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

UNI-TUBE CERAMIC ARMoured CABLE (2F-12F)



CONSTRUCTION DIAGRAM OF 12 FIBERS



- Ceramic Armour
- Loose Tube
- Primary Coated Fiber
- Thixotropic Jelly
- Outer Jacket HDPE

APPLICATIONS & FEATURES

- Suitable for aerial & duct installation
- All dielectric design
- Light in weight
- High tensile & crush resistance
- Rodent proof
- Available upto 12 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Single loose tube filled with thixotropic jelly and centrally placed in the cable
- Dielectric rigid ceramic armour
- Outer sheath UV Stabilized HDPE compound
- Fiber count 2F-12F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- LSZH/FR PVC as an outer jacket /Composite Fibers/ Customized designs/Higher fiber count on request

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-12F	8.0 mm (0.31 in)	65	1500	750	10D	15D

Fiber Transmission Performance

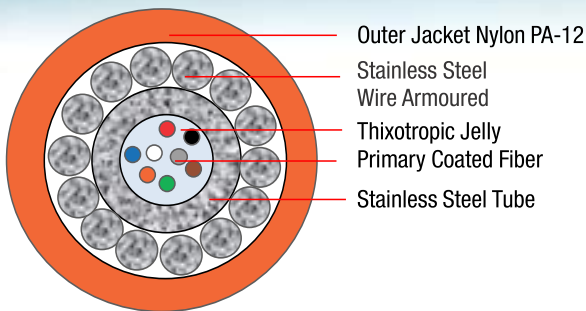
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Special Cables

TACTICAL CABLE (2F-8F)



CONSTRUCTION DIAGRAM OF 8 FIBERS



- Outer Jacket Nylon PA-12
- Stainless Steel Wire Armoured
- Thixotropic Jelly
- Primary Coated Fiber
- Stainless Steel Tube

CONSTRUCTION DETAILS

- Fibers with primary coating
- Central stainless steel loose tube, gel-filled design
- Armouring & strain relief made of stainless steel wire
- Outer jacket Nylon PA-12 with extra abrasion resistance
- Fiber count 2F-8F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

APPLICATIONS & FEATURES

- Suitable for indoor & outdoor applications
- Tactical military or civil applications
- High crush resistance
- Excellent rodent proof
- Very light in weight
- Rapid deployment in harsh surroundings
- Available upto 8 fibers

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -55°C to + 85°C
- Storage Temperature : -60°C to + 85°C
- Installation Temperature : -55°C to + 85°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

FIBER COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
2F-4F	3.9 mm (0.15 in)	29	1100	550	15D	20D
6F-8F	4.5 mm (0.18 in)	42	1500	750	15D	20D

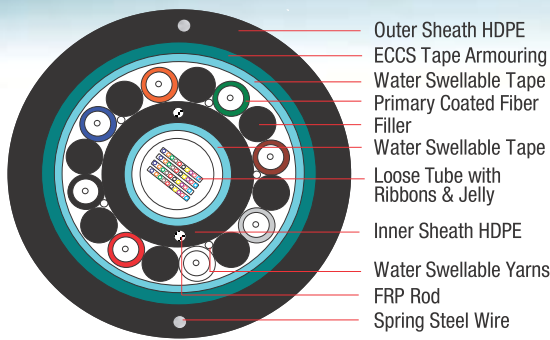
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE INTRUSION PROOF ARMoured CABLE (48F + 8F)



CONSTRUCTION DIAGRAM OF (48+8) FIBERS



CONSTRUCTION DETAILS

- Non Metallic, anti-buckling two FRP rod as Peripheral Strength Member (PSM)
- Central loose tube containing ribbon fibers and filled with thixotropic jelly
- Cable core dry type wrapped with water blocking tape
- Inner sheath with UV Stabilized HDPE compound
- Loose tube containing single fiber is stranded over inner sheath
- Cable core dry type wrapped with water blocking tape
- Electrolyte chrome coated corrugated steel tape armouring
- Two spring steel wires are embedded in outer sheath
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 48F+8F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

APPLICATIONS & FEATURES

- Superior cable design combines ribbon optical fiber and sensory layer content single fiber to provide the signals for IP Cameras, Surveillance devices, Monitoring devices or media convertors via sensory fibers
- Networking security sensors can help prevent physical attacks from internal and external sources, and they also protect against accidental intrusions and the inside threat
- Intrusion proof cabling systems are immune to cable taps
- The product is a carrier-grade product used to meet the high volumes of information coming from the network

OPTIONS AVAILABLE ON REQUEST

- Composite fibers/Customized designs/ Aramid or Glass Yarn/Rip Cord(s)

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657; EN 187000; Telecordia GR-20 issue 3rd May, 2008

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

Ribbon is identified as 1RIBBON1, 2RIBBON2, 3RIBBON3, 4RIBBON4.

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
48F+8F	20 mm (0.79 in)	350	3000	1500	15D	20D

Fiber Transmission Performance

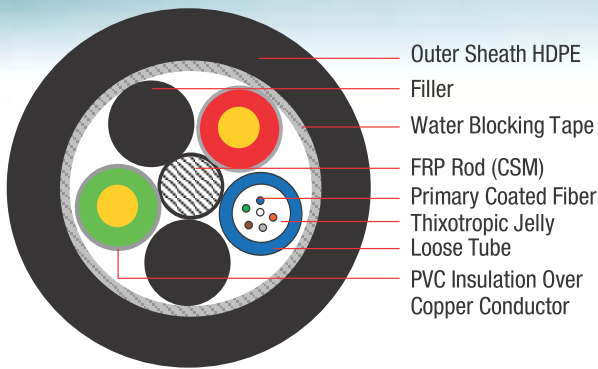
Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

Special Cables

HYBRID CABLE (OPTICAL FIBER WITH COPPER CONDUCTOR)



CONSTRUCTION DIAGRAM OF 6 FIBERS



APPLICATIONS & FEATURES

- Suitable for underground installation on pathways or road
- Robust under all conditions of operation, adjustment, replacement, storage and transport
- Suitable for lightning prone areas
- Better tensile strength

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core dry type
- S/Z core wrapped with water blocking tape
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 6F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

OPTIONS AVAILABLE ON REQUEST

- Wet core construction/Composite fibers/Customized designs/Aramid or Glass Yarns/Rip Cord(s)/ FR PVC/ LSZH

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to +70°C
- Storage Temperature : -30°C to +70°C
- Installation Temperature : -20°C to +70°C

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657 ; EN 187000; Telecordia GR-20 issue 3rd May, 2008

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
6F	9.8 mm (0.39 in)	100	2700	1350	15D	20D

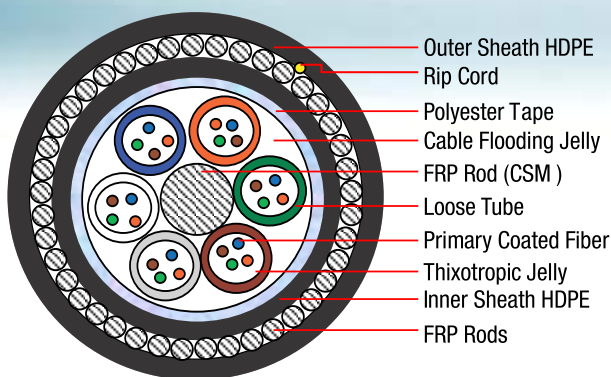
Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	G.652D
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

MULTI-TUBE FRP ROD ARMoured CABLE



CONSTRUCTION DIAGRAM OF 24 FIBERS



APPLICATIONS & FEATURES

- Suitable for direct burial & inside duct installation
- Improves compressive strength and rodent protection
- Designed for installation in areas where mechanical impact is expected
- Excellent mechanical feature
- Rugged & robust design
- Available upto 144 fibers

FIBER & TUBE COLOUR CODING

- BLUE
- ORANGE
- GREEN
- BROWN
- SLATE
- WHITE
- RED
- BLACK
- YELLOW
- VIOLET
- PINK
- AQUA / NATURAL

CONSTRUCTION DETAILS

- Non metallic, anti-buckling FRP rod as Central Strength Member (CSM)
- Loose tube containing coloured fibers and filled with thixotropic jelly
- Cable core fully filled with flooding jelly
- S/Z core wrapped with polyester tape
- Inner sheath with UV Stabilized HDPE compound
- FRP Rods armoring as Peripheral Strength Member (PSM)
- Outer sheath with UV Stabilized HDPE compound
- Fiber count 2F-144F (SM Fiber G.652D, G.655, G.657 and Multimode OM1, OM2, OM3 & OM4)

INTERNATIONAL STANDARDS

IEC 60794; IEC 60793; ITU-T Rec. G.650; ITU-T Rec. G.652; ITU-T Rec. G.655; ITU-T Rec. G.656; ITU-T Rec G.657 ; EN 187000; Telecordia GR-20 issue 3rd May, 2008

OPTIONS AVAILABLE ON REQUEST

- Dry core construction (Gel free)/Composite fibers/ Customized designs/Metallic CSM/Flat FRP/ Rip Cord(s)/LSZH/FR PVC

ENVIRONMENTAL CONDITIONS (IEC 60794-1-2-F1)

- Operating Temperature : -30°C to + 70°C
- Storage Temperature : -30°C to + 70°C
- Installation Temperature : -20°C to + 70°C

DRUM LENGTH

2000 meters ± 10% or as per customer's requirement

Technical Data

Fiber Count	Outer Diameter (Nominal)	Weight (kg/km)	Tensile Strength (N)		Bending Radius	
			Temporary	Permanent	Temporary	Permanent
Upto 36F	14.2 mm (0.56 in)	184	7000	3500	15D	20D
48F-72F	15.7 mm (0.62 in)	226	9000	4500	15D	20D
96F	17.1 mm (0.67 in)	265	9000	4500	15D	20D
144F	20.2 mm (0.80 in)	363	9000	4500	15D	20D

Fiber Transmission Performance

Parameters	Multimode				Single Mode
	OM1	OM2	OM3	OM4	
Fiber Core Diameter (µm)	62.5	50	50	50	9
Fiber Category	OM1	OM2	OM3	OM4	G.652D
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	1310/1550/1625
Maximum Attenuation (dB/ km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.36/0.23/0.26
Bandwidth (MHz*km) 850/ 1300	200/500	500/500	1500/500	3500/500	N/A

FIBER REINFORCED PLASTIC (FRP) ROD (CENTRAL/PERIPHERAL STRENGTH MEMBER)



PRODUCT DESCRIPTION

- Fiber Reinforced Plastic (FRP) is manufactured using E-Glass fiber with high heat resistance
- Fiber Reinforced Plastic (FRP) is available in various coatings including EAA and HDPE which allows easy handling
- Di-electric cable composite strength member widely known as FRP/GRP rod is designed to provide excellent strength performance while maintaining high degree of stiffness, preventing cable buckling over its entire service life
- Long continuous standard lengths FRP rod improves yield & productivity on the factory floor. It has an added advantage of high heat resistant property with high torsional strength

PRODUCT FEATURES

- Superior dimensional stability and prevents sagging in aerial installation
- Light weight, excellent tensile strength and high tensile modulus
- Consistent diameter and shape, designed for all-dielectric or metallic cable applications
- Cost effective solution as a strength member
- Provides anti-buckling properties and protection during installation
- Inexpensive way to increase diameter to accommodate designs with high fiber counts increases equipment uptime and productivity
- Long, splice-free lengths and adhesion to up jacketing materials
- Used as central or peripheral reinforcement in fiber optic cable
- Dual Advantage: Reinforcement during installation as well as reduce stress on signal carrying optic fiber/conductor

Mechanical Properties

PROPERTIES	VALUE	UNITS	TEST METHOD
Tensile strength at break	≥1.50	GPa	ASTM D3916
Elongation at break	≥2.5 & ≤4.0	%	ASTM D3916
Tensile modulus	≥50	GPa	ASTM D3916
Coefficient of thermal expansion	≤6.6x10 ⁻⁶	/°C	ASTM D696
Water absorption	≤0.1	%	ASTM D570
Flexural modulus	≥50	GPa	ASTM D790
Flexural strength	≥0.7	GPa	ASTM D790
Heat stress tolerance (Bend Radius), 100° C, 8 Days	50 D	mm	
Minimum Bend Radius at 25° C	≤25 D	mm	

PRODUCT APPLICATION

- It is most suitable for multi loose tube, uni-tube, slotted core or ribbon cable and is typically used as central or peripheral reinforcement in fiber optic cable
- FRP rods located in the centre of fiber optic cables, combine the high performance properties of glass reinforcements with unique resin formulations to produce a strong and cost-efficient cable reinforcement

PACKAGING DETAILS

PROPERTIES	SPOOL DIMENSIONS (mm)				
Flange Dia	625	800	935	800	935
Barrel Dia	315	400	400	400	400
Traverse	450	490	550	490	550
Overall Width	514	554	614	554	614
Central Bore (CB)	80	80	80	80	80
CB to Driving hole distance	120	120	120	120	120

FRP Rod (mm)	1.00	1.60	2.00	2.30	3.80
Length / Reel (km)	50.4	50.4	50.4	25.2	16.8

PHYSICAL PROPERTIES

PROPERTIES	VALUE	UNITS	TEST METHOD
Glass content	83±2	%	DIN EN ISO 1172
Density	2.05 to 2.15	gm/cc	Water immersion
Diameter Tolerance	±0.05	mm	Micrometer
Ovality	≤0.05	mm	Micrometer
Splices	None		

Product Range: 0.40 mm to 6.00 mm with very close diameter tolerance.

ARAMID REINFORCED PLASTIC (ARP) ROD

PRODUCT DESCRIPTION

- Aramid Reinforced Plastic (ARP) manufactured using Aramid yarn and a proprietary resin system to provide low bending radius & good anti-buckling properties with very high modulus
- Aramid Reinforced Plastic (ARP) rods are non-metallic composites designed primarily for use as a central strength member in fiber optic cables
- Aramid Reinforced Plastic (ARP) rods offer high tensile strength & better bending properties with minimum weight

PRODUCT APPLICATION

- Aramid Reinforced Plastic (ARP) Rod in addition to high tensile modulus and protection during installation
- It is most suitable for Aerial, FTTH, Drop and Micro duct cables
- These are also ideal for all dielectric cable configurations where placement close to power lines is common

PRODUCT FEATURES

- Light weight, high strength and superior dimensional stability
- Low expansion : ARP has a low coefficient of thermal expansion than steel wire and FRP in a wider temperature range
- Impact and break resistance : ARP has much higher tensile strength
- ARP is non-metallic material not sensitive to electric shock due to lightning rain and other climatic scenarios
- Enables the cable to be compact, aesthetic and flexible, especially for the indoor layouts
- Good flexibility : ARP is flexible and easy to bend and its minimum bending radius is 24 times of the diameter of ARP rod

0.40 mm ARAMID REINFORCED PLASTIC ROD

PHYSICAL PROPERTIES

PROPERTIES	VALUE	UNITS	TEST METHOD
Aramid content	67±3	%	DIN EN ISO 1172
Unit weight	0.17±0.05	gm/m	Weighing Scale
Diameter tolerance	±0.05	mm	Micrometer
Ovality	≤0.05	mm	Micrometer

MECHANICAL PROPERTIES

PROPERTIES	VALUE	UNITS	TEST METHOD
Tensile strength at break	≥1.50	GPa	ASTM D3916
Elongation at break	≥2.5	%	ASTM D3916
Tensile modulus	≥50	GPa	ASTM D3916
Minimum bend radius at 25° C	<8	mm	Mandrel bend
Moisture content	≤2.0	%	Oven, 150° C, 30 Min.

0.50 mm ARAMID REINFORCED PLASTIC ROD

PHYSICAL PROPERTIES

PROPERTIES	VALUE	UNITS	TEST METHOD
Aramid content	67±3	%	DIN EN ISO 1172
Unit weight	0.25 ± 0.05	gm/m	Weighing scale
Diameter tolerance	±0.05	mm	Micrometer
Ovality	≤0.05	mm	Micrometer

MECHANICAL PROPERTIES

PROPERTIES	VALUE	UNITS	TEST METHOD
Tensile strength at break	≥1.50	GPa	ASTM D3916
Elongation at break	≥2.5	%	ASTM D3916
Tensile modulus	≥50	GPa	ASTM D3916
Minimum bend radius at 25° C	<10	mm	Mandrel bend
Moisture content	≤2.0	%	Oven, 150° C, 30Min.

Product Range: 0.40 mm & 0.50 mm with very close diameter tolerance. Other sizes are available as per customer's requirement.

Let's go green 

POLYCAB

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