

# **CATALOG** Indoor and outdoor fiber optic cables



# FIBRAMÉRICA

Complete solutions for the intelligent development of fiber optic networks

**FIBRAMERICA** - Minqing Tancome Technology is a leading company in the design, development, manufacture and marketing of optical connectivity solutions for operators, distributors and importer installers worldwide.

With its headquarters located in China, it has offices in Shanghai and Ningbo. In the Americas, it has a strategic unit located in Brazil, where it offers commercial and technical support to customers in the same time zone and language.

Through continuous improvements in production processes, the implementation of new technologies and communication resources, **FIBRAMERICA** guarantees competitive prices, fast production times, purchasing facilities and support to follow up the manufacturing and transportation processes of the products.

All Fibramérica products are manufactured according to international quality norms and standards (ISO9001).

**FIBRAMERICA**'s team is composed of specialized professionals with long experience in the telecommunications market, who work closely with customers in their stock material requirements as well as in bidding and homologation projects.

**FIBRAMERICA** focuses on the development of new products according to the needs of each project, from the conception, production of prototypes and technical material, to the final manufacturing of the product.

We currently have products approved by important telecommunication operators in the continent through our local distributors, both in America and Europe.





# **Fiber Optic Cables**

Fibramérica supplies fiber optic cables for external and internal installation applications, manufactured in accordance with international standards and quality norms.

Fiber optic cables are composed of glass filaments, each capable of transmitting digital data modulated in light waves. They efficiently send encoded information in a beam of light through a glass tube.

Fibramérica's cable catalog includes cables for overhead, subway and direct burial, with metallic or dielectric structures, in different configurations according to the project's needs.

The fibers used in each cable can be of the single-mode type (G652D, G657A1, G657A2 and G657B3), and G657B3), as well as multimode (OM1, OM2, OM3 and OM3). All cables are designed and manufactured in accordance with international standards, under strict quality controls.

Some of Fibramérica's most popular cable models are self-supporting dielectric cables (ADSS and ASU), self-supporting dielectric cables (ADSS and ASU), self-supporting dielectric cables (ADSS and ASU), armored cables (GYTS, GYTA, GYXTW) and drop cables in their version with messenger (outside) and without messenger (inside).

Fibramérica provides cables with customized marking of its products (OEM).



# ADSS Self Supporting Cable



#### Cable structure

PE Outer Jacket
 FRP core element
 Tear wire
 Fiber optic yarns
 Loose tubes
 Filler tube
 Aramid yarns
 Moisture blocker

### Description

ADSS optical cable is a fully dielectric self-supporting cable for external installation which, depending on the type of configuration, can support spans of up to 800 meters without the use of messenger cables. It is currently the most widely used cable, in its different versions, for the construction of backbone networks and is mainly installed in existing 220 kV or lower voltage power lines.

The cable can have one or two medium or high density polyethylene sheaths, maximum capacity of up to 288 fibers and its accommodation is in wooden reels of up to 4km or 5km, depending on the cable model.

#### Features

- Precise control of excess fiber length to prevent fibers from becoming taut when the rope is subjected to maximum design load.
- Precise control of release tension and aramid yarn placement to improve cable tensile strength.
- Use of high quality materials to provide an efficient and safe environment.

- Special ADSS cables can be designed on request.

### Standards

The cable complies with the IEEE 1222-2004 standard as well as IEC 6079-



# ADSS Self Supporting Cable

# Specifications

| lte                         | ms             | Unit                 |         |         | Cable ty | уре     |         |         |
|-----------------------------|----------------|----------------------|---------|---------|----------|---------|---------|---------|
| Spam                        |                | m                    | 100     | 200     | 300      | 400     | 500     | 600     |
| Outside diameter            |                | mm                   | 11.6    | 12.0    | 12.3     | 12.5    | 12.8    | 13.8    |
| M(-:                        | PE sheath      |                      | 124.2   | 131.1   | 136.3    | 141.4   | 146.5   | 165.9   |
| weight                      | AT Cover       | Ng/ KITI             | 132.6   | 139.9   | 145.3    | 150.7   | 156.0   | 176.3   |
| Cross sectional area        |                | mm²                  | 105.68  | 112.70  | 117.9    | 123.07  | 128.19  | 150.21  |
| Traction member area        |                | mm²                  | 5.67    | 10.20   | 13.62    | 17.02   | 20.43   | 26.10   |
| RTS                         |                | KN                   | 8.50    | 15.30   | 20.40    | 25.50   | 30.60   | 39.10   |
| MOTS                        |                | KN                   | 3.40    | 6.12    | 8.16     | 10.20   | 12.24   | 15.64   |
| EDS                         |                | KN                   | 2.13    | 3.83    | 5.10     | 6.38    | 7.65    | 9.78    |
| Maximum exceptional stress  |                | KN                   | 5.10    | 9.18    | 12.24    | 15.30   | 18.36   | 23.46   |
| Modules                     |                | KN/mm²               | 8.44    | 12.52   | 15.27    | 17.79   | 20.11   | 21.71   |
| Coefficient of thermal expa | ansion         | 10 <sup>-6</sup> /°C | 9.32    | 5.28    | 3.78     | 2.80    | 2.12    | 1.42    |
| Cruching force              | Operation      | N/10cm               | 1000    | 1000    | 1000     | 1000    | 1000    | 1000    |
| crushing force              | Installation   | N/10cm               | 2200    | 2200    | 2200     | 2200    | 2200    | 2200    |
| Safety factor               |                |                      | 2.5     | 2.5     | 2.5      | 2.5     | 2.5     | 2.5     |
| Minimum bonding radius      | Operation      | mm                   | 174     | 180     | 185      | 188     | 192     | 207     |
| Minimum bending radius      | Installation   | mm                   | 290     | 300     | 308      | 313     | 320     | 345     |
|                             | Installation   | ٥C                   | -10-+60 | -10-+60 | -10-+60  | -10-+60 | -10-+60 | -10-+60 |
| Temperature                 | Transportation | °C                   | -40-+70 | -40-+70 | -40-+70  | -40-+70 | -40-+70 | -40-+70 |
|                             | Operation      | °C                   | -40-+70 | -40-+70 | -40-+70  | -40-+70 | -40-+70 | -40-+70 |
| Sag (5mm Lce Load.          | PE             | 0/                   | 0.72    | 0.84    | 1.6      | 1.28    | 1.47    | 1.57    |
| Average 20°C)               | AT             | %                    | 0.76    | 0.90    | 1.12     | 1.35    | 1.54    | 1.63    |

# Self-supporting Cable ASU



#### Cable structure

- 1. PE Outer Jacket
- 2. FRP traction elements
- 3. Tear wire
- 4. Fiber optic yarns
- 5. Single loose tube

### Description

FAB-ASU cable is a fully dielectric, self-supporting, single loose tube cable with water blocking gel, widely used in outside plant for optical distribution. In short runs (80 to 120 meters), ASU cable is an economical alternative to ADSS cable.

It has a medium density polyethylene jacket, reduced diameter and capacity to support up to 24 fibers in its single loose tube. It consists of two parallel FRP elements that act as supporting elements supporting spans of up to 200 meters.

The outer jacket is made of PE which, depending on the requirement, can change the outer diameter. In addition, its design minimizes wind and ice loads, is quick to install and easy to transport.

#### Features

- Single-mode optical fiber type G.652D
- Outer sheath: MDPE (Medium Density Polyethylene)
- Operating Temperature:  $-20^{\circ}C \sim +65^{\circ}C$
- Maximum Span (Distance between Poles): 200 meters
- Protection against UV rays and humidity
- Variable diameter according to the number of fibers and project criteria.

### Standards

The cable complies with the IEEE 1222-2004 standard as well as IEC 6079-



# Self-supporting Cable ASU

# Specifications

| SPAM 80 meters               | unit   |              |               |               |                |               |                |  |
|------------------------------|--------|--------------|---------------|---------------|----------------|---------------|----------------|--|
| Amount of fiber              | N°     |              | 6             |               | 12             |               | 24             |  |
| Cable model                  |        | FAB-ASU-6-80 | FAB-ASU-6-80A | FAB-ASU-12-80 | FAB-ASU-12-80A | FAB-ASU-24-80 | FAB-ASU-24-80A |  |
| FRP reinforcement diameter   | ±0.1mm | 1.5mm        | 2mm           | 1.5mm         | 2mm            | 1.5mm         | 2.5mm          |  |
| Number of FRP reinforcements | N°     |              | 2             |               | 2              |               | 2              |  |
| Loose tube diameter PBT      | ±0.1mm | 1.8          | mm            | 2mm           |                | 2.4           | mm             |  |
| Number of loose tubes        | N°     |              | 1             | 1             |                | 1             |                |  |
| Water blocking threads       | D      | 20           | 2000          |               | 2000           |               | 00             |  |
| Tear threads                 | N°     | 1            |               | 1             |                | 1             |                |  |
| Cable diameter               | ±0.1mm | 6.2mm        | 6.5mm         | 6.5mm         | 6.6mm          | 7.2mm         | 8mm            |  |

| SPAM 120 meters              | unit   |               |                |                |                 |                |                 |
|------------------------------|--------|---------------|----------------|----------------|-----------------|----------------|-----------------|
| Amount of fiber              | N°     |               | 6              | 1              | 2               | 24             |                 |
| Cable model                  |        | FAB-ASU-6-120 | FAB-ASU-6-120A | FAB-ASU-12-120 | FAB-ASU-12-120A | FAB-ASU-24-120 | FAB-ASU-24-120A |
| FRP reinforcement diameter   | ±0.1mm | 2.0mm         | 2.0mm          | 2.0mm          | 2.0mm           | 2.0mm          | 2.6mm           |
| Number of FRP reinforcements | N°     |               | 2              |                | 2               | 2              |                 |
| Loose tube diameter PBT      | ±0.1mm | 1.8           | mm             | 2mm            |                 | 2.4            | mm              |
| Number of loose tubes        | N°     |               | 1              | 1              |                 | 1              |                 |
| Water blocking threads       | D      | 20            | 2000           |                | 2000            |                | 00              |
| Tear threads                 | N°     | 1             |                |                | 1               |                | 1               |
| Cable diameter               | ±0.1mm | 6.2mm         | 7.5mm          | 6.5mm          | 7.5mm           | 7.2mm          | 8.5mm           |

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# Outdoor shielded cable



#### **Cable structure**

- 1. PE Outer Jacket
- 2. Metallic armor
- 3. FRP core element
- 4. Loose tubes
- 5. Fiber optic strands

# Description

FAB-GYTS aerial cable with metallic armor is designed for different outdoor applications, both in ducts and aerial for non-self-supporting applications. Its main characteristic is that it has a steel tape that protects the cable against humidity, provides rigid protection, rodent resistance, covered by a black polyethylene jacket.

In FAB-GYTS cable, the fibers are placed in loose tubes that are filled with a water-blocking filling compound. The tubes and fillers are braided around the reinforcing member in a circular cable core.

#### Features

- Excellent crush resistance and flexibility
- Up to 288 fiber capacity
- Gel-filled slack tubes for superior water-resistant performance
- Corrugated steel moisture-proof tape protects cable from mechanical and rodent damage.

# Standards

The cable complies with the IEEE 1222-2004 standard as well as IEC 6079-



# Outdoor shielded cable

# Specifications

| Code             | Number of<br>fibers | Tubes | Fillers | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile strength<br>(Long/Short term)<br>N | Crush resistance<br>( <i>Long/Short term</i> )<br>N/1000mm | Radius of curvature<br>Dinámico / Estático<br>(mm) |
|------------------|---------------------|-------|---------|------------------------|-----------------------|--------------------------------------------|------------------------------------------------------------|----------------------------------------------------|
| FAB-GYTS-2-6     | 2-6                 | 1     | 4       | 8.9                    | 78/88                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-8-12    | 8-12                | 2     | 3       | 8.9                    | 78/88                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-14-18   | 14-18               | 3     | 2       | 8.9                    | 78/88                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-20-24   | 20-24               | 4     | 1       | 8.9                    | 78/88                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-26-30   | 26-30               | 5     | 0       | 8.9                    | 78/88                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-32-36   | 32-36               | 6     | 0       | 9.2                    | 82/87                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-38-48   | 38-48               | 4     | 1       | 9.5                    | 82/87                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-50-60   | 50-60               | 5     | 0       | 9.5                    | 82/87                 | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-62-72   | 62-72               | 6     | 0       | 10.0                   | 98/114                | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-74-84   | 74-84               | 7     | 1       | 11.2                   | 110/129               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-86-96   | 86-96               | 8     | 0       | 11.2                   | 112/129               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-98-108  | 98-108              | 9     | 1       | 12.5                   | 137/161               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-110-120 | 110-120             | 10    | 0       | 12.5                   | 137/161               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-122-132 | 122-132             | 11    | 1       | 13.8                   | 163/189               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |
| FAB-GYTS-134-144 | 134-144             | 12    | 0       | 13.8                   | 163/189               | 600/1500                                   | 300/1000                                                   | 10D/20D                                            |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# Armored cable for outdoor use double sheathed Mod. FAB-GYTY53



#### Cable structure

- 1. PE Outer Jacket
- 2. Metallic armor
- 3. PE inner jacket
- 3. FRP core element
- 4. Loose tubes
- 5. Fiber optic strands

# Descripción

The FAB-GYTY53 double sheathed metallic armored aerial cable is designed for different outdoor applications, either for aerial, direct buried or duct laying. Its main advantage is its robust design, which provides better performance against crushing or impact.

It has a steel tape that protects the cable against humidity, provides rigid protection, rodent resistance, covered by a black polyethylene jacket. The double jacket system increases the degree of protection of the fiber optic cable core in case it is damaged by rodent attack, for example.

In the FAB-GYTS cable, the fibers are placed in loose tubes that are filled with a water-blocking filling compound. The tubes and fillers are braided around the reinforcing member in a circular cable core.

#### Features

- Excellent crush resistance and flexibility
- Up to 288 fiber capacity
- Gel-filled slack tubes for superior water-resistant performance
- Corrugated steel moisture-proof tape protects cable from mechanical and rodent damage.

# Standards

The cable complies with YD/T 901-2009 standard as well as IEC 60794-1.



# Armored cable for outdoor use double sheathed $_{\mbox{Mod. FAB-GYTY53}}$

# Specifications

| Code               | Number of<br>fibers | Tubes | Fillers | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile strength<br>(Long/Short term)<br>N | Crush resistance<br>(Long/Short term)<br>N/1000mm | <b>Radius of curvature</b><br>Dinámico / Estático<br>(mm) |
|--------------------|---------------------|-------|---------|------------------------|-----------------------|--------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|
| FAB-GYTY53-2-6     | 2-6                 | 1     | 4       | 10.3                   | 114                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-8-12    | 8-12                | 2     | 3       | 10.3                   | 114                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-14-18   | 14-18               | 3     | 2       | 10.3                   | 114                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-20-24   | 20-24               | 4     | 1       | 10.3                   | 114                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-26-30   | 26-30               | 5     | 0       | 10.3                   | 114                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-32-36   | 32-36               | 6     | 0       | 10.6                   | 123                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-38-48   | 38-48               | 4     | 1       | 10.9                   | 125                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-50-60   | 50-60               | 5     | 0       | 10.9                   | 125                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-62-72   | 62-72               | 6     | 0       | 11.4                   | 143                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-74-84   | 74-84               | 7     | 1       | 12.6                   | 162                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-86-96   | 86-96               | 8     | 0       | 12.6                   | 162                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-98-108  | 98-108              | 9     | 1       | 13.8                   | 190                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-110-120 | 110-120             | 10    | 0       | 13.8                   | 190                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-122-132 | 122-132             | 11    | 1       | 15.2                   | 225                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |
| FAB-GYTY53-134-144 | 134-144             | 12    | 0       | 15.2                   | 225                   | 1000/3000                                  | 1000/3000                                         | 25D/12.5D                                                 |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# Dielectric outdoor cable



#### Cable structure

- 1. PE Outer Jacket
- 2. Fiber
- 3. Loose tubes
- 4. FRP tensile element
- 5. Pipe compound

### Description

FAT-GYFTY cable is ideally designed for outdoor installations, whether for laying in pipelines and overhead power systems, multiple lightning strikes and severe electromagnetic interference conditions, and can also be used as an optical access cable.

It has a fully dielectric structure, consisting of a PE jacket and loose tubes containing fiber inside. In the middle of the cable, an FRP tensile element articulates the cable configuration. This type of cable offers excellent tensile strength and flexibility in a compact size. It offers excellent optical transmission and physical performance.

### Features

- Low dispersion and attenuation
- Light weight and small diameter, easy to place
- Excellent mechanical and temperature performance
- FRP ensuring resistance to electromagnetic interference
- High-strength, hydrolysis resistant loose tube
- Special tube filling compound ensures critical fiber protection
- 100% cable core filling

# Standards

The cable complies with YD/T 901-2009 standard as well as IEC

# Dielectric outdoor cable

# Specifications

| Code              | Number of<br>fibers | Tubes | Fillers | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile strength<br>(Long/Short term)<br>N | Crush resistance<br>(Long/Short term)<br>N/1000mm | Radius of curvature<br>Dinámico / Estático<br>(mm) |
|-------------------|---------------------|-------|---------|------------------------|-----------------------|--------------------------------------------|---------------------------------------------------|----------------------------------------------------|
| FAB-GYFTY-2-6     | 2-6                 | 1     | 5       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-8-12    | 8-12                | 2     | 4       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-14-18   | 14-18               | 3     | 3       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-20-24   | 20-24               | 4     | 2       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-26-30   | 26-30               | 5     | 1       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-32-36   | 32-36               | 6     | 0       | 8.3                    | 59                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-38-48   | 38-48               | 4     | 1       | 9.0                    | 67                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-50-60   | 50-60               | 5     | 0       | 9.0                    | 67                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-62-72   | 62-72               | 6     | 0       | 9.0                    | 67                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-74-84   | 74-84               | 7     | 1       | 10.2                   | 82                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-86-96   | 86-96               | 8     | 0       | 10.2                   | 82                    | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-98-108  | 98-108              | 9     | 1       | 11.4                   | 101                   | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-110-120 | 110-120             | 10    | 0       | 11.4                   | 101                   | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-122-132 | 122-132             | 11    | 1       | 12.8                   | 125                   | 600/1500                                   | 300/1000                                          | 20D/10D                                            |
| FAB-GYFTY-134-144 | 134-144             | 12    | 0       | 12.8                   | 125                   | 600/1500                                   | 300/1000                                          | 20D/10D                                            |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# Armored central tube cable



Cable structure

- 1. PE outer jacket
- 2. Metal tensile members
- 3. Metallic reinforcement
- 4. Water blocking material
- 5. Loose tube
- 6. Fibers

# Description

FAB-GYXTW fiber cable is a suitable solution for aerial, duct, direct buried and pipe laying applications. Its main feature is the parallel metallic elements that improve tensile strength.

It is a compact, small diameter, flexible and lightweight cable, easy to install in the field. It has a corrugated steel metallic armor structure that provides resistance against crushing and protection against rodents, mainly in hostile outdoor environments.

Inside, there are protection and filling elements designed to block water access.

# Features

- Excellent crush resistance and flexibility
- Capacity up to 24 fibers in a central loose tube, type G.652D, G657A1 and
- G657A2, among other options.
- Excellent thermal performance

# Standards

According to standard YD/769-2010



# $\underset{\text{Mod. FAB-GYXTW}}{\text{Armored central tube cable}}$

# Specifications

| Code            | Fiber | Cable diameter<br>mm | Cable weight<br>kg/Km | Tensile Strength<br>Long/Short term<br>N | Crush resistance<br>resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dynamic / Static<br>mm |
|-----------------|-------|----------------------|-----------------------|------------------------------------------|---------------------------------------------------------------|------------------------------------------|
| FAB-GYXTW-2~12  | 2~12  | 8.0                  | 64                    | 600/1500                                 | 300/1000                                                      | 20D/10D                                  |
| FAB-GYXTW-14~24 | 14~24 | 8.3                  | 72                    | 600/1500                                 | 300/1000                                                      | 20D/10D                                  |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

# Dielectric center tube cable



Cable structure

- 1. PE outer jacket
- 2. Dielectric tensile members
- 3. Water blocking material
- 4. Loose tube
- 5. Fibers

# Description

FAB-GYFXY fiber cable is a suitable solution for aerial and duct applications. Its main feature is the parallel dielectric elements that improve tensile strength.

It is a compact, small diameter, flexible and lightweight cable, easy to install in the field. Inside, it has a protection and filling element to block water access, in addition to a high-density loose tube that stores up to 24 fibers.

### Features

- Excellent crush resistance and flexibility
- Capacity up to 24 fibers in a central loose tube, type G.652D, G657A1 and G657A2, among other options.
- Excellent thermal performance

# Standards

According to standard YD/769-2010



# Dielectric center tube cable Mod. FAB-GYFXY

# Specifications

| Code            | Fiber | Cable diameter<br>mm | Cable weight<br>kg/Km | Tensile Strength<br>Long/Short term<br>N | Crush resistance<br>resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dynamic / Static<br>mm |
|-----------------|-------|----------------------|-----------------------|------------------------------------------|---------------------------------------------------------------|------------------------------------------|
| FAB-GYFXY-2~12  | 2~12  | 7.5                  | 48                    | 600/1500                                 | 300/1000                                                      | 25D/12.5D                                |
| FAB-GYFXY-14~24 | 14~24 | 8.0                  | 55                    | 600/1500                                 | 300/1000                                                      | 25D/12.5D                                |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

# Design and production of custom cables

Fibramérica's technical engineering team works to develop cables that best suit the needs of each project. To this end, we offer advice to our customers for the manufacture of custom cables, with the guarantee of working with top quality materials.

Our team of professionals have a long market experience to support companies to identify the best option of fiber optic cabling for your company and / or project, through an analysis of technical requirements, design, type of use and applications of the cable, among other aspects.

We perform all types of marking and packaging so that your cables are presented in the best way. We can also offer special cable productions in reduced quantities with short delivery times for homologation processes and specific projects.

For more information or to discuss possible customized cabling solutions, please contact our technicians by e-mail at info@fibramerica.com.



# Cable Figure 8 Mod. FAB-GYTC8S



#### Cable structure

- 1. PE Outer Jacket
- 2. Braided messenger
- 3. FRP center member
- 4. Loose tubes
- 5. Fibers
- 6. Water blocking protector

# Description

Figure 8 cables feature moisture resistance and shock resistance characteristics. They are suitable for overhead applications.

The metallic messenger is formed by stranded wires forming a unit, or a single metallic tube. This messenger is protected by a polyethylene (PE) jacket, so that the fiber cut looks like a figure 8.

The interior is composed of loose tubes containing optical fibers, a water-blocking shield and a central tensile member. The impact structure ensures excellent mechanical and environmental performance.

### Features

- Excellent crush resistance and flexibility
- Capacity up to 24 fibers in a central loose tube, type G.652D, G657A1
- and G657A2, among other options.
- Excellent thermal performance

# Standards

According to YD/T1155 -2001 and IEC60794 -1



# Cable Figure 8 Mod. FAB-GYTC8S

# Specifications

| Code               | Fiber   | Tubes | Filling | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile Strength<br>Long/Short term<br>N | Crush resistance<br>crush resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dynamic / Static<br>mm |
|--------------------|---------|-------|---------|------------------------|-----------------------|------------------------------------------|---------------------------------------------------------------------|------------------------------------------|
| FAB-GYTCBA/S-2-30  | 2~30    | 1~5   | 4 ~ 0   | 8.9x15.9               | 139/153               | 600/1500                                 | 300/1000                                                            | 20D/10D                                  |
| FAB-GYTCBA/S-32-36 | 32~36   | 6     | 0       | 9.2x16.2               | 147/163               | 600/1500                                 | 300/1000                                                            | 20D/10D                                  |
| FAB-GYTCBA/S-38-60 | 38 ~ 60 | 5 ~ 6 | 1~0     | 9.5x16.5               | 147/163               | 600/1500                                 | 300/1000                                                            | 20D/10D                                  |
| FAB-GYTCBA/S-62-72 | 62 ~ 72 | 6     | 0       | 10.0x17.0              | 163/179               | 600/1500                                 | 300/1000                                                            | 20D/10D                                  |
| FAB-GYTCBA/S-74-96 | 74 ~ 96 | 7~8   | 1~0     | 11.2x18.2              | 175/193               | 600/1500                                 | 300/1000                                                            | 20D/10D                                  |

Transport / Storage / Operating temperature - 40 °C~ + 70 °C,

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# $\underset{\text{Mod. FAB-GJYFXTH}_G}{\text{Building access cable}}$



#### Cable structure

- 1. LSZH Outer Jacket
- 2. Glass or aramid yarns
- 3. Loose tube
- 5. Fibers
- 6. Water blocking protector

# Description

The FAB-GYFXTH\_G optical access cable has a simple structure, where the  $250\mu$ m optical fiber is inserted into a loose loose tube made of high-strength material, and the loose tube is filled with waterproof compound to ensure water blocking.

The loose tube is coated with a layer of glass fiber reinforced elements and extruded with a cover layer of low smoke, halogen-free, flame retardant (LSZH) material.

#### Features

In accordance with YD/T1258.4-2005,ICEA-596,GR-409,IEC 60794,IEC 332-1 and IEC 332-3C

- Good mechanical and thermal performance
- Loose tube with high hydrolysis resistance
- Glass yarn guarantees tensile strength
- Crush resistance and flexibility

# Estándares

In accordance with YD/T1258.4-2005,ICEA-596,GR-409,IEC 60794,IEC 332-1 and IEC 332-3C

# Building access cable Mod. FAB-GJYFXTH\_G

# Specifications

| Code               | Fiber | Tubes     | Filling | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile Strength<br>Long/Short term<br>N | Crush resistance<br>crush resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dynamic / Static<br>mm |
|--------------------|-------|-----------|---------|------------------------|-----------------------|------------------------------------------|---------------------------------------------------------------------|------------------------------------------|
| FAB-GYFXTH_G-2-12  | 2~12  | 6.0 ± 0.3 | 2.5     | 43                     | 200/660               | 300/1000                                 | 10D/20D                                                             | 20D/10D                                  |
| FAB-GYFXTH_G-14-24 | 14~24 | 6.0 ± 0.3 | 3.0     | 48                     | 400/1330              | 300/1000                                 | 10D/20D                                                             | 20D/10D                                  |

Transport/storage/operating temperature: - 20°C- + 60°C | Installation temperature: - 50 °C- + 50 °C

Important: All cables can be adjusted according to the need of each project. Please consult with one of our specialists for the best cable option.

# Building access cable Mod. FAB-GJYFTZX\_A



#### Cable structure

- 1. LSZH Outer Jacket
- 2. Corrugated steel
- 2. Glass or aramid yarns
- 3. Loose tube
- 5. Fibers
- 6. Water blocking protector

# Description

The FAB-GJYFTZX\_A optical access cable is similar to the FAB-GYFXTH\_G cable, but with a corrugated steel metallic jacket that offers increased resistance against rodents and crushing. It has a simple structure, where the 250µm optical fiber is inserted into a loose loose tube made of high-strength material, and the loose tube is filled with waterproof compound to ensure water blocking.

The loose tube is coated with a layer of glass fiber reinforced elements and extruded with a cover layer of low smoke, halogen-free, flame retardant (LSZH) material.

### Features

- Good mechanical and thermal behavior
- Loose tube with high resistance to hydrolysis
- Aramid yarns ensure tensile strength
- PSP improves moisture resistance
- Small diameter, light weight and easy installation
- Long delivery length

# Standards

In accordance with YD/T1258.4-2005,ICEA-596,GR-409,IEC 60794,IEC 332-1 and IEC 332-3C

# Building access cable Mod. FFAB-GJYFTZX\_A

Specifications

| Code                | Fiber | Tubes     | Filling | Cable diameter<br>(mm) | Cable weight<br>kg/Km | Tensile Strength<br>Long/Short term<br>N | Crush resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dynamic / Static<br>mm |
|---------------------|-------|-----------|---------|------------------------|-----------------------|------------------------------------------|-------------------------------------------------|------------------------------------------|
| FAB-GJYFTZX-A-2-12  | 2~12  | 7.0 ± 0.5 | 2.5     | 63                     | 200/660               | 300/1000                                 | 10D/20D                                         | 20D/10D                                  |
| FAB-GJYFTZX-A-14-24 | 14~24 | 7.5 ± 0.5 | 3.0     | 70                     | 400/1330              | 300/1000                                 | 10D/20D                                         | 20D/10D                                  |

Temperatura de transporte/almacenamiento/funcionamiento: - 20 °C- + 60 °C | Temperatura de instalación: - 50 °C- + 50 °C

# Outdoor drop cable flat Mod. FAB-GJYX(F)CH



### Cable structure

- Metal messenger
  LSZH cover
- 3. Traction members (metal-
- lic or dielectric) 4. Optical fiber

### Description

This flat drop cable allows quick and easy installation, reducing the effort and time spent in the field. With a simple and compact structure, the drop cable offers high reliability to your network.

reliability to your network. In addition, it represents a low installation and maintenance cost cable.

Its structure is defined by a core capable of supporting up to 4 BLI A - (ITU-T G.657) fibers that guarantee low loss levels in small bending radii (Microbending), avoiding fiber breakage during handling. Its traction members can be metallic or dielectric (FRP or KFRP). The metallic support facilitates the suspension of the cable. The outer jacket is designed with flame-retardant and low-smoke, LSZH, UV-resistant thermoplastic material.

#### Features

- Suitable for fiber: G652D / G657A1 / G657A2.
- Its outer diameter is 2x5mm with metal carrier.
- The diameter of its traction members is 0.45mm or 0.5mm, according to requirement.
- The diameter of the metal support is 1mm or 1.2mm, and it can be galvanized or phosphated.
- 100% LSZH coating.
- Black color cover, with UV protection.
- Parallel traction members can be metallic or dielectric (FRP or KFRP).
- Simple structure with light weight, providing high practicability.
- Wood or plastic coils. Highly customizable packaging.

### Standards

According to IEC60793-1, IEC60793-2, EIA/TIA598 B, ITU-T G.650, ITU-T G.657



# $\underset{\text{Mod. FAB-GJYX(F)CH}}{\text{Outdoor drop cable flat}}$

# **Specifications**

| Structure                               | Unit     | Parameter                 |
|-----------------------------------------|----------|---------------------------|
| Number of fibers                        | Quantity | 1, 2 o 4 fibras           |
|                                         | Туре     | G657A2                    |
| Traction members                        | Material | Metálico, FRP o KFRP      |
|                                         | Diámetro | 0.45mm x 2 pcs            |
| Cover                                   | Material | LSZH                      |
| Matalmassangar                          | Material | Fosfatizado o galvanizado |
| Metal messenger                         | mm       | 1mm o 1,2mm               |
| Cable size                              | mm       | 5x2mm                     |
| Padius of suprature                     | Dynamic  | ≥20 × diámetro del cable  |
|                                         | Static   | ≥10 × diámetro del cable  |
| Operating temperature range             | °C       | -10 ~ +60                 |
| Installation temperature range          | °C       | -10 ~ +60                 |
| Transport and storage temperature range | °C       | -10 ~ +60                 |
| Max. tensile load                       | N        | 600                       |
| Crush resistance                        | N        | 2000/10cm                 |

The drop cable spools are made of wood, protected by a soft cardboard box. The standard length of each reel is 1000 meters of drop cable. During transport, suitable tools should be used to avoid damaging the packaging and to handle its transport with ease. Cables should be protected from moisture; keep away from high temperature sparks and contact with fire; protect from bending and crushing. Protect from mechanical stress and damage.

The printing on the cable is done in white color, which are printed at 1 meter intervals with the factory standard information. The labels accompanying the wooden spools contain the following information: cable type, fiber quantity, length, gross weight, spool number, year of manufacture. All the spools have their test report.

# Indoor drop cable flat Mod. FAB-GJXFH



#### Cable structure

- 1. LSZH casing
- 2. Tension members (metallic or dielectric)
- 3. Optical fiber

# Description

This flat drop cable allows quick and easy installation, reducing the effort and time spent in the field. With a simple and compact structure, the drop cable offers high reliability to your network.

reliability to your network. In addition, it represents a low installation and maintenance cost cable.

Its structure is defined by a core capable of supporting up to 4 BLI A - (ITU-T G.657) fibers that guarantee low loss levels in small bending radii (Microbending), avoiding fiber breakage during handling. Its traction members can be metallic or dielectric (FRP or KFRP). The outer jacket is designed with flame-retardant and low-smoke temoplastic material, LSZH, resistant to UV rays.

#### Features

- Suitable for fiber: G652D / G657A1 / G657A2.
- Its outer diameter is 2x3mm without metal bearing.
- The diameter of its traction members is 0.45mm or 0.5mm, according to requirement.
- The diameter of the metal support is 1mm or 1.2mm, and can be galvanized or phosphated.
- 100% LSZH coating.
- Black color cover, with UV protection.
- Parallel traction members can be metallic or dielectric (FRP or KFRP).
- Simple structure with light weight, providing high practicability.
- Wood or plastic coils. Highly customizable packaging.

### Standards

According to IEC60793-1, IEC60793-2, EIA/TIA598 B, ITU-T G.650, ITU-T G.657



# $\underset{\text{Mod. FAB-GJYX(F)CH}}{\text{Indoor flat drop cable}}$

# **Specifications**

| Structure                               | Unit     | Parameter            |  |  |
|-----------------------------------------|----------|----------------------|--|--|
| Number of fibers                        | Quantity | 1, 2 or 4 fibers     |  |  |
|                                         | Туре     | G657A2               |  |  |
| Traction members                        | Material | Metallic, FRP o KFRP |  |  |
|                                         | Diameter | 0.45mm x 2 pcs       |  |  |
| Cover                                   | Material | LSZH                 |  |  |
| Cable size                              | mm       | 3x2mm                |  |  |
| Padius of suprature                     | Dynamic  | ≥20 × cable diameter |  |  |
|                                         | Static   | ≥10 × cable diameter |  |  |
| Operating temperature range             | °C       | -10 ~ +60            |  |  |
| Installation temperature range          | °C       | -10 ~ +60            |  |  |
| Transport and storage temperature range | °C       | -10 ~ +60            |  |  |
| Max. tensile load                       | N        | 80                   |  |  |
| Crush resistance                        | N        | 1000/10cm            |  |  |

The drop cable spools are made of wood, protected by a soft cardboard box. The standard length of each reel is 1000 meters of drop cable. During transport, suitable tools should be used to avoid damaging the packaging and to handle its transport with ease. Cables should be protected from moisture; keep away from high temperature sparks and contact with fire; protect from bending and crushing. Protect from mechanical stress and damage.

The printing on the cable is done in white color, which are printed at 1 meter intervals with the factory standard information. The labels accompanying the wooden spools contain the following information: cable type, fiber quantity, length, gross weight, spool number, year of manufacture. All the spools have their test report.

# Flat drop cable for duct Mod. FAB-GJXFHA



#### Cable structure

PE outer jacket
 Metallic armor
 Water blocker
 LSZH drop cover
 Metallic or dielectric traction elements
 Fiber

### Description

This flat drop cable for duct allows quick and easy installation, reducing the effort and time spent in the field. With a simple and compact structure, the drop cable offers high reliability to your network.

reliability to your network. In addition, it represents a low installation and maintenance cost cable.

Its structure is defined by a core capable of supporting up to 4 BLI A - (ITU-T G.657) fibers that guarantee low loss levels in small bending radii (Microbending), avoiding fiber breakage during handling. Its traction members can be metallic or dielectric (FRP or KFRP). The outer jacket is designed with flame-retardant and low-smoke temoplastic material, LSZH, resistant to UV rays.

#### Features

- Suitable for fiber: G652D / G657A1 / G657A2.
- Its outer diameter is 2x3mm without metal bearing.
- The diameter of its traction members is 0.45mm or 0.5mm, according to requirement.
- The diameter of the metal support is 1mm or 1.2mm, and can be galvanized or phosphated.
- 100% LSZH coating.
- Black color cover, with UV protection.
- Parallel traction members can be metallic or dielectric (FRP or KFRP).
- Simple structure with light weight, providing high practicability.
- Wood or plastic coils. Highly customizable packaging.

### Standards

According to IEC60793-1, IEC60793-2, EIA/TIA598 B, ITU-T G.650, ITU-T G.657



# Flat drop cable for duct Mod. FAB-GJXFHA

Specifications

| Code        | Fiber | Cable diameter<br>mm | Cable weight<br>kg/Km | Tensile strength<br>Long/Short term<br>N | Crush resistance<br>Long/Short term<br>N/1000mm | Bending radius<br>Dyna mic / Static<br>mm |
|-------------|-------|----------------------|-----------------------|------------------------------------------|-------------------------------------------------|-------------------------------------------|
| GJYX(F)HA-1 | 1     | Ø7.0                 | 49                    | 300/600                                  | 1000/2200                                       | 10D/20D                                   |
| GJYX(F)HA-2 | 2     | Ø7.0                 | 49                    | 300/600                                  | 1000/2200                                       | 10D/20D                                   |
| GJYX(F)HA-4 | 4     | Ø7.0                 | 49                    | 300/600                                  | 1000/2200                                       | 10D/20D                                   |
| GJYX(F)HA-6 | 6     | Ø7.0                 | 49                    | 300/600                                  | 1000/2200                                       | 10D/20D                                   |
|             |       |                      |                       |                                          |                                                 |                                           |
|             |       |                      |                       |                                          |                                                 |                                           |

Transport / Storage / Operating temperature - 20 °C~ + 60 °C | Installation temperature - 5 °C~ + 50 °C

# Distribution cable Mod. FAB-GJFJV-H



#### Cable structure

LSZH or PVC coating
 Aramid yarns
 Optical fiber

# Description

The fiber optic distribution cable has a tight structure with 0.9mm sheathing, glass fiber or Kevlar tensile elements (depending on the requirement) and sheathing generally LSZH, although it can also be manufactured in other types of materials depending on the project.

This type of cable is mostly used for indoor distribution, both for transverse and horizontal applications, as it has a compact and flexible size. It also allows direct termination of connectors, saving installation time and reducing connection costs.

### Features

- Small size flexible cable, ideal for indoor installations.
- Suitable for direct connectorization on the cable fibers without using pigtails.
- Tigh-buffer structure with capacity up to 48 fibers.
- High-strength aramid yarns

# Standards

Según la norma 1258.4-2005, ICEA-596, GR-409, IEC 60794-2-20/21,etc; y cumplen los requisitos de homologación UL para OFNR

# Distribution cable Mod. FAB-GJFJV-H

# Specifications

| Code               | Cable diameter<br>mm | Cable weight<br>kg/Km | Tensile strength<br>Long/Short term<br>N | Crush resistance<br>Long/Short term<br>N/1000mm | Bend Radius<br>Dyna mic / Static<br>mm | Cover material |
|--------------------|----------------------|-----------------------|------------------------------------------|-------------------------------------------------|----------------------------------------|----------------|
| FAB-GJPFJV (H) -04 | 4.8                  | 20                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |
| FAB-GJPFJV (H) -06 | 5.0                  | 22                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |
| FAB-GJPFJV (H) -08 | 5.5                  | 26                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |
| FAB-GJPFJV (H) -12 | 6.5                  | 32                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |
| FAB-GJPFJV (H) -24 | 8.5                  | 54                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |
| FAB-GJPFJV (H) -48 | 10.5                 | 85                    | 400/1320                                 | 300/1000                                        | 20D/10D                                | PVC/LSZH       |

Transport / Storage / Operating temperature - 20 °C~ + 60 °C | Installation temperature - 5 °C~ + 50 °C

# Distribution cable Mod. FAB-GJPFJV-H



#### Cable structure

- 1. LSZH or PVC coating
- 2. Aramid yarns
- 3. Loose tubes
- 4. Optical fiber
- 5. Dielectric core element

# Description

FAB-GJPFJV multi-purpose optical cable uses multi-core subunits (Ø900um tight buffered optical fiber, aramid fiber reinforced components), non-metallic reinforced central core, the optical cable subunits are overlapped over the reinforced central core to form a cable core.

The outer jacket is LSZH type (low smoke, halogen free, flame retardant) for indoor installations.

# Features

- The structure of the non-metallic resistance elements guarantees a higher tensile strength of the cable.

- Compact structure with high capacity and fiber density.

- The sheath is anti-corrosion, anti-water, anti-ultraviolet radiation, flame retardant and environmentally friendly, etc.

- The whole dielectric structure protects it from electromagnetic influence.

# Standards

According to YD standard (T 1258.4-2005, ICEA-596, GR-409, IEC 60794-2-20 /21, IEC 3221-1 and IEC332-3C).



# Distribution cable Mod. FAB-GJPFJV-H

# Specifications

| Code            | Cable diameter<br>mm | Cable weight<br>kg/Km | Tensile strength<br>Long/Short term<br>N | Crush resistance<br>Long/Short term<br>N/1000mm | Radius of curvature<br>Dynamic / Static<br>mm | Cover material |
|-----------------|----------------------|-----------------------|------------------------------------------|-------------------------------------------------|-----------------------------------------------|----------------|
| FABGJPFJV-024   | 10.4 ± 0.5           | 96                    | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-030  | 12.4 ± 0.5           | 149                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-036  | 13.5 ± 0.5           | 185                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-048  | 15.7 ± 0.5           | 265                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-060  | 18.0 ± 0.5           | 350                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-0 72 | 20.5 ± 0.5           | 440                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |
| FAB-GJPFJV-096  | 20.5 ± 0.5           | 448                   | 400/1320                                 | 300/1000                                        | 20D/10D                                       | PVC/LSZH       |

Transport / Storage / Operating temperature - 20 °C~ + 60 °C | Installation temperature - 5 °C~ + 50 °C



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