



# Outdoor Cable Solution

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# FiberHome Technologies

FiberHome Technologies Group is a leading equipment vendor and a global solution provider in the field of information technology and telecommunications. This high-tech enterprise is directly affiliated to the State-owned Assets Supervision and Administration Commission of the State Council. It is also the largest enterprise located in the Optics Valley, Wuhan, China. FiberHome Technologies Group was established in 1974. After continuous and intensive development for over 50 years, its business has been extended to R&D, manufacturing, marketing & sales, and engineering service in 4 major areas: fiber-optic communications, data networking communications, wireless communication, and intelligent applications. In particular, it has been providing end-to-end solutions integrated with opto-electronic devices, optical preforms, fiber & cables, and optical communication systems to many countries around the world.



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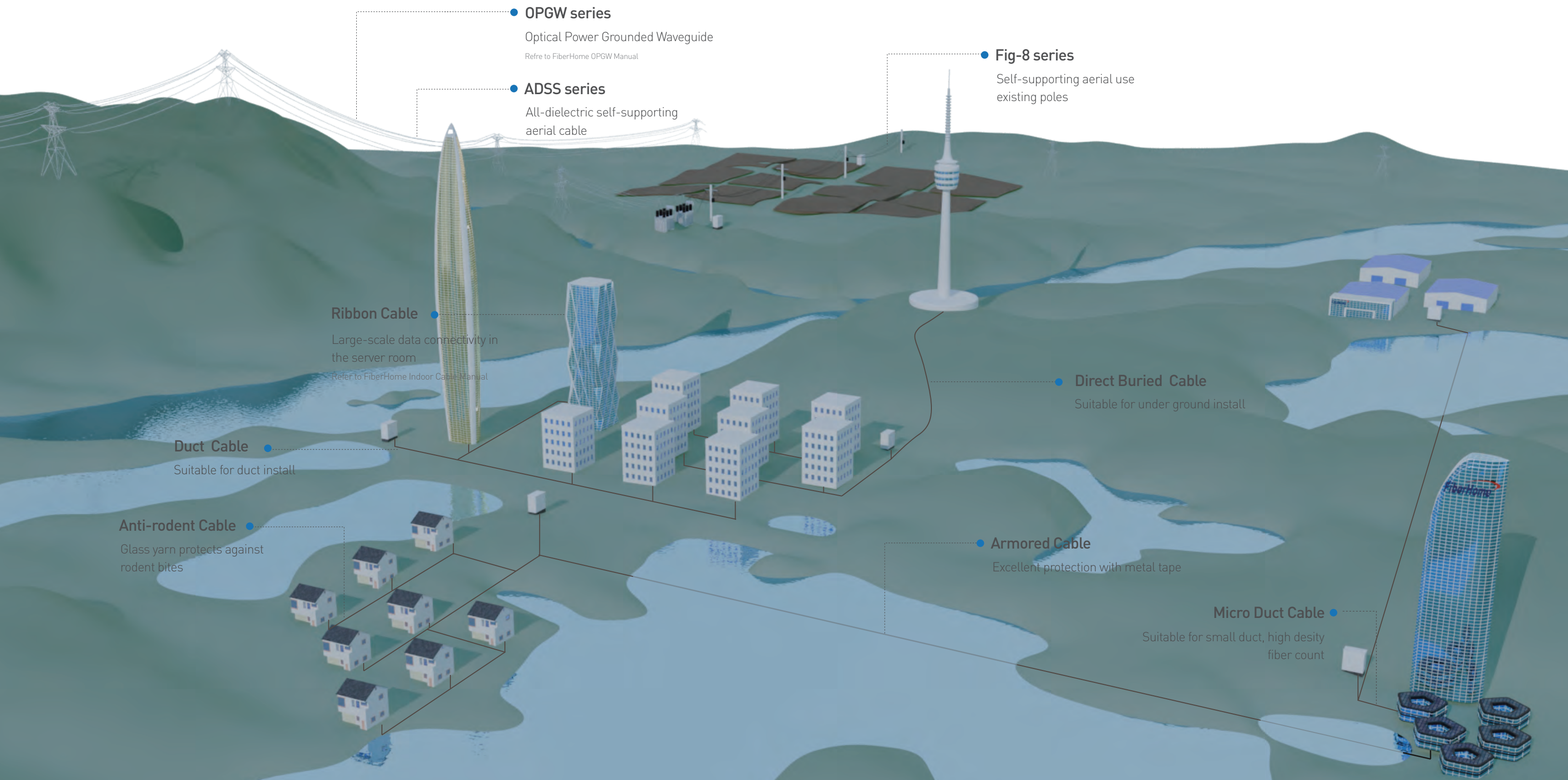
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# Scenarios

## FiberHome Cable Application Scenarios



Full-dry Duct Cable

GYFY series



Features

- Max 864 core
- Full-dry loose tube, gel-free, jelly-free
- Light weight fiber optic cable, easy to construct



Applications

- Duct install
- Extreme low temperature environment: -40°C or below



Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -30 ~ +60°C, operation -40 ~ +70°C



Duct



Water Blocking



Bend Resistant



Abrasion Resistance



Low Temperature



\*Easy Strip

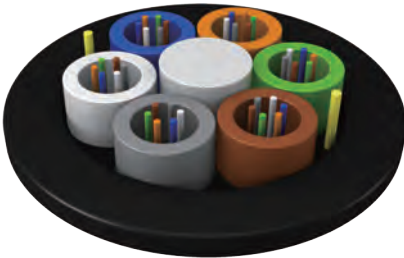


\*Flame Retardant

• Customized feature refer to Attachement 2

Gel-filled Duct Cable

GYFTY series



Features

- Max 864 core
- Moisture-proof and prevents water penetration
- All dielectric construction design
- Superior mechanical and environmental performance



Applications

- Duct instation



Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -20 ~ +60°C, operation -40 ~ +70°C



Duct



Water Blocking



Bend Resistant



Abrasion Resistance



\*Flame Resistance

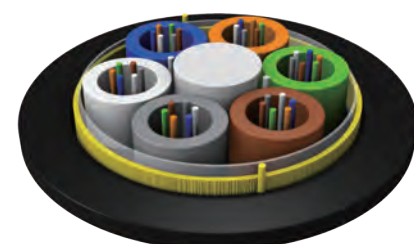


\*Easy Strip

• Customized feature refer to Attachement 2

# All Dielectric Cable

GYFCY series



## Features

- Max 288 core
- All dielectric self-support aerial cable
- Performance can be expanded according to the usage of different environments
- Span 100m - 1600m



## Applications

- Aerial installation
- Duct installation



## Installation performance

- Min bend radius: installation 20D, operation 15D
- Temperature range: storage -40 ~ +70°C, installation -20 ~ +60°C, operation -40 ~ +70°C
- Extremely cold region: storage -60 ~ +70°C, installation -40 ~ +60°C, operation -60 ~ +70°C



Aerial



High-voltage Tower



\*Anti-lightning Strike



\*Flame Retardant



\*Rodent Protection



\*Anti-termite



\*Low Temperature

• Customized feature refer to Attachement 2

# Figure-8 Cable

GYF8Y series



## Features

- Max 192 core
- Messing wire self-support
- Span 50m - 100m
- Easy construction and fast laying



## Applications

- Aerial installation



## Installation performance

- Min bend radius: installation 20D, operation 15D
- Temperature range: storage -40 ~ +70°C, installation -20 ~ +70°C, operation -40 ~ +70°C



Aerial



Water Resistant



\*Rodent Protection

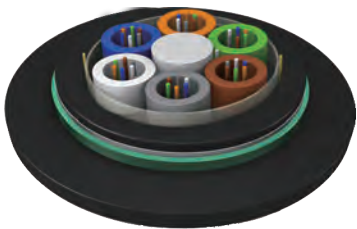


\*Easy Strip

• Customized feature refer to Attachement 2

# Armored Cable

GYF53 series



## Features

- Max 576 core
- Moisture-proof and prevents water penetration
- High desirable tensile strength and crush resistance
- Superior mechanical and environmental performance



## Applications

- Direct buried installation
- Under water installation



## Installation performance

- Min bend radius: installation 25D, operation 15D
- Temperature range: storage -40 ~ +70°C, installation -20 ~ +60°C, operation -40 ~ +70°C



Direct Buried



Hi-crush Resistance



Water Resistant



Rodent Protection



\*Anti-termite

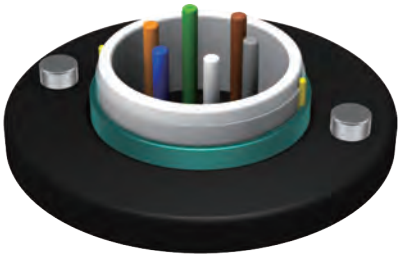


\*Easy Strip

• Customized feature refer to Attachement 2

# Center Tube Cable

GYX series



## Features

- Max 24 core
- Flexible, lightweight, easy to handle & install
- Tightly controlled diameter
- Steel Armored for tensile and crush resistance



## Applications

- Duct instllation
- Aerial drop



## Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -10 ~ +50°C, operation -20 ~ +70°C



Aerial



High-voltage Tower



Anti-lightning Strike



Water Resistant



Abrasion Resistance



\*Easy Strip

• Customized feature refer to Attachement 2



# Standard Ribbon Cable

GYFDA series



## Features

- Max 864 core
- Gel-filled buffer tubes, flexible, superior kink resistance
- Flat ribbon contains 12 colored fibers, easy to identify
- Precise fiber ribbon geometries and excellent mass fusion splicing
- Ribbon cable can be prepared and spliced more rapidly



## Applications

- Duct installation
- Direct buried installation



## Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -10 ~ +50°C, operation -20 ~ +70°C



Duct



Direct Buried



Data Center



Water Resistant



Fast Connector

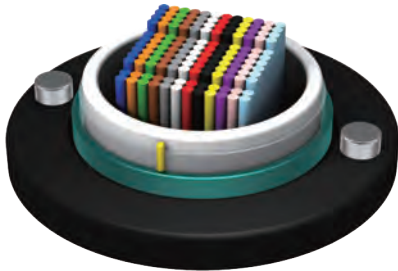


\*Flame Retardant

• Customized feature refer to Attachement 2

# Center Ribbon Cable

GYDX series



## Features

- Max 432 core
- Dry water blocking materials or gel-filled buffer inside and outside the loose tube
- Flat ribbon contains 12 or 24 colored fibers, easy to identify
- Precise fiber ribbon geometries and excellent mass fusion splicing
- Ribbon cable can be prepared and spliced more rapidly



## Applications

- Duct installation
- Direct buried installation



## Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -10 ~ +50°C, operation -20 ~ +70°C



Duct



Direct Buried



Data Center



Water Resistant



Fast Connector



\*Flame Retardant

• Customized feature refer to Attachement 2

## Micro Duct Cable

GCYFY series



### Features

- Max core 576
- Gel-free center loose tube all dielectric cable
- High fiber density and small cable diameter
- Air-blowing intallation in microduct
- Easy installation and maintenance



### Applications

- Microduct air-blowing installation



### Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -10 ~ +50°C, operation -30 ~ +70°C



Air-blowing



Water Blocking



Bend Resistant



Abrasion Resistance



\*Easy Strip



\*Flame Retradant

• Customized feature refer to Attachement 2

## Anti-rodent Cable

Special series



### Features

- Max core 876
- Moisture-proof and prevents water penetration
- Superior anti-rodent performance
- High desirable tensile strength and crush resistance
- Customized longitudinal color strip



### Applications

- Duct installation



### Installation performance

- Min bend radius: installation 20D, operation 10D
- Temperature range: storage -40 ~ +70°C, installation -10 ~ +60°C, operation -40 ~ +70°C



Duct



Water Blocking



Rodent Protection



Bend Resistant



Eco-friendly



\*Flame Resistance

• Customized feature refer to Attachement 2



## ☑ FiberHome and Environmental









- Reducing energy consumption by 694 tons of standard coal through energy saving and emission reduction
- Reduction of greenhouse gas (CO<sub>2</sub>) emissions by 2,719 tons
- Disposing 4.88 tons of HW06 waste organic solvents and waste containing organic solvents in 2020
- Disposing 8.1 tons of waste circuit boards (HW49) and 25.14 tons of other waste (HW49) in 2020
- Recycling waste water from production which can save about 360,000 tons of water every year
- Packaging products with environment-friendly materials which can be reused and degraded naturally






*Solar power panel array at FiberHome R&D Center rooftop and phase II parking lot*



Applications

Customers Options

|                                                                                                              |     |                                                                                                     |     |
|--------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------|-----|
| <div> Air Blowing</div>     |     | <div> Duct</div>   |     |
| GYX series                                                                                                   | P10 | GYFY series                                                                                         | P05 |
| Outdoor/indoor Unitube cable                                                                                 |     | All dielectric, stranded loose tube cable                                                           |     |
| GCYFY series                                                                                                 | P13 | GYFTY series                                                                                        | P06 |
| Air-blow micro cable                                                                                         |     | All dielectric, gell-filled stranded loose tube cable                                               |     |
| <div> Aerial</div>          |     | <div> Duct</div>   |     |
| GYFCY series                                                                                                 | P07 | GYX series                                                                                          | P10 |
| ADSS cable                                                                                                   |     | Outdoor/indoor Unitube cable                                                                        |     |
| GYF8Y series                                                                                                 | P08 | GYFDA series                                                                                        | P11 |
| Figure 8 self-supporting cable                                                                               |     | Corrugated metal tape armored, stranded loose tube ribbon cable                                     |     |
| <div> Direct Buried</div> |     | <div> Duct</div> |     |
| GYFY53 series                                                                                                | P09 | GYDX series                                                                                         | P12 |
| Double-layer, double corrugated metal tape armored, stranded loose tube cable                                |     | Corrugated metal tape armored, center tube ribbon cable                                             |     |
| Specil series                                                                                                | P14 | GCFYFY series                                                                                       | P13 |
| Double-layer, double round wire armored, stranded loose tube cable                                           |     | Air-blow micro cable                                                                                |     |

| Series       |                                                                                       | Options                                                                                                                                                                                                                                                            |
|--------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GYFY series  |    | <ul style="list-style-type: none"><li>• Half-dry (gel-filled loose tube)</li><li>• No armor / single armor ( FRP tape / flat FRP / aluminum tape / steel tape / armind yarn / glass yarn)</li><li>• Color idetification line ( longitudinal color strip)</li></ul> |
| GYFTY series |   | <ul style="list-style-type: none"><li>• No armor / single armor ( FRP tape / flat FRP / aluminum tape / steel tape / armind yarn / glass yarn)</li><li>• Color idetification line ( longitudinal color strip)</li></ul>                                            |
| GYFCY series |  | <ul style="list-style-type: none"><li>• Full-dry</li><li>• Single armind yarn and sheath / double aramid yarn and double sheath</li><li>• Glass yarn</li><li>• Color idetification line ( longitudinal color strip)</li></ul>                                      |
| GYF8Y series |  | <ul style="list-style-type: none"><li>• Full-dry</li><li>• No armor / single armor ( FRP tape / flat FRP / aluminum tape / steel tape / armind yarn / glass yarn)</li><li>• Color idetification line ( longitudinal color strip)</li></ul>                         |
| GYF53 series |  | <ul style="list-style-type: none"><li>• Full-dry</li><li>• Single metal armor / double metal armor ( aluminum tape / steel tape / steel wire)</li><li>• Color idetification line ( longitudinal color strip)</li></ul>                                             |

• Products can be customized, included but not limited to the above

• Cable diagram not to scale



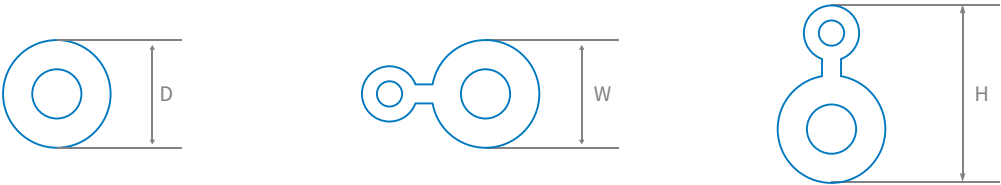
Customers Options

Symbols

| Series        | Options                                                                                                                                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GYX series    | <ul style="list-style-type: none"><li>Full-dry</li><li>No armor / single armor ( aluminum tape / steel tape / armind yarn / glass yarn)</li><li>Color idetification line ( longitudinal color strip)</li></ul>                                                               |
| GYFDA series  | <ul style="list-style-type: none"><li>Single armor (aluminum tape / steel tape)</li><li>No armor / single armor / double aramor (FRP tape / armind yarn / glass yarn / aluminum tape / steel tape / )</li><li>Color idetification line ( longitudinal color strip)</li></ul> |
| GYDX series   | <ul style="list-style-type: none"><li>Full-dry</li><li>Single armind yarn and sheath / double aramid yarn and double</li><li>Color idetification line ( longitudinal color strip)</li></ul>                                                                                  |
| GCYFY series  | <ul style="list-style-type: none"><li>Full-dry</li><li>No armor / single non-metal armor ( armind yarn / glass yarn)</li><li>Color idetification line ( longitudinal color strip)</li></ul>                                                                                  |
| Specil series | <ul style="list-style-type: none"><li>Full-dry</li><li>Single glass tape armor / FRP armor ( round FRP / flat FRP)</li><li>Color idetification line ( longitudinal color strip)</li></ul>                                                                                    |

• Cable diagram not to scale

Cable Cross Section



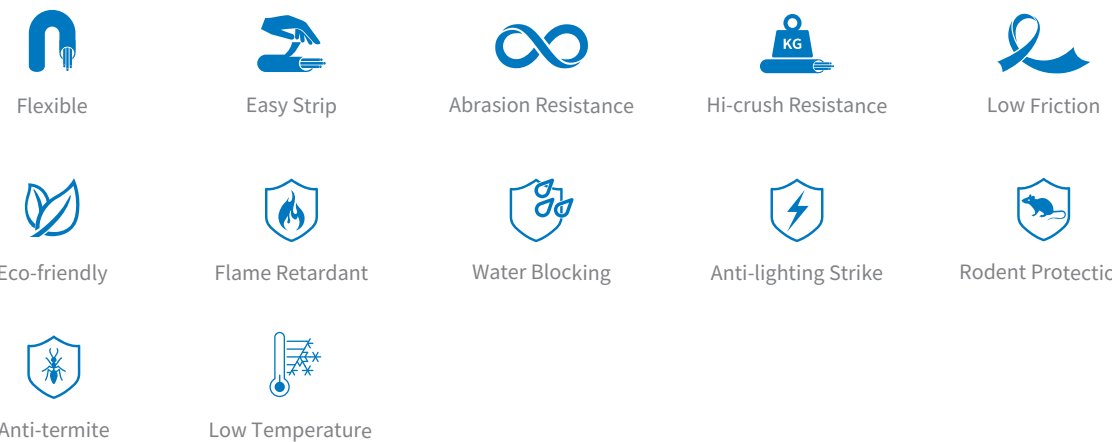
Applications



Installations



Features



• Products can be customized, included but not limited to the above

▼ Marking and Packing

▼ Marking and Packing

Cable Marking

The outer sheath is marked in 1 meter intervals as follows:



Note: Telephone symbol ☎, laser symbol ~

Color Identification Line

Color identification lines are horizontal lines molded integrally with the outer sheath during the manufacture process. Identification lines can be customized in color or quantity.



A sample of aluminum tape armored cable with red identification line

Cable Length

|                  |                |
|------------------|----------------|
| Standard length: | 4000m per reel |
| Tolerance:       | ± 1%           |

Drum Type

Each length of the cable shall be wound on a separate iron wooden reel.  
The arbor holes provided in the reels shall be approximately 105 mm with a wood or steel hub in the arbor hole (in lieu of fiberboard).

Drum Marking

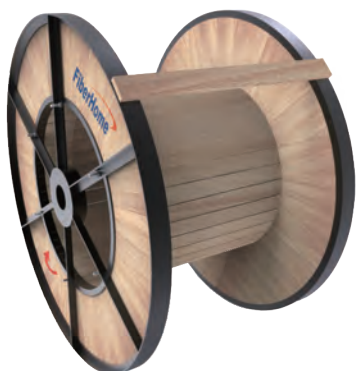
- Details given below shall be distinctly marked with a weather-proof material on both outer sides of the reel flange:
- Purchaser
  - Reel number
  - Manufacturer
  - Year
  - Arrow showing the direction the drum shall be rolled

Cable End Retaining Methods

|                   |                                                                             |
|-------------------|-----------------------------------------------------------------------------|
| Iron wooden reel: | Inner retaining                                                             |
| Wooden reel:      | Outer retaining recommended, inner retaining or groove retaining available. |



Wooden Drum



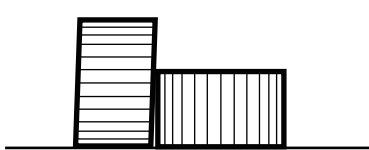
Steel-frame Drum



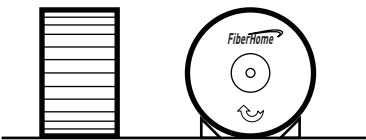
Storage and Transportation

Accessories

Storage



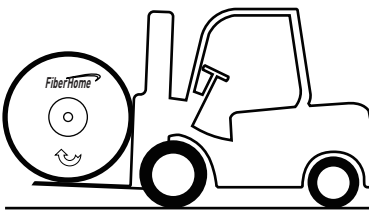
Do NOT lying or reclining



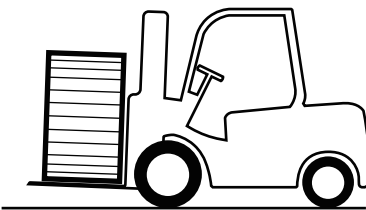
Place vertically and set up blocks



Transportation



Do NOT transportation in rolling direction



Transportation in a non-rolling direction



Accessories for Traditional Cable and OPGW Cable



Tension Assembly



Suspension Assembly



Cable Storage



Vibration Damper



Downlead Clamp


























Joint Box

▼ Reference Standards

|               |                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| ASTM D1248-12 | Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable                                  |
| ASTM D3916-08 | Standard Test Method for Tensile Properties of Pultruded Glass-Fiber-Reinforced Plastic Rod                              |
| EN 50290-2-27 | Communication cables. Halogen free flame retardant thermoplastic sheathing compounds                                     |
| ELOT EN 61034 | Measurement of smoke density of cables burning under defined conditions                                                  |
| ELOT EN 50575 | Cables for general applications in construction works subject to reaction to fire requirements                           |
| GR-409-CORE   | Generic Requirements for Indoor Fiber Optic Cable                                                                        |
| IEC 60332     | Tests on Electric and Optical Fibre Cables under Fire Conditions                                                         |
| IEC 60754     | Tests on Gases Evolved during Combustion of Materials from Cables                                                        |
| IEC 60794-1   | Optical Fibre Cables - Generic Specification - Basic Optical Cable Test Procedures                                       |
| IEC 60794-3   | Optical Fibre Cables - Generic Specification - Outdoor cables - Sectional Specification                                  |
| IEC 60794-4   | Optical Fibre Cables - Generic Specification - Outdoor cables - Aerial optical cables along electrical power lines       |
| IEC 60794-5   | Optical Fibre Cables - Generic Specification - Outdoor cables - Microduct cabling for installation by blowing            |
| IEC 60794-6   | Optical Fibre Cables - Generic Specification - Indoor-outdoor cables - Sectional specification for indoor-outdoor cables |
| UL1581        | UL Standard for Safety Reference Standard for Electrical Wires, Cables, and Flexible Cords                               |

▼ Clients

|                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
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