



Fire-Resistance Optical Fiber Cable

Specializing in designing, manufacturing cables
and providing customized services for our customers



Fire-Resistance Optical Fiber Cable for Railway Transportation

Introduction:

With the increase in operation length, the corresponding demands for communication devices for rail transit keep increasing. Optical cables are widely used in rail transit for their remarkable safety, electromagnetic compatibility, reliability, multi-interfaces, and extensibility. Meanwhile, the safety of rail transit has become more and more important. For the optical cables, the most serious accident is fire. Once the cable is damaged by fire, the communication might be interrupted, making it impossible to monitor the signals and control the key devices, thus making it difficult for rescue, real-time monitoring, and equipment control. Therefore, the communication cables are required to guarantee normal communication in the case of emergencies. Based on flame-retardant & fire-resistant optical cables, ZION has developed optical cables for rail transit. The cables can maintain normal communication and operation of key equipment, send alarms and minimize losses caused by fire.



Product Series:

| | |
|------------|---|
| GYFZY | Non-metallic+Fire-Resistant Layer+Flame-Retardant Sheath |
| GYTZA | Single APL Armor+ Single Flame-Retardant Sheath |
| GYTZA53 | Single APL+Single PSP Armor+Double Flame-Retardant Sheaths |
| GYZS | Single Fire-Resistant Layer+ Single PSP armor+ Single Flame-Retardant Sheath |
| GYZS53 | Double Fire-Resistant Layers+Double PSP armors+Double Flame-Retardant Sheaths |
| GYZS53+33 | Double Fire-Resistant Layers+Double PSP+Single Steel Wire Armor+3 Flame-Retardant |
| GYFZA04+33 | APL+Steel Wire armor+Fire-Resistant Layer+Anti-Termite Layer+Flame-Retardant Sheath |



GYFZY

All Dielectric Fire-resistance Stranded Loose Tube Optical Cable for Railway Transportation

Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a non-metallic central strength member to form a cable core. The core is armored with a layer of fire resistance tape and glass fibre yarns. Then, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- Small size and light weight, easy for installation
- Fire-resistant layer and LSZH sheath ensuring good fire-resistance and flame-retardant performances
- All-dielectric design, applicable to lightning-prone areas
- Comply with IEC60331(no cooling), IEC60754-1&2, IEC61034 and IEC60332-3-24

Cross Section:



- 1,LSZH Sheath 2,Glass Fibre Yarn 3,Fire Resistance Tape 4,Ripcord 5,Water Blocking Yarn 6,Strength Member
- 7,Fibre 8,Loose Tube 9,Water Blocking Tape



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYFZY-6Xn | 10.8 | 120 | 6 | 600/1500 | 300/1000 |
| GYFZY-12Xn | 10.8 | 120 | 6 | 600/1500 | 300/1000 |
| GYFZY-24Xn | 10.8 | 120 | 6 | 600/1500 | 300/1000 |
| GYFZY-48Xn | 12.4 | 180 | 6 | 600/1500 | 300/1000 |
| GYFZY-72Xn | 12.4 | 180 | 6 | 600/1500 | 300/1000 |
| GYFZY-96Xn | 13.6 | 220 | 6 | 600/1500 | 300/1000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~ 70 °C

Delivery Length:

Standard length: 2000m, Other length available



GYTZA

Flame-retardance Stranded Loose Tube Optical Cable for Railway Transportation

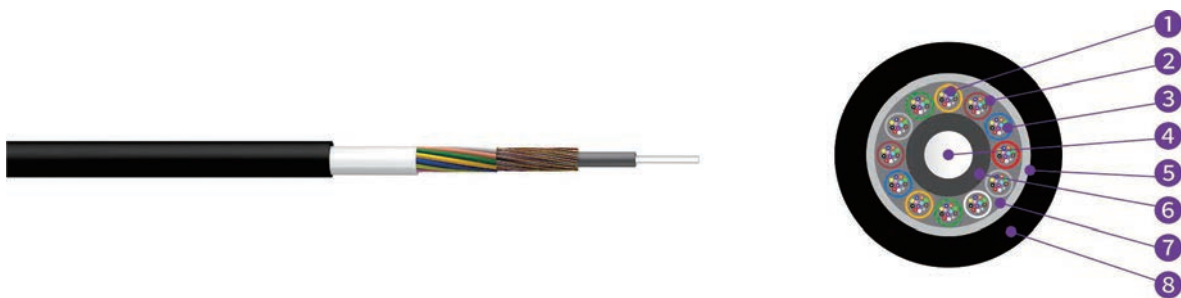
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a metallic central strength member to form a cable core. The core is armored with laminated aluminum tape. Then, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- LSZH sheath ensuring good flame-retardant performance
- Water resistance of optical cable is ensured by the following measures
- Special water-blocking compound filled in loose tubes
- Laminated aluminum tape armor
- Water-blocking material ensuring longitudinal water resistance

Cross Section:



- 1, Fibre
- 2, Loose Tube
- 3, Tube Filling Compound
- 4, Strength Member
- 5, APL
- 6, PE Layer
- 7, Cable Filling Compound
- 8, LSZH Sheath



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|-----------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYTZA-2-30Xn | 9.2 | 85 | 5 | 600/1500 | 300/1000 |
| GYTZA-32-36Xn | 10.2 | 107 | 6 | 600/1500 | 300/1000 |
| GYTZA-38-60Xn | 10.4 | 110 | 6 | 600/1500 | 300/1000 |
| GYTZA-62-72Xn | 11.4 | 130 | 6 | 600/1500 | 300/1000 |
| GYTZA-74-96Xn | 13.6 | 165 | 8 | 600/1500 | 300/1000 |
| GYTZA-98-120Xn | 14.8 | 195 | 10 | 600/1500 | 300/1000 |
| GYTZA-122-144Xn | 16.4 | 236 | 12 | 600/1500 | 300/1000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length: 2000m, Other length available



GYTZA53

Flame-retardant Double Armored Stranded Loose Tube Optical Cable for Railway Transportation

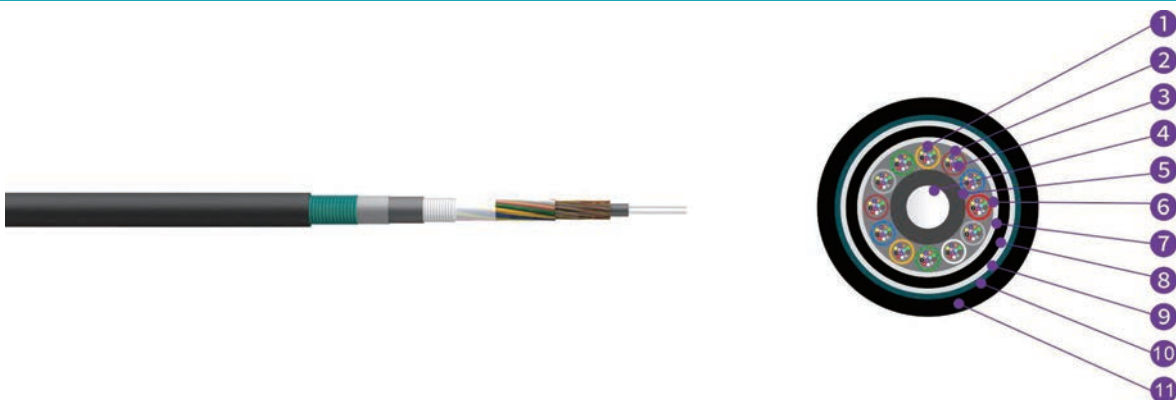
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a metallic central strength member to form a cable core. The core is armored with laminated aluminum tape. Then a LSZH inner sheath is extruded and armored with corrugated steel tape. Finally, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- LSZH sheath ensuring good flame-retardant performance
- Water resistance of optical cable is ensured by the following measures
- Special water-blocking compound filled in loose tubes
- Laminated aluminum tape armor
- Water-blocking material ensuring longitudinal water resistance

Cross Section:



- 1,Fibre 2,Loose Tube 3,Tube Filling Compound 4,Strength Member 5,PE Layer 6,Cable Filling Compound
7,APL 8,LSZH Inner Sheath 9,Cable Filling Compound 10,PSP 11,LSZH Outer Sheath



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|-------------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYTZA53-2-36Xn | 13 | 199 | 6 | 1000/3000 | 1000/3000 |
| GYTZA53-38-72Xn | 15 | 244 | 6 | 1000/3000 | 1000/3000 |
| GYTZA53-74-96Xn | 16.8 | 290 | 8 | 1000/3000 | 1000/3000 |
| GYTZA53-98-120Xn | 17.8 | 333 | 10 | 1000/3000 | 1000/3000 |
| GYTZA53-122-144Xn | 20 | 389 | 12 | 1000/3000 | 1000/3000 |
| GYTZA53-146-216Xn | 20 | 385 | 18 | 1000/3000 | 1000/3000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length:2000m,Other length availabe



GYZS Semi-dry Fire-resistance Steel Tape Armored Optical Cable for Railway Transportation

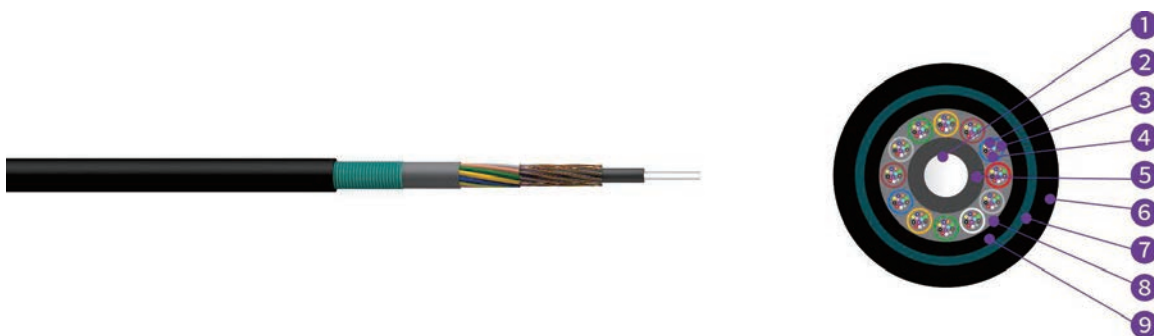
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a metallic central strength member to form a cable core. The core is armored with a layer of fire resistance tape and corrugated steel tape. Then, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes, with good hydrolysis resistance and relatively high strength
- Fire-resistant layer and LSZH sheath ensuring good fire-resistance and flame-retardant performances
- Excellent crush resistance
- Comply with IEC60331 (no cooling), IEC60754-1&2, IEC61034 and IEC60332-3-24

Cross Section:



- 1, Strength Member 2, Fibre 3, Loose Tube 4, Tube Filling Compound 5, PE Layer 6, LSZH Sheath 7, PSP
8, Water Blocking Yarn 9, Fire Resistance Tape



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|-----------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYTS-6Xn | 13 | 210 | 6 | 600/1500 | 300/1000 |
| GYTS-12Xn | 13 | 210 | 6 | 600/1500 | 300/1000 |
| GYTS-24Xn | 13 | 210 | 6 | 600/1500 | 300/1000 |
| GYTS-48Xn | 13 | 230 | 6 | 1000/3000 | 300/1000 |
| GYTS-72Xn | 13 | 230 | 6 | 1000/3000 | 300/1000 |
| GYTS-96Xn | 14.4 | 260 | 8 | 1000/3000 | 300/1000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length:2000m,Other length availabe



GY (F) ZS53

All Dielectric Fire-resistance Stranded Loose Tube Optical Cable for Railway Transportation

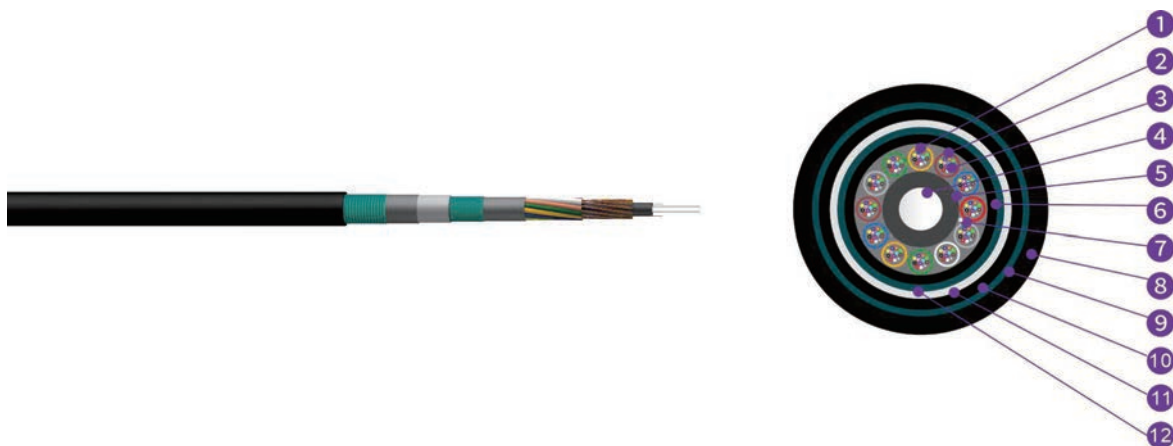
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a metallic (or non-metallic) central strength member to form a cable core. The core is armored with a layer of fire resistance tape and corrugated steel tape. Then a LSZH inner sheath is extruded and armored with another layer of fire resistance tape and corrugated steel tape. Finally, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- Fire-resistant layers and LSZH sheaths ensuring good fire resistance and flame-retardant performances
- Excellent crush resistance
- Comply with IEC60331(no cooling),IEC60754-1&2,IEC61034 and IEC60332-2-24

Cross Section:



- 1,Fibre 2,Loose Tube 3,Tube Filling Compound 4,Strength Member 5,PE Layer 6,Fire Resistance Tape
7,Water Blocking Yarn 8,LSZH Outer Sheath 9,PSP 10,Fire Resistance Tape 11,LSZH Inner Sheath 12,PSP



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|--------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYTS53-6Xn | 16.8 | 360 | 6 | 600/1500 | 1000/3000 |
| GYTS53-12Xn | 16.8 | 360 | 6 | 600/1500 | 1000/3000 |
| GYTS53-24Xn | 16.8 | 360 | 6 | 600/1500 | 1000/3000 |
| GYTS53-48Xn | 16.8 | 380 | 6 | 600/1500 | 1000/3000 |
| GYTS53-72Xn | 16.8 | 380 | 6 | 600/1500 | 1000/3000 |
| GYTS53-96Xn | 18 | 430 | 8 | 600/1500 | 1000/3000 |
| GYTS53-144Xn | 21.2 | 540 | 12 | 600/1500 | 1000/3000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length:2000m,Other length availabe



GYZS53+33

Multi-armed Fire-resistance Optical Cable for Railway Transportation

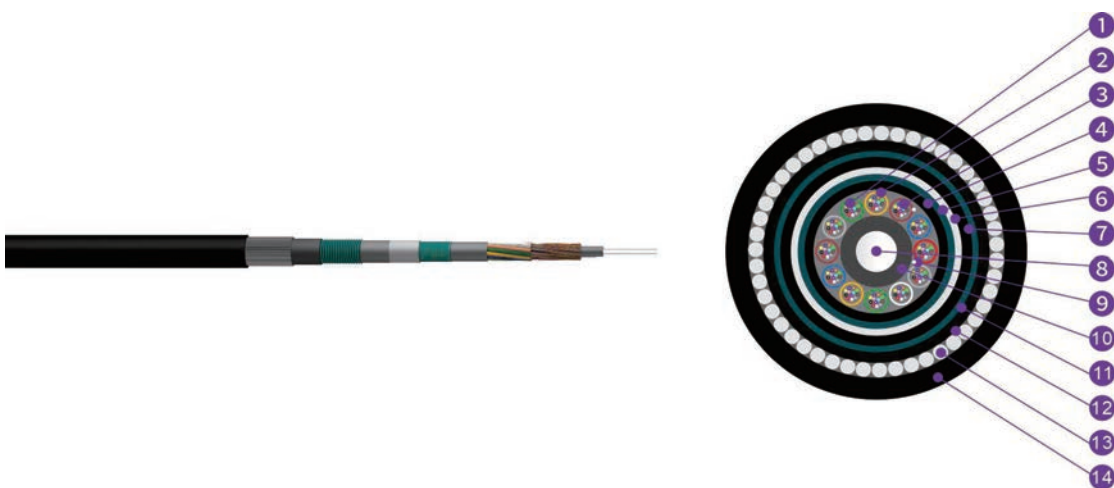
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tubefilling compound. The tubes (and fillers) are stranded around a metallic central strength member to form a cable core. The core is armored with a layer of fire resistance tape and corrugated steel tape. Then a LSZH inner sheath is extruded and armored with another layer of fire resistance tape and corrugated steel tape. Then a LSZH middle sheath is extruded and wrapped with steel wires. Finally, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- Fire-resistant layers and LSZH sheaths ensuring good fire resistance and flame-retardant performances
- Excellent crush resistance
- Comply with IEC60331(no cooling),IEC60754-1&2,IEC61034 and IEC60332-2-24

Cross Section:



- 1,Fibre 2,Loose Tube 3,Tube Filling Compound 4,Fire Resistance Tape 5,PSP 6,LSZH Inner Sheath
- 7,Fire Resistance Tape 8,Strength Member 9,Water Blocking Yarn 10,PE Layer 11,PSP 12,LSZH Middle Sheath
- 13,Steel Wire 14,LSZH Outer Sheath



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|-----------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYTS53+33-6Xn | 22.8 | 950 | 6 | 2000/5000 | 1000/3000 |
| GYTS53+33-12Xn | 22.8 | 950 | 6 | 2000/5000 | 1000/3000 |
| GYTS53+33-24Xn | 22.8 | 950 | 6 | 2000/5000 | 1000/3000 |
| GYTS53+33-48Xn | 22.8 | 950 | 6 | 2000/5000 | 1000/3000 |
| GYTS53+33-72Xn | 22.8 | 950 | 6 | 2000/5000 | 1000/3000 |
| GYTS53+33-96Xn | 24.4 | 1100 | 8 | 2000/5000 | 1000/3000 |
| GYTS53+33-144Xn | 27.4 | 1300 | 12 | 2000/5000 | 1000/3000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length:2000m,Other length availabe



GYFZA04+33

Multi-armed Fire-resistance Optical Cable

Anti-rodent & Anti-termite for Railway Transportation

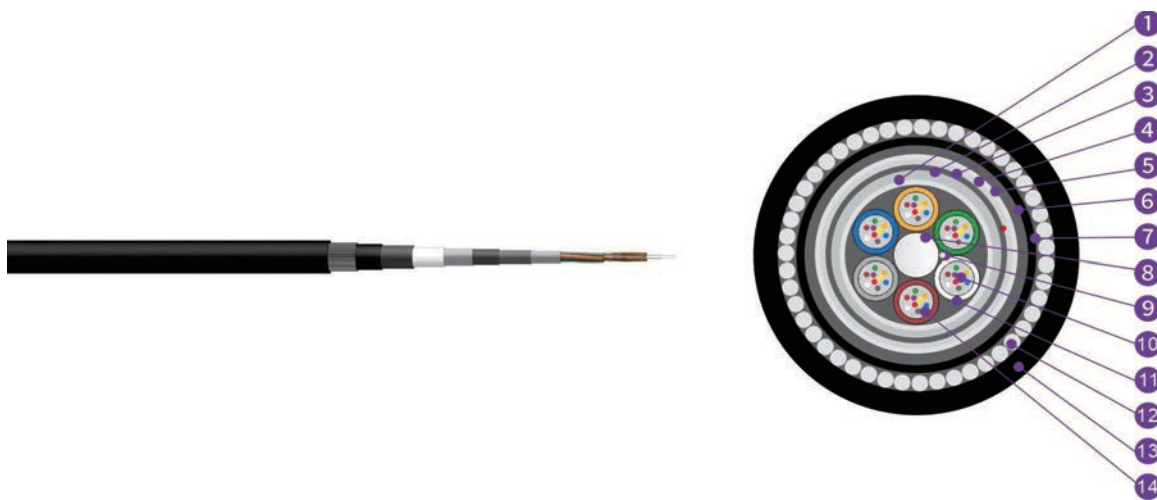
Introduction:

Optical fibres are housed in loose tubes that are made of high-modulus plastic and filled with tube filling compound. The tubes (and fillers) are stranded around a non-metallic central strength member to form a cable core. The core is covered by a fire resistance layer. A LSZH inner sheath is extruded and armored with laminated aluminum tape. Then a PE second sheath and a nylon third sheath is extruded and wrapped with steel wires. Finally, a LSZH outer sheath is extruded.

Features:

- Accurate process control ensuring good mechanical and temperature performances
- The material of loose tubes with good hydrolysis resistance and relatively high strength
- Fire-resistant layers and LSZH sheaths ensuring good fire resistance and flame-retardant performances
- Excellent crush resistance
- Nylon sheath with high hardness providing certain anti-termite performances
- Comply with IEC60331(no cooling), IEC60754-1&2, IEC61034 and IEC60332-2-24

Cross Section:



- 1, Water Blocking Tape 2, Fire Resistance Tape 3, LSZH Inner Sheath 4, Water Blocking Tape 5, APL
6, HDPE Second Sheath 7, PA Sheath 8, Strength Member 9, Water Blocking Yarn 10, Fibre 11, Loose Tube
12, Steel Wire 13, LSZH Outer Sheath 14, Tube Filling Compound



Technical Characteristics:

| Type | Diameter mm | Weight (kg/km) | Unit | Tensile strength Long/short term (N) | Crush Long/short term (N/100mm) |
|-----------------|-------------|----------------|------|--------------------------------------|---------------------------------|
| GYFZA04+33-4Xn | 19.1 | 580 | 6 | 3000/5000 | 2000/4000 |
| GYFZA04+33-12Xn | 19.1 | 580 | 6 | 3000/5000 | 2000/4000 |
| GYFZA04+33-24Xn | 19.1 | 580 | 6 | 3000/5000 | 2000/4000 |
| GYFZA04+33-48Xn | 20 | 650 | 6 | 3000/5000 | 2000/4000 |
| GYFZA04+33-72Xn | 20 | 650 | 6 | 3000/5000 | 2000/4000 |
| GYFZA04+33-96Xn | 21.6 | 730 | 8 | 3000/5000 | 2000/4000 |

Note: This specification provides a normative reference. Adjustable outer diameter to suit your budget. Contact us ASAP.

Environmental Characteristics:

Transport/storage temperature: -40°C ~70°C

Delivery Length:

Standard length:2000m,Other length availabe

● GLOBAL MARKET



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