



OPNET
TECHNOLOGIES

FIBER OPTIC CABLE

ADSS (All Dielectric Self-Supporting)

ADSS Cable

ADSS Cables are designed for outdoor installation along power lines, railway or telecommunication cables on poles or lattice towers. The cable is self-supporting and require no messenger or lashing wire for fixing. There are no metallic components used in the cable and has a track-resistant sheath material for installation on medium and high voltage lines.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Central strength member
- Span lengths of up to ~500 meters
- Track-resistant outer sheath material provides long operating lifetime
- Minimized weight due to high strength aramid yarns used and small cable diameter
- Complies with IEEE P-1222, the recognized standard for ADSS cable
- Tested in accordance with IEC 60794-1
- Custom designs available (e.g. single-jacket and double jacket)

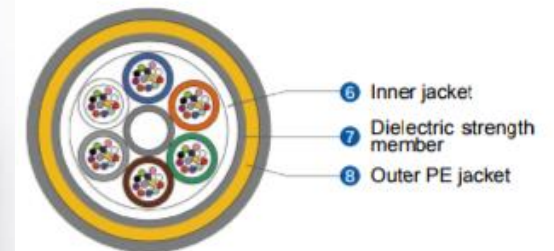
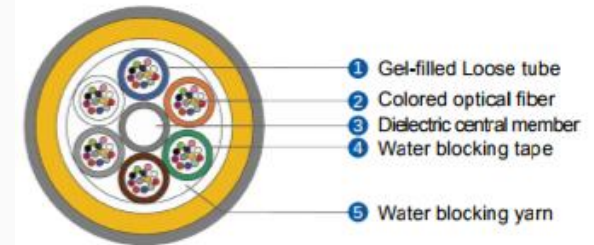
Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Double-jacket All-dielectric Cable

Double-jacket All-dielectric Cable

Double-jacket All-dielectric cables are suitable for direct buried installation with high risk of rodent damage. The cable may also be installed along power lines, railway or telecommunication cables on poles or lattice towers using the lashing method. The cable has a peripheral aramid yarn between its sheaths as a strength element to provide high strength properties and stable performance over a wide temperature range.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Dielectric peripheral and central strength member
- Track-resistant outer sheath material provides long operating lifetime
- Minimized weight due to high strength aramid yarns used and small cable diameter
- Tested in accordance with IFC 60794-1
- Custom designs available in accordance to fiber counts and span lengths

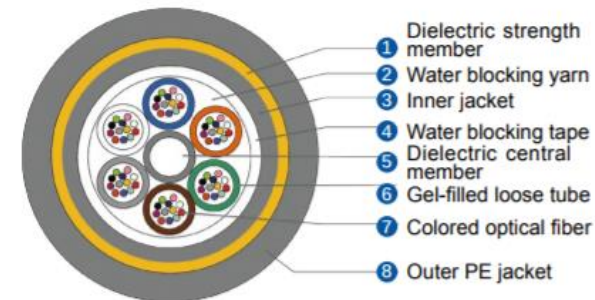
Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Single-jacket Non-Armored Cable

Single-jacket Non-armored Cable

Single-jacket Non-armored cables have a small diameter and are lightweight suitable for duct and aerial installation using the lashing method. Designed with either a metallic central strength member or an aluminum inner sheathing tape, the cable has excellent performance over a wide range of temperature.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Metallic central strength member or aluminum/polymer laminated tape
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

Environmental Performance

Minimum bending radius

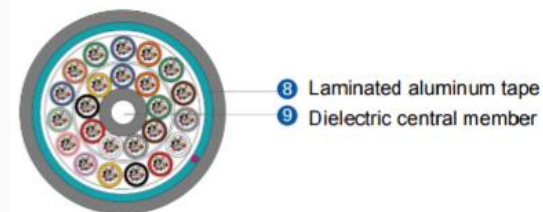
-Short term (loaded): 15 * Outer diameter

-Long term (installed): 10 * Outer diameter

Temperature

Operation / Storage: -40°C~+70°C

Installation: -20°C~+70°C



Single-jacket Single-Armored Cable



Single-jacket Single-armored Cable

Single-jacket Single-armored cables have a small diameter and are lightweight suitable for direct burial, duct or aerial installation using the lashing method. The cable's corrugated steel tape armoring and its loose tube design provide excellent crush and rodent resistance. The cable provides stable performance in a wide range of temperatures and in the most demanding environments.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Corrugated steel tape that provides excellent crush and rodent resistance
- High strength with peripheral dielectric strength members
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

Environmental Performance

Minimum bending radius

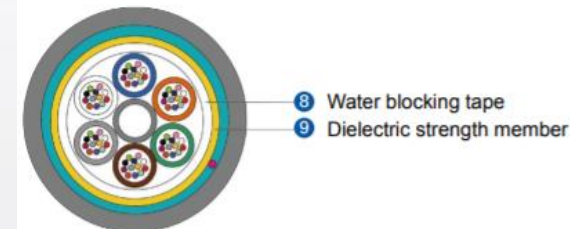
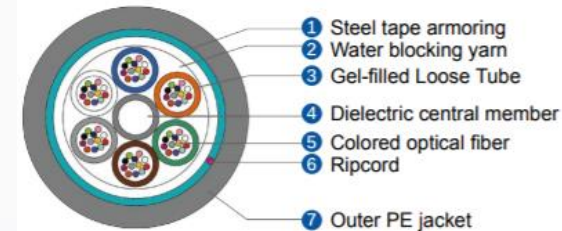
Short term (loaded): 15 * Outer diameter

Long term (installed): 10 * Outer diameter

Temperature

Operation / Storage: -40°C~+70°C

Installation: -20°C~+70°C



Double-jacket Single-armored Cable

Double-jacket Single-armored Cable

Double-jacket Single-armored cables are suitable for direct burial and aerial installation using the lashing method. The cable's loose tube design, double jacket and corrugated steel tape armoring provide superior crush and rodent resistance. The cable provides stable performance in a wide range of temperatures and in the most demanding environments.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Corrugated steel tape that provides superior crush and rodent resistance
- High strength with central strength member and peripheral dielectric strength members
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Double-jacket Steel Wire Armored Cable

Double-jacket Steel Wire Armored Cable

Double-jacket Steel Wire Armored Cable are suitable for direct burial and aerial installation using the lashing method. The cable's loose tube design, double jacket and steel wire armoring provide superior crush and rodent resistance. The cable provides stable performance in a wide range of temperatures and in the most demanding environments.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- Steel wire armor that provides superior crush and rodent resistance
- High strength with central strength member and peripheral dielectric strength members
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C

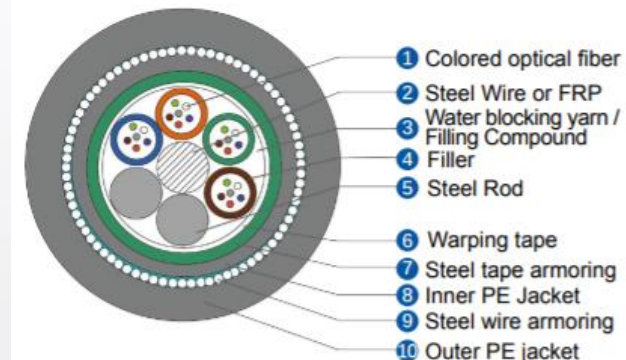


Figure 8 Cable

FIGURE 8 CABLE

Figure 8 cables are suitable for aerial installation and are self-supporting. The strength member is designed to withstand tensile forces and may be metallic or non-metallic. The figure 8 design provides easy one-step and cost-effective installations. The cable also provides stable performance over a wide range of temperatures.

- Up to 288 fibers
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling
- All self-supporting design
- Easy one step installation
- High strength with central strength member and peripheral dielectric strength members
- A variety of design configurations such as armored and double jacket can be made.
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

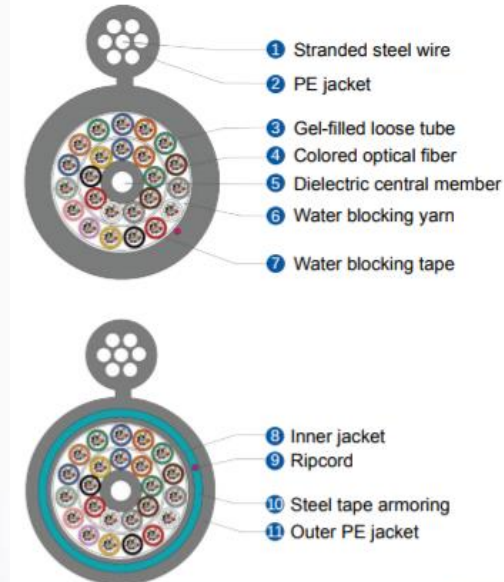
Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Multi-Tube Ribbon Cable

MULTI-TUBE RIBBON CABLE

Ribbon cables deliver the highest fiber density in the most compact cable package possible. This design makes it easy and cost-effective at mass-fusion splicing in highly-dense environments. Ribbon cables can be adapted to All-Dielectric design suitable for duct and Single-jacket Single-armored suitable for direct buried applications.

- Up to 864 fibers
- 12-fiber ribbons with readily identifiable ribbon IDs and easily accessible
- Dry-core technology used for excellent water-blocking effects and easier handling
- Excellent for mass fusion splicing
- High fiber density reduces installation costs
- Easy one step installation
- High strength with central strength member and peripheral dielectric strength members
- A variety of design configurations such as armored and double jacket can be made
- Track-resistant outer sheath material provides long operating lifetime
- Tested in accordance with IEC 60794-1

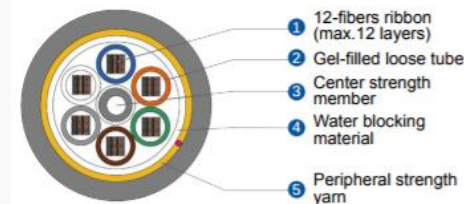
Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Stranded Air-blowing Micro Cable

Stranded Air-blowing Micro Cable

Air Blown Micro Cables are very lightweight and with a small diameter suitable for underground duct networks. The cable has a low friction jacket for an efficient jetting process through micro-ducts using compressed air. The installation avoids expensive excavation costs and permits.

- Up to 288 fibers
- Small diameter, lightweight and low friction sheath design
- Contain high fiber density to maximize the fiber count
- Central strength member
- Cost effective installation and removal if necessary
- Gel-filled loose tubes are S-Z stranded for easy mid-span access
- Dry-core technology used for excellent water-blocking effects and easier handling

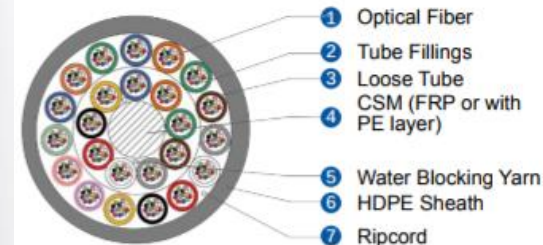
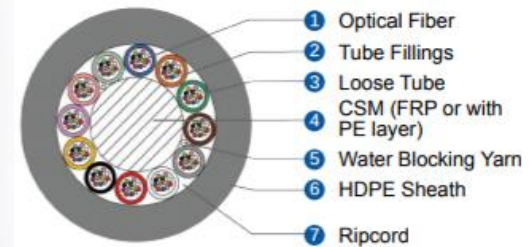
Environmental Performance

Minimum bending radius

- Short term (loaded): 15 * Outer diameter
- Long term (installed): 10 * Outer diameter

Temperature

- Operation / Storage: -40°C~+70°C
- Installation: -20°C~+70°C



Drop Cable



Flat Type / Round Type

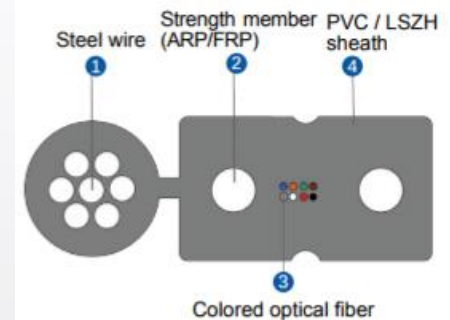
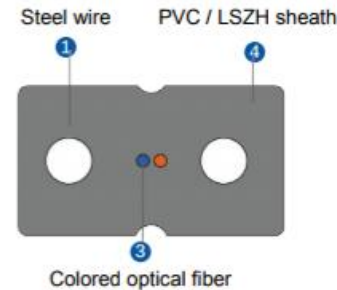
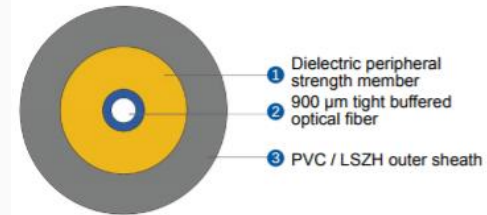
Drop cables are specifically designed for Fiber-to-the-Subscriber applications. It is a dielectric cable and may round or flat shape. The cable may be self-supported by adding a messenger cable or may be installed using the lashing method along other cables.

Environmental Performance

Temperature

Operation / Storage: -30°C~+70°C

Installation: -10°C~+70°C

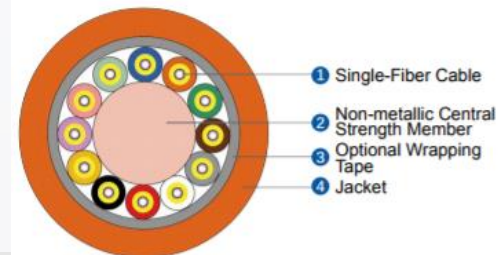


Multi-Fiber Breakout Cable

Multi-fiber Breakout Cable

Multi-fiber Breakout cable are suitable for direct cable termination and for environments with severe mechanical exposure. The cable has individual 2.5mm subunits containing one 900 μ m tight-buffered fiber allowing rapid field termination. Each subunit has an identification number for quick and error-free installation.

- Standardized 2.5mm subunit size simplifies termination practices
- 900 μ m tight-buffered fibers designed to support rapid field termination
- Numbered subunit identification for quick, error-free fiber identification
- Available with bend-insensitive single-mode and multimode optical fibers
- Flexible, flame-retardant, and color-coded jacket outer
- Optional interlock armor provides added robust protection & supports
- One-step installation
- Supports all high performance networks including OM4/10 Gigabit Ethernet Systems

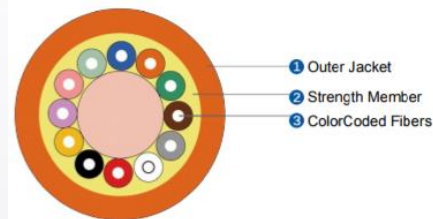


Multi-Distribution Cable

Multi-fiber Distribution Cable

Versatile indoor and outdoor cable, low emission fire protection in crowded spaces, some versions combine LSZH with riser rating for indoor performance.

- Easy Cable Installation & Termination
- 900µm tight-buffered fibers can be directly terminated
- Color-coded fibers & numbered sub-units simplify identification
- Colored rip cords for ease of identification and jacket removal
- Interlock armor option available

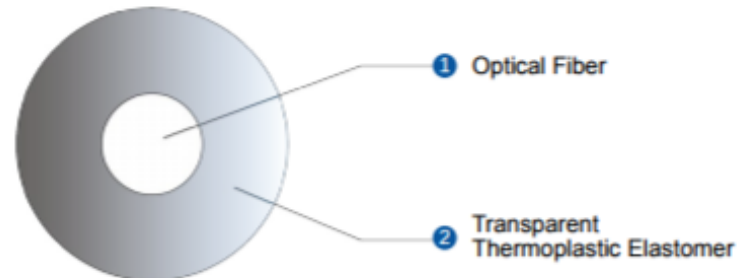


Invisible Cable

This cable is completely transparent and is easily attached to a variety of wall surfaces saving cost of drilling and use of mechanical fasteners. Its properties make it very aesthetic and therefore increase customer satisfaction. The cable is attached to the wall surface using transparent clips which are affixed on the wall using a specialized glue.

Invisible Optical Cable(OFIC)

- Completely transparent drop cable
- Soft cable make an easy and quick installation
- No drilling or mechanical fasteners required
- Clips are compatible for any corner or edge
- Cable is glued at room temperature
- Excellent aesthetic properties – nearly invisible



Technical Parameter							
Fiber Count	Cable Size (mm)	Cable Weight (kg/km)	Tensile Load (N)		Crush Load (N/100mm)		Temperature (°C)
			Long-term	Short-term	Long-term	Short-term	
1	0.9	0.8	5	10	100	200	-40°C ~ +70 °C

Flat-type Invisible Optical Cable

Flat-type Invisible Optical Cable

- Completely transparent cable with LSZH sheath
- Invisible cable can be stripped from LZSH sheath and be installed directly indoors
- Completely transparent drop cable
- Soft cable make an easy and quick installation
- No drilling or mechanical fasteners required
- Clips are compatible for any corner or edge
- Cable is glued at room temperature
- Excellent aesthetic properties – nearly invisible



Technical Parameter

Fiber Count	Cable Size (mm)	Cable Weight (kg/km)	Tensile Load (N)		Crush Load (N/100mm)		Temperature Range (°C)
			Long-term	Short-term	Long-term	Short-term	
1	2.0×3.0	10.5	100	200	1000	2200	- 40°C ~ +70 °C

Note: H is minor axis of the optical cable, and L is major axis of the optical cable.

Multi-Tube Ribbon Cable

Hybrid Feeder Cable

This cable is completely transparent and is easily attached to a variety of wall surfaces saving cost of drilling and use of mechanical fasteners. Its properties make it very aesthetic and therefore increase customer satisfaction. The cable is attached to the wall surface using transparent clips which are affixed on the wall using a specialized glue.

Hybrid feeder cabling solution combines optical fiber and DC power for RRHs in single corrugated aluminum tube, reduce installation complexity and costs at cellular sites.

- Reduce wind and weight load on towers
- Avoid high cost tower cable upgrade
- Reduce installation cost through fewer cables sheaths (70% less) compared to Coax.
- Reduce installation time
- Fast and easy connection and upgrade via tower-top terminal
- Pre-provision for future equipment additions (spare ports)
- Field-proven technology successfully deployed in FTTH

