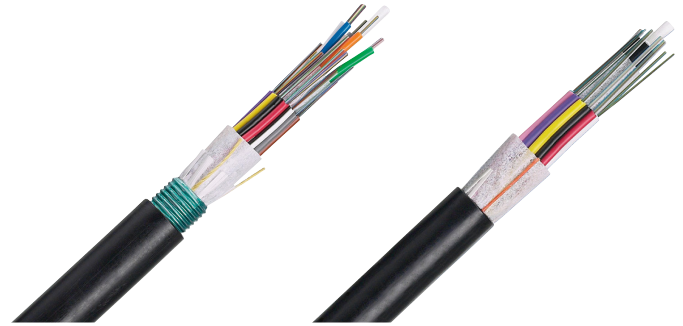


# Opti-Core® Gel-Free Outside Plant Cable, Armored and Unarmored - Americas

## specifications

The fiber cable shall contain up to 144 fibers and have a dry loose tube construction that is water-blocked and UV resistant for harsh outdoor environments. Cable construction shall be robust and include options for armored and non-armored (all-dielectric). It shall comply with common industry standards for outside plant applications and have options for singlemode (OS2) or multimode fibers (OM1 and laser optimized OM3 and OM4) to support common data transmission rates.



## standards

- ✓ Telcordia GR-20-CORE
- ✓ IEC 60794-3-11
- ✓ RUS 7 CFR 1755 (PE90 listed)
- ✓ RoHS Compliant
- ✓ ICEA S-87-640

## construction

**Cable:** Stranded loose tube design has twelve 250µm coated fibers per dry water-blocked sub-unit tube, except for the 6-fiber cable which has just six fibers in its sub-unit tube. Cable has a central strength member and may include filler tubes, depending on the fiber count. Sub-unit and filler tubes are wrapped with water-blocking tape and surrounded by outer strength members. Black outer sheath is water and UV-resistant MDPE and has two ripcords. Non-armored version is all-dielectric (metal-free). Armored version uses corrugated steel tape.

## key features and benefits

<b>Dry water-blocking elements</b>	Expand to prevent water from entering the cable and damaging the optical fibers. Easier to work with than gel-filled cables.
<b>UV Resistant outer jacket</b>	Resists degradation due to sunlight exposure
<b>Non-metallic option</b>	Eliminates the need to ground or bond
<b>Easy-prep armored option</b>	Provides crush resistance and protection from rodents. Allows easy access to the core for mid-span entries.
<b>Reverse oscillating lay of tubes</b>	Facilitates mid-span access to the fibers. Individual tubes can easily be removed from the core.

## applications

- For multi-purpose outdoor use including duct and lashed aerial installations
- Armored version is rodent resistant and suitable for direct burial

## ribbon fiber color sequence

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

# Opti-Core® Gel-Free Outside Plant Cable, Armored and Unarmored - Americas

## physical and mechanical properties

### Non-Armored (Dielectric)

	6 to 48 fibers	72	96	144
<b>Outside Diameter, Inches (mm):</b>	0.40 (10.1)	0.43 (10.9)	0.50 (12.6)	0.64 (15.9)
<b>Number of Sub-Unit Tubes + Filler Tubes:</b>	5	6	8	12
<b>Bend Radius (Installation / Short Term), Inches (cm):</b>	8 (20)	8 (22)	10 (25)	13 (32)
<b>Bend Radius (Operation / Long Term), Inches (cm):</b>	4 (10)	4 (11)	5 (13)	6 (16)
<b>Approximate Cable Weight, lb./kft (kg/km):</b>	43 (64)	50 (75)	65 (97)	105 (156)
<b>Tensile strength (Installation / Short Term):</b>	600 lbf (2700 N)			
<b>Tensile strength (Operation / Long Term):</b>	180 lbf (800N)			
<b>Temperature range:</b>	<b>Shipping and Storage:</b> -40°F to +167°F (-40°C to +75°C)			
	<b>Installation:</b> -22°F to +140°F (-30°C to +60°C)			
	<b>Operation:</b> -40°F to +158°F (-40°C to +70°C)			

### Armored

	6 to 48 fibers	72	96	144
<b>Outside Diameter, Inches (mm):</b>	0.46 (11.8)	0.50 (12.6)	0.56 (14.3)	0.69 (17.6)
<b>Number of Sub-Unit Tubes + Filler Tubes:</b>	5	6	8	12
<b>Bend Radius (Installation / Short Term), Inches (cm):</b>	9 (24)	10 (25)	11 (29)	14 (35)
<b>Bend Radius (Operation / Long Term), Inches (cm):</b>	5 (12)	5 (13)	6 (14)	7 (18)
<b>Approximate Cable Weight, lb./kft (kg/km):</b>	89 (132)	97 (145)	125 (186)	176 (262)
<b>Tensile strength (Installation / Short Term):</b>	600 lbf (2700 N)			
<b>Tensile strength (Operation / Long Term):</b>	180 lbf (800N)			
<b>Temperature range:</b>	<b>Shipping and Storage:</b> -40°F to +167°F (-40°C to +75°C)			
	<b>Installation:</b> -22°F to +140°F (-30°C to +60°C)			
	<b>Operation:</b> -40°F to +158°F (-40°C to +70°C)			

## optical properties

### Maximum Attenuation

<b>OS2 Singlemode (ITU-T G.652.D):</b>	0.4dB/km @1310nm, 0.3dB/km @1550nm
<b>OM1, OM3, and OM4 Multimode:</b>	3.5dB/km @ 850nm, 1.5dB/km @ 1300nm

## ordering information

\*Example: FSWN912, 9µm OS2 12-Fiber Outside Plant Armored Cable, Non-Rated, 250µm Fibers

**Character**

1	2	3	4	5	6	7
F	S	W	N	9	1	2

**Example\***

### 1 and 2 – Fiber Product, Region

FS = Fiber Cable, OM1 & OS2, Americas  
FO = Fiber Cable, OM3 & OM4, Americas

### 3 – Cable Construction

T = Outside Plant Cable, Unarmored  
W = Outside Plant Cable, Armored

### 4 – Flame Rating

N = Non-rated

### 5 – Fiber Type

9 = OS2 9/125µm  
6 = OM1 62.5/125µm  
(Armored with 6, 12, and 24 fibers only)  
X = OM3 50/125µm  
Z = OM4 50/125µm

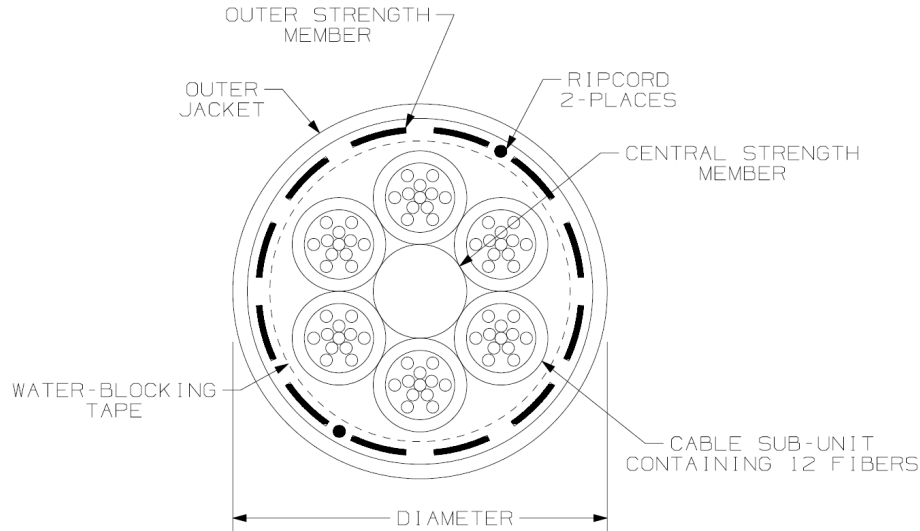
### 6 and 7 – Fiber Count

06 = 6-fiber  
12 = 12-fiber  
24 = 24-fiber  
48 = 48-fiber  
72 = 72-fiber  
96 = 96-fiber  
1A = 144-fiber

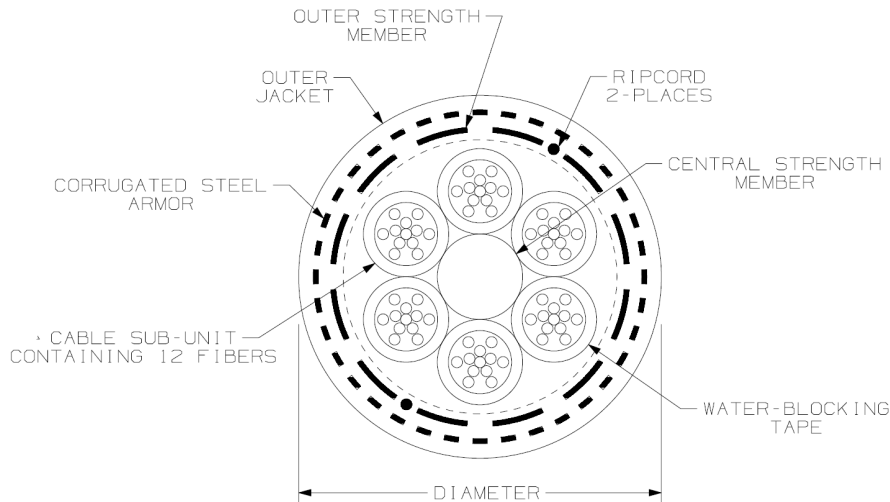
# Opti-Core® Gel-Free Outside Plant Cable, Armored and Unarmored - Americas

engineering drawings (representative)

## Non-Armored (Dielectric)



## Armored



### WORLDWIDE SUBSIDIARIES AND SALES OFFICES

PANDUIT US/CANADA  
Phone: 800.777.3300

PANDUIT EUROPE LTD.  
London, UK  
Phone: 44.20.8601.7200

PANDUIT SINGAPORE PTE. LTD.  
Republic of Singapore  
Phone: 65.6305.7575

PANDUIT JAPAN  
Tokyo, Japan  
Phone: 81.3.6863.6000

PANDUIT LATIN AMERICA  
Guadalajara, Mexico  
Phone: 52.33.3777.6000

PANDUIT AUSTRALIA PTY. LTD.  
Victoria, Australia  
Phone: 61.3.9794.9020

For a copy of Panduit product warranties, log on to [www.panduit.com/warranty](http://www.panduit.com/warranty)

**PANDUIT**®

For more information  
Visit us at [www.panduit.com](http://www.panduit.com)  
Contact Customer Service by email: [cs@panduit.com](mailto:cs@panduit.com)  
or by phone: 800.777.3300

©2021 Panduit Corp.  
ALL RIGHTS RESERVED.  
REPLACES FBDS33  
FBDS35--WW-ENG  
2/2021