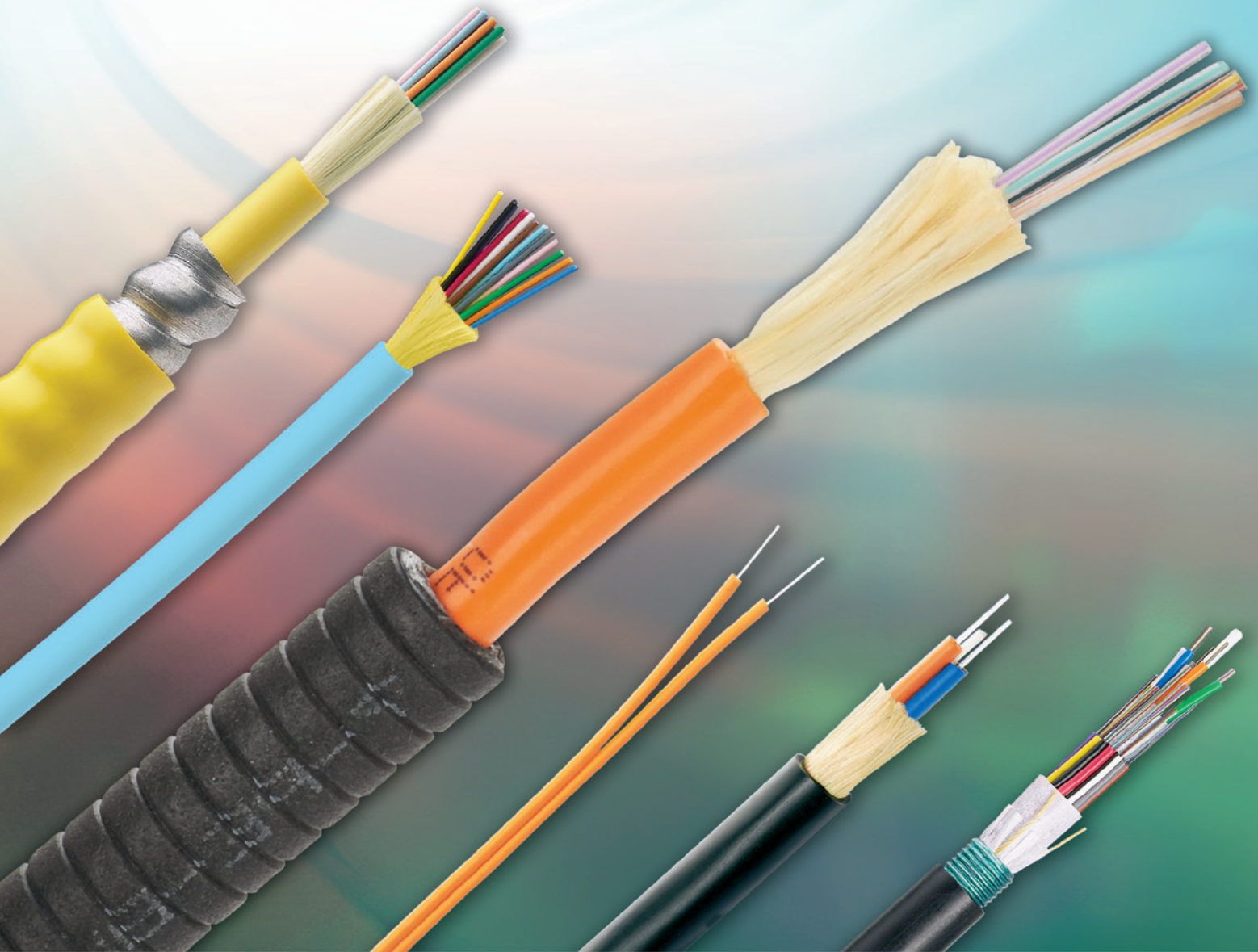# Fiber Optic Cabling Infrastructure Offering

PANDUIT®

building a smarter,
  unified business foundation

Connect. Manage. Automate.

Panduit® Opti-Core®
Fiber Optic Cable

High-Speed Fiber Cabling Systems

Panduit provides high bandwidth and mission-critical physical infrastructures in data center, enterprise, and campus networks with comprehensive fiber optic systems that deliver high performance, reliability, and scalability. The deployment of high-speed cabling systems has been increasing rapidly as data centers enable their physical infrastructure with 10 Gb/s capacity to support server virtualization, I/O consolidation, and convergence of backbone applications.

Structured Cabling Infrastructure

A properly designed and implemented cabling infrastructure is a fundamental asset of every business. Carefully planning a structured cabling solution facilitates the delivery of new services, lowers network maintenance costs, and increases productivity. New high-bandwidth applications enable organizations to better fulfill their need for productivity and innovation in a rapidly changing world.

Innovative Data Center Infrastructure Solutions

Panduit provides a comprehensive, intelligent data center offering that supports best practice methodologies. Our data center solutions enable physical to logical architecture integration, and deliver robust, scalable physical infrastructures that address:

- Visibility and control for managing and automating real-time data processes and documentation
- Convergence of new technologies and high-speed data applications
- Operational efficiency through process improvement and IT initiatives, such as cooling conservation through energy efficient data cabinets
- Capacity management for greater real estate utilization
- Modular pods designed to support high-density applications and provide consistent, reliable deployments while lowering infrastructure risk and costs

Panduit's intelligent data center solutions facilitate faster implementation and simple specification, streamlining the process of designing, specifying, installing, and managing the increasingly complex physical infrastructure necessary to optimize your data center. Panduit knows the data center space intimately. We help you discover tangible infrastructure and business process improvements that increase functionality, interoperability, and manageability of mission-critical operations across your entire organization.

High Speed Data Transport Solutions

High Speed Data Transport (HSDT) Solutions are a set of complementary copper and optical fiber technologies for mission critical data center applications, spanning storage and compute requirements and leading edge architectures. Based on an understanding of today's vital business and technology challenges and how they impact data centers, Panduit has created best-in-class physical infrastructure solutions for HSDT. Panduit provides the broadest offering of end-to-end HSDT solutions supporting all data center architectures. Designed for high-density/high-speed applications, Panduit HSDT solutions are backed by comprehensive research and development programs to ensure high network performance, systems reliability, energy efficiencies, and seamless integration.

PanNet® System Warranty

All Panduit channels are field tested by Panduit Certified Installers (PCI) using industry standard hand-held devices which provide verified network performance, and ensures your network operates at optimal performance.

Cable Fire Ratings Reference Guide

Cable fire ratings need to be considered when specifying cabling infrastructure to ensure local building codes are met. The below rating guide provides the information needed to determine which rating is appropriate for different installation environments.

Plenum Rated Cable (OFNP)

A Plenum Rating (OFNP) signifies cable that has passed stringent burn testing and is suitable for installation into air plenum spaces. OFNP cables have fire-resistance and low smoke production characteristics. They can be installed in ducts, plenums, and other spaces used for building airflow. This is the highest fire rating fiber cable and no other cable types can be used as substitutes.

Plenum Rated Cable (OFCP)

A Plenum Rating (OFCP) differs from OFNP in that the cable contains metallic elements and, therefore, conducts electricity. All other aspects of this rating are the same as OFNP.

Riser Rated Cable (OFNR)

A Riser Rating (OFNR) is commonly required when cables are run between floors through open vertical shafts. OFNR cables are used in Riser areas which are building vertical shafts or runs from one floor to another floor. OFNR cables cannot be installed in plenum areas since they do not have the required smoke rating as plenum rated cables. OFNP plenum cables can be used as substitutes for OFNR Riser cables.

Riser Rated Cable (OFCR)

A Riser Rating (OFCR) differs from OFNR in that the cable contains metallic elements and, therefore, conducts electricity. All other aspects of this rating are the same as OFNR.

Low Smoke Zero Halogen (LSZH)

A Low Smoke Zero Halogen Rating (LSZH) is sometimes referred to as low toxicity cable. When burned, PVC-based cables produce a cloud of toxic smoke containing corrosive compounds such as hydrochloric acid. The LSZH cables do not contain the Halogen type compounds that form these toxic substances. Smoke emitted from burning LSZH cables do not produce the toxic halogen-based gasses previously mentioned.
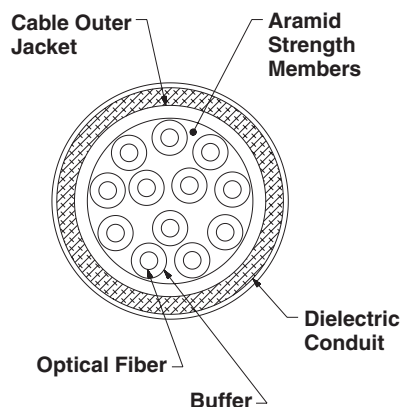
Non-Flame Rated

Outside Plant (OSP) cables are intended for outdoor use only. Typically, these cables are constructed using varying densities of Polyethylene, (PE) in the outer jacket, and perhaps in other OSP cable components. Because cables without flame ratings do not contain flame suppressants and emit noxious gasses when burned, building codes often restrict the distance installers are permitted to route inside buildings before termination.

Fiber Cable for Americas
(North America and Latin America)

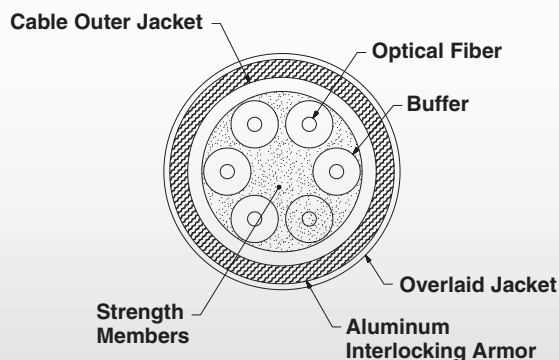## Opti-Core® Dielectric Conduited Fiber (DCF) Optic Cable

For indoor use in intra-building backbone and horizontal installations.

Cable Outer Jacket — Aramid Strength Members — Dielectric Conduit — Optical Fiber — Buffer

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	S	P	D	5	1	2	–	0	5	0	M

1 and 2 – Fiber Product
FS = Fiber

3 – Cable Construction
P = Dielectric conduited distribution (indoor)

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen

5 – Fiber Type
6 = OM1 62.5/125µm
5 = OM2 50/125µm
9 = OS2 9/125µm

6 and 7 – Fiber Count
02 = 2-fiber
04 = 4-fiber
08 = 8-fiber
12 = 12-fiber

8 – Dash
Blank – 1km fixed reel

9, 10, 11, and 12 – Reel Length
050M = 50-meter fixed reel

Opti-Core® Indoor Interlocking Armored Cable

Used in intrabuilding backbone, building backbone, and horizontal installations and harsh environments.

Cable Outer Jacket — Optical Fiber — Buffer — Overlaid Jacket — Aluminum Interlocking Armor — Strength Members

Character	1	2	3	4	5	6	7	8
Example	F	O	P	R	Z	0	6	Y

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3, OM4

3 – Cable Construction
P = Interlocking aluminum armored indoor

4 – Flame/Smoke Rating
R = Riser (OFNR)
P = Plenum (OFNP)

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
06 = 6-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber
72 = 72-fiber
96 = 96-fiber
1A = 144-fiber

8 – RoHS
Y = RoHS compliant

Opti-Core® Indoor Distribution Cable

For indoor use in intra-building backbone and horizontal installations.

Optical Fiber
Buffer
Outer Jacket
Strength Members
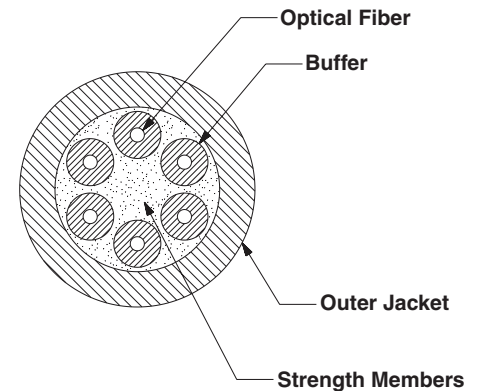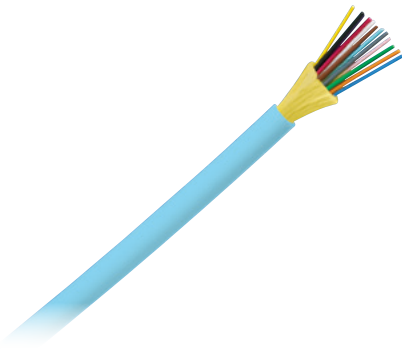
Character	1	2	3	4	5	6	7	8
Example	F	S	D	P	5	0	6	Y

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3, OM4

3 – Cable Construction
D = Distribution cable

4 – Flame/Smoke Rating
R = Riser (OFNR)
P = Plenum (OFNP)

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
06 = 6-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber
72 = 72-fiber

8 – RoHS
Y = RoHS Compliant

Opti-Core® IndustrialNet™ Polymer Coated Fiber (PCF) Fiber Optic Cable – Interconnect

Used for in-cabinet applications demanding high mechanical performance; quick and easy to terminate.

Outer Jacket
500µm ETFE Buffer
Optical Fiber
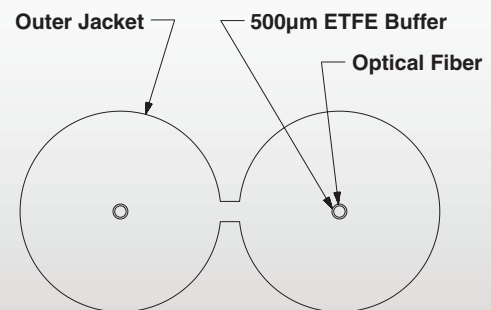
Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	I	D	1	0	2	–	0	2	5	M

1 – Fiber Product
F = Fiber

2 – Product Type
I = Opti-Core® IndustrialNet™ PCF Cable

3 – Cable Construction
I = Interconnect cable (duplex zipcord)

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
1 = 62.5/200/230 graded-index polymer coated fiber
2 = 50/200/230 graded-index polymer coated fiber

6 and 7 – Fiber Count
02 = 2-fiber

8 – Dash
Blank – Length made to order

9, 10, 11 and 12 – Reel Length
025M – 25-meter fixed reel

Fiber Cable for Americas
(North America and Latin America)

Opti-Core® Indoor/Outdoor Interlocking Armored Cable with Tight Buffered Fibers

For use indoors and outdoors. Interlocking aluminum armor eliminates the need for inner duct or conduit.

Cable Outer Jacket — Optical Fiber

Buffer

Overlaid Jacket

Strength Members

Aluminum Interlocking Armor
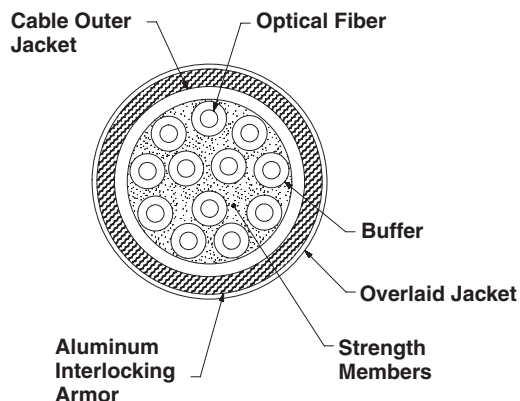
Character	1	2	3	4	5	6	7
Example	F	S	L	P	5	1	2

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3 and OM4

3 – Cable Construction
L = Indoor/Outdoor Tight Buffered Armored

4 – Flame Rating
R = Riser
P = Plenum

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
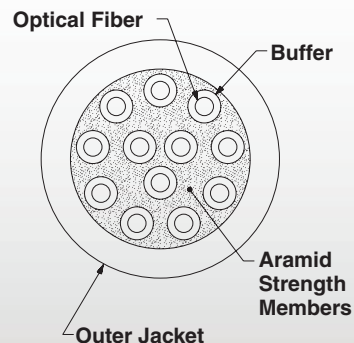5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
02 = 2-fiber
04 = 4-fiber
06 = 6-fiber
08 = 8-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber
72 = 72-fiber
96 = 96-fiber
1A = 144-fiber (Riser only)

Opti-Core® All-Dielectric Indoor/Outdoor Cable with Tight Buffered Fibers

These cables provide an effective solution for inter-building and building transition applications.

Optical Fiber

Buffer

Aramid Strength Members

Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	S	K	R	5	1	2

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3, OM4

3 – Cable Construction
K = Indoor/Outdoor Tight Buffered Unarmored

4 – Flame/Smoke Rating
R = Riser
P = Plenum

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 6.25//125µm
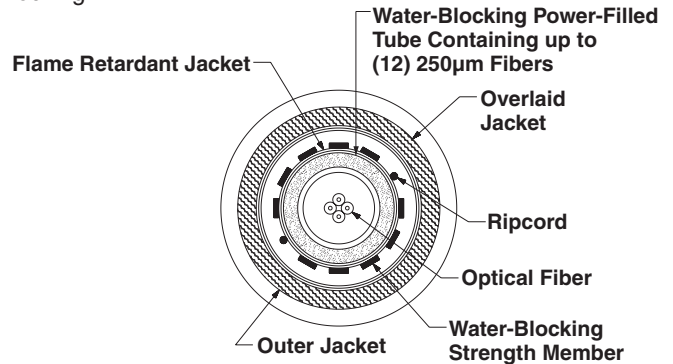5 = OM2 50/125µm
X = OM3 10G 50/125µm
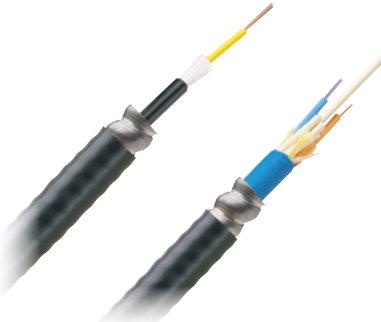Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
02 = 2-fiber
04 = 4-fiber
06 = 6-fiber
08 = 8-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber
72 = 72-fiber
96 = 96-fiber
1A = 144-fiber (Riser only)

Opti-Core® Indoor/Outdoor Interlocking Armored Cable

For use indoor and outdoors. Central loose tube constructions. Interlocking aluminum armor eliminates the need for inner duct or conduit.

Flame Retardant Jacket

Water-Blocking Power-Filled Tube Containing up to (12) 250µm Fibers

Overlaid Jacket

Ripcord

Optical Fiber

Outer Jacket

Water-Blocking Strength Member

Character	1	2	3	4	5	6	7	8
Example	F	S	G	P	5	0	6	Y

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3, OM4

3 – Cable Construction
G = Indoor/outdoor interlocking armored central cable
M= Indoor/Outdoor interlocking armored stranded tube

4 – Flame Rating
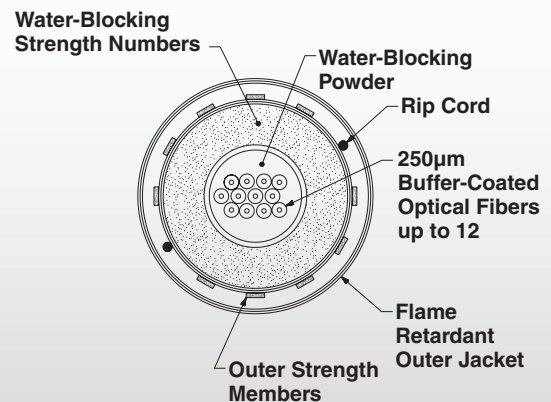R = Riser
P = Plenum

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
06 = 6-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber
72 = 72 fiber
96 = 96-fiber
1A = 144-fiber

Opti-Core® Indoor/Outdoor All-Dielectric Cable

Allows installation using loose tube cable methods within buildings and outdoor environments for transitional aerial, duct applications, and entrance facilities.

Water-Blocking Strength Numbers

Water-Blocking Powder

Rip Cord

250µm Buffer-Coated Optical Fibers up to 12

Flame Retardant Outer Jacket

Outer Strength Members

Character	1	2	3	4	5	6	7	8
Example	F	S	C	P	5	0	6	Y

1 and 2 – Fiber Product
FS = Fiber – OM1, OM2, OS2
FO = Fiber – OM3 and OM4

3 – Cable Construction
C = Indoor/outdoor central cable
N = Indoor/Outdoor stranded tube cable

4 – Flame Rating
R = Riser
P = Plenum

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
06 = 6-fiber
12 = 12-fiber
24 = 24 fiber
36 = 36 fiber
48 = 48 fiber
72 =72 fiber
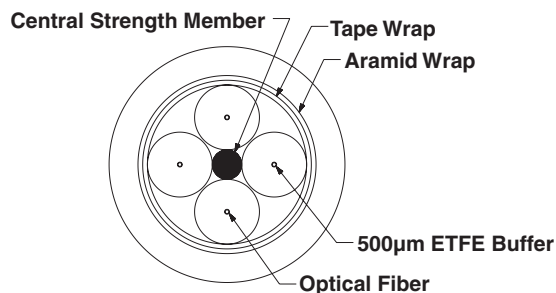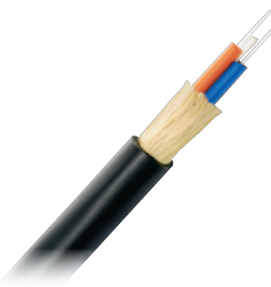96 = 96 fiber
1A = 144 fiber

8 – RoHS
Y = RoHS compliant

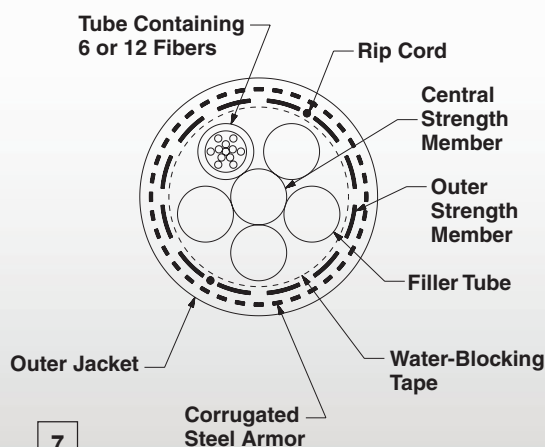## Opti-Core® IndustrialNet™ Polymer Coated Fiber (PCF) Fiber Optic Cable – Breakout

Allows installers to install high speed fiber optic permanent links quickly and ideal for installation in harsh, industrial environments.

Central Strength Member
Tape Wrap
Aramid Wrap
500µm ETFE Buffer
Optical Fiber

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	2	D	2	0	2	–	0	5	0	M

1 – Fiber Product
   F = Fiber
2 – Product Type
   I = Opti-Core® IndustrialNet™
      PCF Cable

3 – Cable Construction
   2 = Breakout cable
4 – Flame/Smoke Rating
   D = Dual Rated Riser (OFNR)
      and Low Smoke Zero
      Halogen (LSZH)

5 – Fiber Type
   1 = 62.5/200/230
      graded-index polymer
      coated fiber
   2 = 50/200/230 graded-index
      polymer coated fiber

6 and 7 – Fiber Count
   02 = 2-fiber
   04 = 4-fiber
8 – Dash
   Blank – Length made to order
9, 10, 11, and 12 – Reel Length
   050M – 50-meter fixed reel

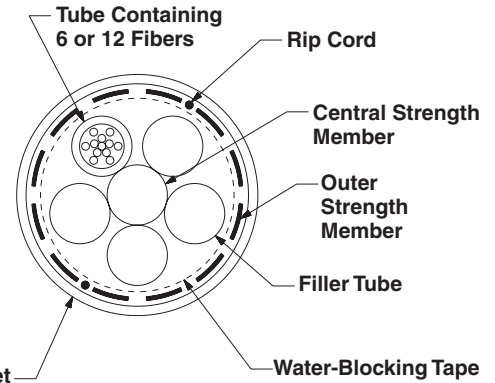## Opti-Core® Gel-Free Armored Outside Plant Cable

Corrugated steel armor provides superior crush resistance for extended durability in direct burial applications.

Tube Containing 6 or 12 Fibers
Rip Cord
Central Strength Member
Outer Strength Member
Filler Tube
Outer Jacket
Corrugated Steel Armor
Water-Blocking Tape

Character	1	2	3	4	5	6	7
Example	F	O	W	N	X	0	6

1 and 2 – Fiber Product
   FS = Fiber – OM1, OM2, OS2
   FO = Fiber – OM3, OM4

3 – Cable Construction
   W = Outside plant armored
      stranded cable
4 – Flame/Smoke Rating
   N = Non-rated

5 – Fiber Type
   9 = OS2 9/125µm
   6 = OM1 6.25/125µm
   5 = OM2 50/125µm
   X = OM3 10G 50/125µm
   Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
   06 = 6-fiber
   12 = 12-fiber
   24 = 24-fiber
   36 = 36-fiber
   48 = 48-fiber
   72 = 72-fiber
   96 = 96-fiber
   1A = 144-fiber

Opti-Core® Gel-Free All-Dielectric Outside Plant Cable

For use outdoors in aerial and duct applications.

Tube Containing 6 or 12 Fibers

Rip Cord

Central Strength Member

Outer Strength Member

Filler Tube

Outer Jacket

Water-Blocking Tape

Character	1	2	3	4	5	6	7
Example	F	O	T	N	X	0	6

1 and 2 – Fiber Product
    FS = Fiber – OM1, OM2, OS2
    FO = Fiber – OM3, OM4

3 – Cable Construction
    T = Outside plant stranded cable

4 – Flame Rating
    N = Non-rated
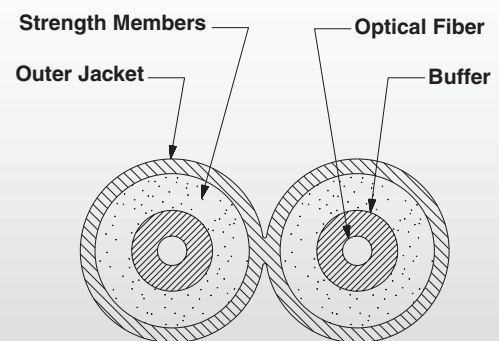
5 – Fiber Type
    9 = OS2 9/125µm
    6 = OM1 6.25//125µm
    5 = OM2 50/125µm
    X = OM3 10G 50/125µm
    Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
    06 = 6-fiber
    12 = 12-fiber
    24 = 24-fiber
    36 = 36-fiber
    48 = 48-fiber
    72 = 72-fiber
    96 = 96-fiber
    1A = 144-fiber

Opti-Core® Interconnect Cable

Used in interconnect, horizontal installations, routing in tight spaces such as panels, cable trays, and fiber-to-the-desk (FTTD) applications.

Strength Members

Optical Fiber

Outer Jacket

Buffer

Character	1	2	3	4	5	6	7	8
Example	F	S	I	P	5	0	2	Y

1 and 2 – Fiber Product
    FS = Fiber – OM1, OM2, OS2
    FO = Fiber – OM3 and OM4

3 – Cable Construction
    I = Interconnect cable

4 – Flame Rating
    P = Plenum
    R = Riser

5 – Fiber Type
    9 = OS2 9/125µm
    6 = OM1 6.25//125µm
    5 = OM2 50/125µm
    X = OM3 10G 50/125µm
    Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
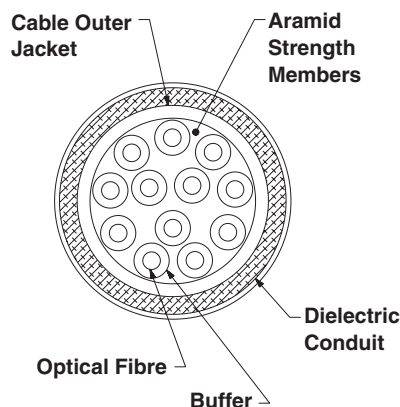   02 = 2-fiber

8 – RoHS
    Y = RoHs Compliant

Fibre Cable for EMEA
(Europe, Middle East, and Africa)
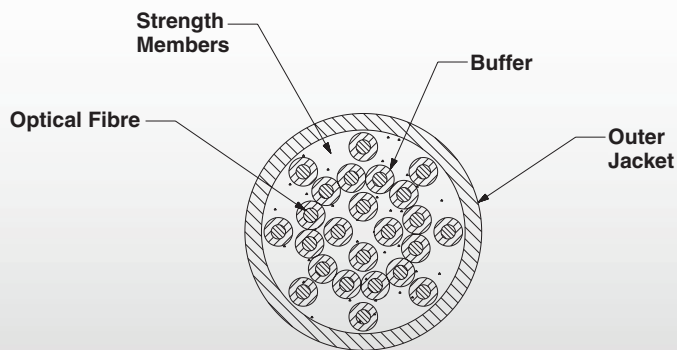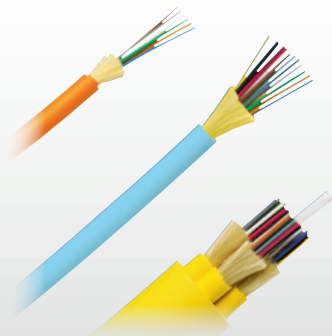
Opti-Core® Dielectric Conduited (DCF) Fibre Optic Cable

For indoor use in intrabuilding backbone and horizontal installations.

Cable Outer Jacket · **Aramid Strength Members** · **Dielectric Conduit** · **Optical Fibre** · **Buffer**

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	S	P	D	5	1	2	–	0	5	0	M

1 and 2 – Fibre
FS = Fibre

3 – Cable Construction
P = Dielectric conduited distribution (indoor)

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fibre Type
6 = OM1 62.5/125µm
5 = OM2 50/125µm
9 = OS2 9/125µm

6 and 7 – Fibre Count
02 = 2-fibre
04 = 4-fibre
08 = 8-fibre
12 = 12-fibre

8 – Dash
Blank – 1km fixed reel

9, 10, 11, and 12 – Reel Length
050M = 50-meter fixed reel

Opti-Core® Distribution Cable

For indoor use in intrabuilding backbone and horizontal installations.

Strength Members · **Buffer** · **Optical Fibre** · **Outer Jacket**

Character	1	2	3	4	5	6	7
Example	F	P	D	L	9	2	4

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
D = Distribution cable

4 – Flame/Smoke Rating
L = Low Smoke Zero Halogen (LSZH)

5 – Fibre Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fibre Count
04 = 4-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre
36 = 36-fibre
72 = 72-fibre

Opti-Core® IndustrialNet™ Polymer Coated Fiber (PCF) Fibre Optic Cable – Interconnect

Used for in-cabinet applications demanding high mechanical performance; quick and easy to terminate.

Outer Jacket — 500μm ETFE Buffer
Optical Fibre
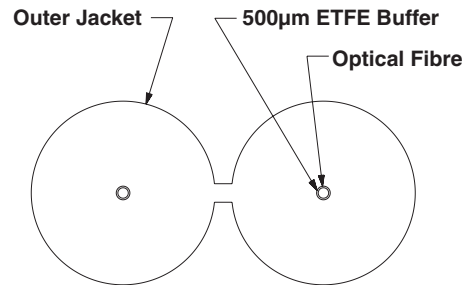
Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	I	D	1	0	2	–	0	2	5	M

1 – Fibre Product
F = Fibre

2 – Product Type
I = Opti-Core® IndustrialNet™ PCF Cable

3 – Cable Construction
I = Interconnect cable (duplex zipcord)
2 = Indoor/outdoor breakout cable

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fibre Type
1 = 62.5/200/230 graded-index polymer coated fiber
2 = 50/200/230 graded-index polymer coated fiber

6 and 7 – Fibre Count
02 = 2 fibres

8 – Dash
Blank – Length made to order

9, 10, 11, and 12 – Reel Length
025M – 25-meter fixed reel

Opti-Core® All-Dielectric Indoor/Outdoor Cable with Tight Buffered Fibres
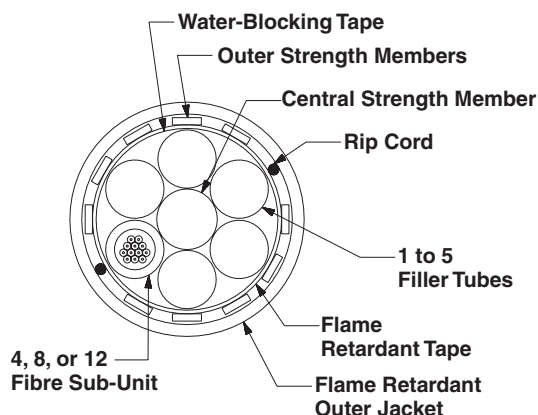
For indoor and outdoor use.

Strength Members
Optical Fibre
Buffer
Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	P	K	L	5	1	2

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
K = Indoor/Outdoor Tight Buffered Unarmored

4 – Flame Rating
L – Low Smoke Zero Halogen

5 – Fibre Type
9 = OS2 9/125μm
6 = OM1 62.5/125μm
5 = OM2 50/125μm
X = OM3 10G 50/125μm
Z = OM4 10G 50/125μm

6 and 7 – Fibre Count
02 = 2-fibre
04 = 4-fibre
06 = 6-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre
36 = 36-fibre
48 = 48-fibre
72 = 72-fibre
96 = 96-fibre

Fibre Cable for EMEA

(Europe, Middle East, and Africa)

Opti-Core® Indoor/Outdoor All-Dielectric Cable

For use indoor or outdoors. Central and stranded loose tube constructions are all-dielectric.

Water-Blocking Tape
Outer Strength Members
Central Strength Member
Rip Cord
1 to 5 Filler Tubes
Flame Retardant Tape
Flame Retardant Outer Jacket
4, 8, or 12 Fibre Sub-Unit

Character	1	2	3	4	5	6	7
Example	F	P	N	L	5	3	6

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
C = Indoor/outdoor central tube
N = Indoor/Outdoor stranded tube

4 – Flame Rating
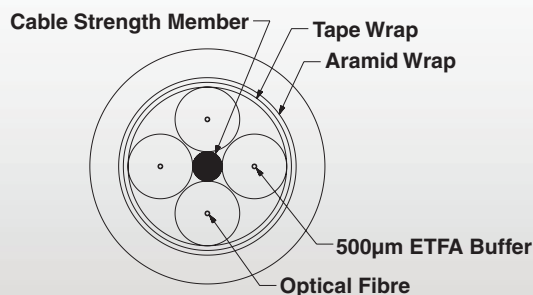L = Low Smoke Zero Halogen

5 – Fibre Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fibre Count
04 = 4-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre
36 = 36-fibre
48 = 48-fibre
72 = 72-fibre
96 = 96-fibre

Opti-Core® IndustrialNet™ Polymer Coated Fiber (PCF) Fibre Optic Cable – Breakout

Allows installers to install high speed fibre optic permanent links quickly and ideal for installation in harsh, industrial environments.

Cable Strength Member
Tape Wrap
Aramid Wrap
500µm ETFA Buffer
Optical Fibre

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	2	D	2	0	2	–	0	5	0	M

1 – Fibre Product
F = Fibre

2 – Product Type
I = Opti-Core® IndustrialNet™ PCF Cable

3 – Cable Construction
2 = Breakout cable

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fibre Type
1 = 62.5/200/230 graded-index polymer coated fiber
2 = 50/200/230 graded-index polymer coated fiber

6 and 7 – Fibre Count
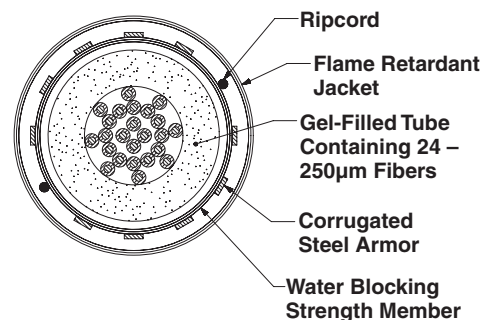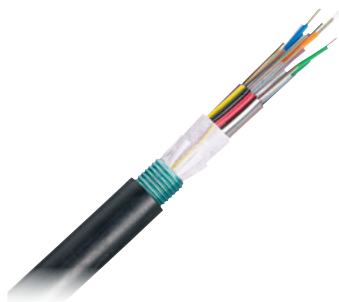02 = 2-fibre
04 = 4-fibre

8 – Dash
Blank – Length made to order

9, 10, 11, and 12 – Reel Length
050M – 50-meter fixed reel

Opti-Core® Gel-Filled Single Armor Single Jacket Outside Plant Cable

For use outdoors in direct burial applications. Central loose tube constructions are armored with corrugated steel tape for greater crush resistance.

Ripcord

Flame Retardant Jacket

Gel-Filled Tube Containing 24 – 250μm Fibers

Corrugated Steel Armor

Water Blocking Strength Member

Character	1	2	3	4	5	6	7
Example	F	P	S	N	5	1	2

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
S = Gel-filled Single Armor Single Jacket Outside Plant Cable

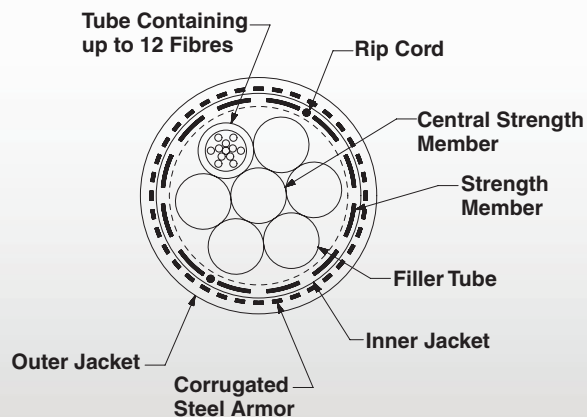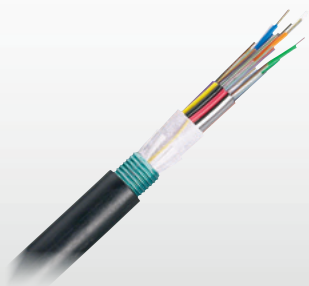**4 – Flame Rating**
N = Non-rated

5 – Fibre Type
9 = OS2 9/125μm
6 = OM1 62.5/125μm
5 = OM2 50/125μm
X = OM3 10G 50/125μm
Z = OM4 10G 50/125μm

6 and 7 – Fibre Count
04 = 4-fibre
06 = 6-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre

Opti-Core® Gel-Filled Single Armor Double Jacket Outside Plant Cable

For use outdoors in direct burial applications. Stranded loose tube constructions are armored with corrugated steel tape for greater crush resistance.

Tube Containing up to 12 Fibres

Rip Cord

Central Strength Member

Strength Member

Filler Tube

Inner Jacket

Outer Jacket

Corrugated Steel Armor

Character	1	2	3	4	5	6	7	8
Example	F	P	Q	N	5	1	2	B

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
Q = Gel-filled single armor double jacket outside plant cable

4 – Flame Rating
N = Non rated

5 – Fibre Type
9 = OS2 9/125μm
6 = OM1 62.5/125μm
5 = OM2 50/125μm
X = OM3 10G 50/125μm
Z = OM4 10G 50/125μm

6 and 7 – Fibre Count
02 = 2-fibre
04 = 4-fibre
06 = 6-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre
36 = 36-fibre
48 = 48-fibre
72 = 72-fibre
96 = 96-fibre
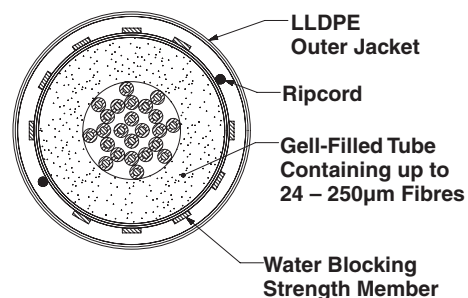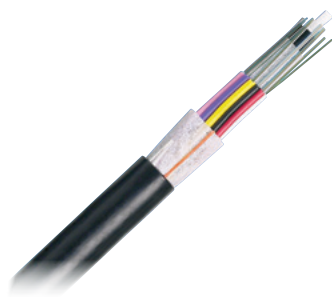1A = 144-fibre

8 – Fibre Cable
B = single armor double jacket stranded tube

Fibre Cable for EMEA
(Europe, Middle East, and Africa)

Opti-Core® Gel-Filled All-Dielectric Outside Plant Cable

For use outdoors in aerial or duct applications. Central loose tube constructions are all-dielectric. No need to ground or bond.

LLDPE Outer Jacket

Ripcord

Gell-Filled Tube Containing up to 24 – 250µm Fibres

Water Blocking Strength Member

Character	1	2	3	4	5	6	7
Example	F	P	U	N	5	1	2

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
U = Gel-filled All-Dielectric Outside Plant Cable

4 – Flame Rating
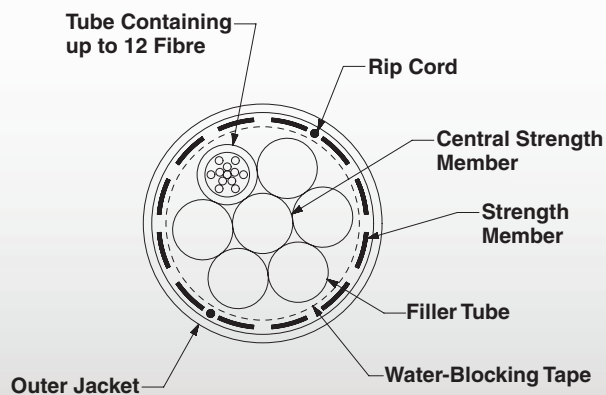N = Non-rated

5 – Fibre Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fibre Count
02 = 2-fibre
04 = 4-fibre
06 = 6-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre

Opti-Core® Gel-Filled All-Dielectric Outside Plant Cable

For use outdoors in aerial or duct applications. Stranded loose tube constructions are all-dielectric. No need to ground or bond.

Tube Containing up to 12 Fibre

Rip Cord

Central Strength Member

Strength Member

Filler Tube

Water-Blocking Tape

Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	P	T	N	5	1	2

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
T = Outside plant, gel-filled, all-dielectric, unarmored stranded tube

4 – Flame Rating
N = Non-rated

5 – Fibre Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
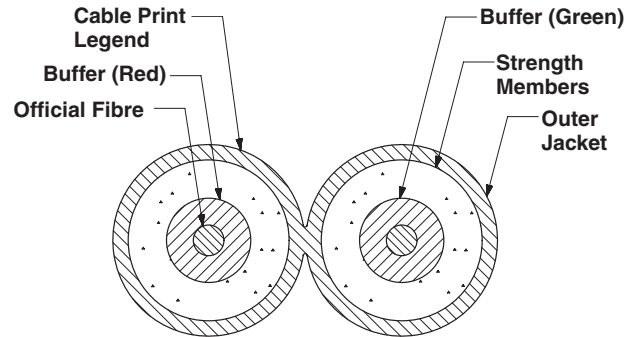5 = OM2 50/125µm
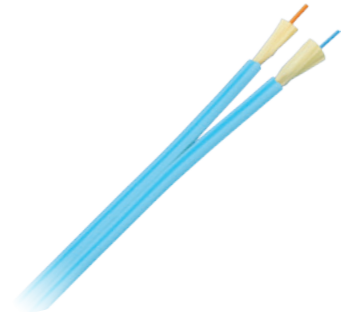X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fibre Count
06 = 6-fibre
08 = 8-fibre
12 = 12-fibre
24 = 24-fibre
36 = 36-fibre
48 = 48-fibre
72 = 72-fibre
96 = 96-fibre
1A = 144-fibre

Opti-Core® Interconnect Cable

Used in interconnect, horizontal installations, and for routing in tight spaces such as panels, cable trays, and fibre-to-the-desk (FTTD) applications.

Cable Print Legend

Buffer (Red)

Official Fibre

Buffer (Green)

Strength Members

Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	P	I	L	5	0	2

1 and 2 – Fibre Product
FP = Fibre – OM1, OM2, OS2
FQ = Fibre – OM3, OM4

3 – Cable Construction
I = Interconnect zip-cord cable

4 – Flame Rating
L = Low Smoke Zero Halogen (LSZH)

5 – Fibre Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
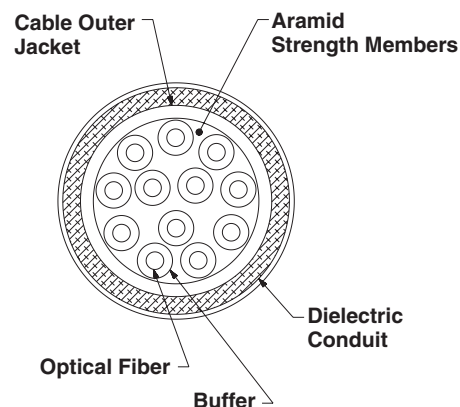Z = OM4 10G 50/125µm

6 and 7 – Fibre Count
02 = 2-fibre

Opti-Core® Dielectric Conduited (DCF) Fiber Optic Cable

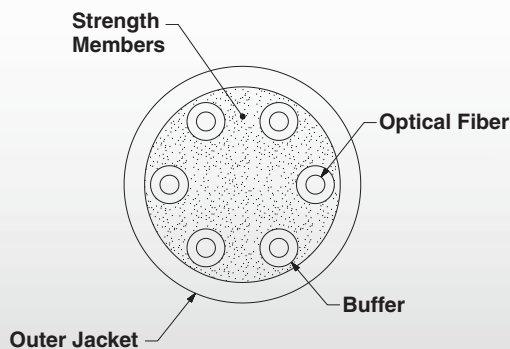For indoor use in intrabuilding backbone and horizontal installations.

Cable Outer Jacket — **Aramid Strength Members** — **Dielectric Conduit** — **Buffer** — **Optical Fiber**

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	S	P	D	5	1	2	–	0	5	0	M

1 and 2 – Fiber Product
FS = Fiber

3 – Cable Construction
P = Dielectric conduited distribution (indoor)

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
6 = OM1 62.5/125μm
5 = OM2 50/125μm
9 = OS2 9/125μm

6 and 7 – Fiber Count
02 = 2-fiber
04 = 4-fiber
08 = 8-fiber
12 = 12-fiber

8 – Dash
Blank – 1km fixed reel

9, 10, 11, and 12 – Reel Length
050M = 50-meter fixed reel

Opti-Core® Distribution Cable

For indoor use in intrabuilding backbone and horizontal installations.

Strength Members — **Optical Fiber** — **Buffer** — **Outer Jacket**

Character	1	2	3	4	5	6	7	8
Example	F	L	D	L	5	0	6	Y

1 and 2 – Fiber Product
FL = Fiber – OS2, OM1, OM2, OM3, OM4

3 – Cable Construction
D = Distribution Cable

4 – Flame/Smoke Rating
L = Low Smoke Zero Halogen

5 – Fiber Type
9 = OS2 9/125μm
6 = OM1 62.5/125μm
5 = OM2 50/125μm
X = OM3 10G 50/125μm
Z = OM4 10G 50/125μm

6 and 7 – Fiber Count
02 = 2-fiber
04 = 4-fiber
06 = 6-fiber
08 = 8-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber

8 – RoHS
Y = RoHS compliant

Opti-Core® IndustrialNet™ PCF (Polymer Coated Fiber) Fiber Optic Cable – Interconnect

Used for in-cabinet applications demanding high mechanical performance; quick and easy to terminate.

Outer Jacket — **500μm ETFE Buffer**

Optical Fiber

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	I	D	1	0	2	–	0	2	5	M

1 – Fiber Product
F = Fiber

2 – Product Type
I = Opti-Core® IndustrialNet™ PCF Cable

3 – Cable Construction
I = Interconnect cable (duplex zipcord)
2 = Indoor/outdoor breakout cable

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fiber Size
1 = 62.5/200/230 graded-index polymer coated fiber
2 = 50/200/230 graded index polymer coated fiber

6 and 7 – Fiber Count
02 = 2 fibers

8 – Length
Blank = Length made to order

9, 10, 11, and 12 – Reel Length
025M – No fixed lengths, made to order per customer specs

Opti-Core® All-Dielectric Indoor/Outdoor Cable with Tight Buffered Fibers
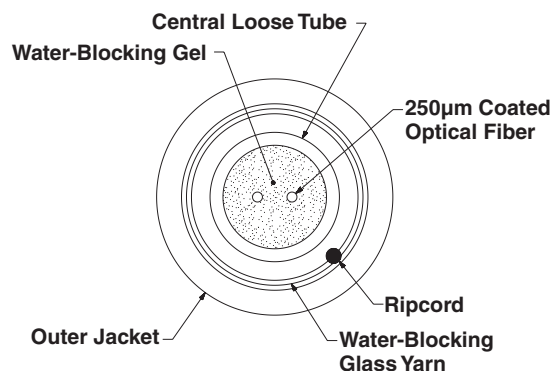
For use indoor and outdoors.

Strength Members

Optical Fiber

Buffer

Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	L	K	R	5	1	2

1 and 2 – Fiber Product
FL = Fiber – OM1, OM2, OS2, OM3, OM4

3 – Product Type
K = Indoor/outdoor tight buffered unarmored

4 – Flame/Smoke Rating
R = Riser (ONFR)
L = Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
9 = OS2 9/125μm
6 = OM1 62.5/125μm
5 = OM2 50/125μm
X = OM3 10G 50/125μm
Z = OM4 10G 50/125μm

6 and 7 – Fiber Count
04 = 4-fiber
06 = 6-fiber
08 = 8-fiber
12 = 12-fiber
16 = 16-fiber
24 = 24-fiber
48 = 48-fiber
72 = 72-fiber

Opti-Core® Indoor/Outdoor All-Dielectric Cable

For use indoor or outdoors. Central loose tube and stranded loose tube constructions are all-dielectric.

Central Loose Tube
Water-Blocking Gel
250µm Coated Optical Fiber
Ripcord
Outer Jacket
Water-Blocking Glass Yarn

Character	1	2	3	4	5	6	7	8
Example	F	L	C	L	5	0	2	Y

1 and 2 – Fiber Product
FL = Fiber – OM1, OM2, OS2, OM3, OM4

3 – Product Type
C = Indoor/outdoor central cable
N = Indoor/outdoor stranded cable

4 – Flame/Smoke Rating
R = Riser (OFNR)
L = Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 62.5/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
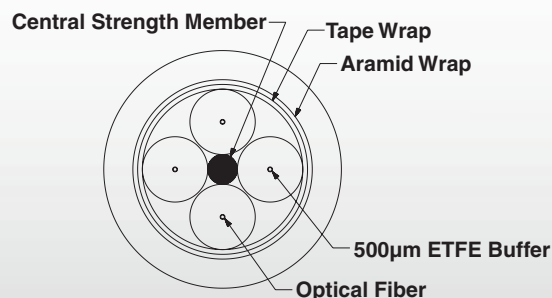02 = 2-fiber
04 = 4-fiber
08 = 8-fiber
12 = 12-fiber
24 = 24-fiber
36 = 36-fiber
48 = 48-fiber

Opti-Core® IndustrialNet™ Polymer Coated Fiber (PCF) Fiber Optic Cable – Breakout

Used for in-cabinet applications demanding high mechanical performance. Quick and easy to terminate.

Central Strength Member
Tape Wrap
Aramid Wrap
500µm ETFE Buffer
Optical Fiber

Character	1	2	3	4	5	6	7	8	9	10	11	12
Example	F	I	2	D	2	0	2	–	0	5	0	M

1 – Fiber Product
F = Fiber

2 – Product Type
I = Opti-Core® IndustrialNet™ PCF Cable

3 – Cable Construction
2 = Breakout cable

4 – Flame/Smoke Rating
D = Dual Rated Riser (OFNR) and Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
1 = 62.5/200/230 graded-index polymer coated fiber
2 = 50/200/230 graded-index polymer coated fiber

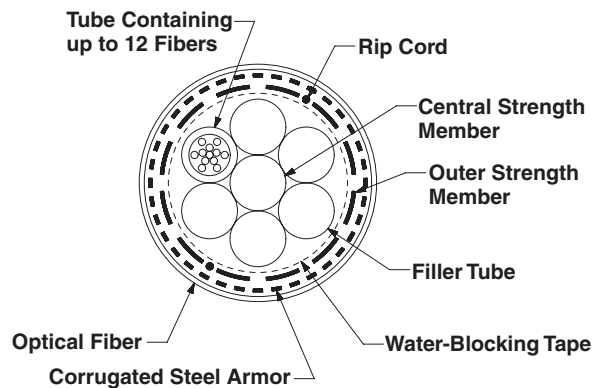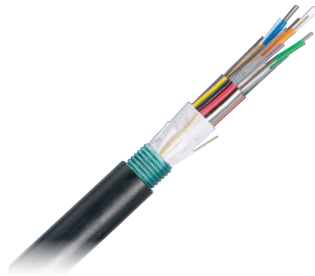**6 and 7 – Fiber Count**
02 = 2-fiber
04 = 4-fiber

8 – Dash
Blank = Length made to order

9, 10, 11, and 12 – Reel Length
050M – 50-meter fixed reel

Opti-Core® Gel-Filled Armored Outside Plant Cable

For use outdoors in direct burial applications. Stranded loose tube constructions are armored with corrugated steel tape for greater crush resistance. Gel-filled. Non-rated PE outer jacket.

Tube Containing up to 12 Fibers — Rip Cord — Central Strength Member — Outer Strength Member — Filler Tube — Water-Blocking Tape — Corrugated Steel Armor — Optical Fiber

Character	1	2	3	4	5	6	7
Example	F	L	W	N	5	1	2

1 and 2 – Fiber Product
   FL = Fiber – OS2, OM1, OM2, OM3, OM4

3 – Cable Construction
   W = Gel-filled armored outside plant cable

4 – Flame/Smoke Rating
   N = Non-rated

5 – Fiber Type
   9 = OS2 9/125µm
   6 = OM1 62.5/125µm
   5 = OM2 50/125µm
   X = OM3 10G 50/125µm
   Z = OM4 10G 50/125µm

6 and 7 – Fiber Count

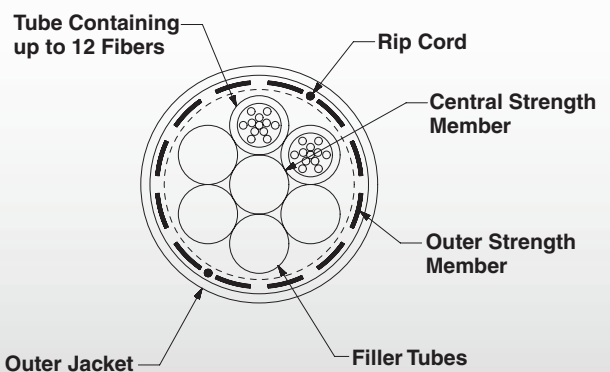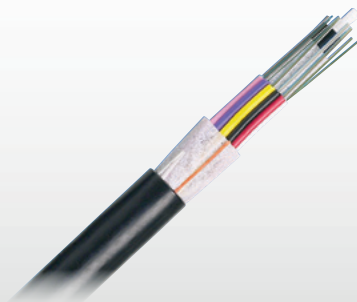|	
02 = 2-fiber	48 = 48-fiber
04 = 4-fiber	72 = 72-fiber
06 = 6-fiber	96 = 96-fiber
08 = 8-fiber	1A = 144-fiber
12 = 12-fiber	
24 = 24-fiber	
36 = 36-fiber	

Opti-Core® Gel-Filled All-Dielectric Outside Plant Cable

For use outdoors in aerial or duct applications. Stranded constructions are all-dielectric. Gel-free. Non-rated PE outer jacket.

Tube Containing up to 12 Fibers — Rip Cord — Central Strength Member — Outer Strength Member — Filler Tubes — Outer Jacket

Character	1	2	3	4	5	6	7
Example	F	L	T	N	5	1	2

1 and 2 – Fiber
   FL = Fiber – OS2, OM1, OM2, OM3, OM4

3 – Cable Construction
   T = Gel-filled all-dielectric outside plant cable

4 – Flame/Smoke Rating
   N = Non-rated

5 – Fiber Type
   9 = OS2 9/125µm
   6 = OM1 62.5/125µm
   5 = OM2 50/125µm
   X = OM3 10G 50/125µm
   Z = OM4 10G 50/125µm

6 and 7 – Fiber Count

02 = 2-fiber	48 = 48-fiber
04 = 4-fiber	72 = 72-fiber
06 = 6-fiber	96 = 96-fiber
08 = 8-fiber	1A = 144-fiber
12 = 12-fiber	
24 = 24-fiber	
36 = 36-fiber	

Opti-Core® Interconnect Cable

Used in interconnect, horizontal installations, routing in tight spaces such as panels, cable trays, and fiber-to-the-desk (FTTD) applications.

Strength Members   **Optical Fiber**
Outer Jacket   **Buffer**

Character	1	2	3	4	5	6	7	8
Example	F	L	I	L	X	0	2	Y

1 and 2 – Fiber Product
FL = Fiber – OS2, OM1, OM2, OM3, OM4

3 – Cable construction
I = Interconnect zipcord

4 – Flame/Smoke Rating
L = Low Smoke Zero Halogen (LSZH)

5 – Fiber Type
9 = OS2 9/125µm
6 = OM1 6.25/125µm
5 = OM2 50/125µm
X = OM3 10G 50/125µm
Z = OM4 10G 50/125µm

6 and 7 – Fiber Count
02 = 2-fiber

8 –RoHS
Y = RoHs compliant

TIA 598-C

The Telecommunications Industry Association's TIA-598-C Optical Fiber Cable Color Coding, is an American National Standard, that provides all necessary information for color-coding optical fiber cables in a uniform manner. It defines identification schemes for fibers, buffered fibers, fiber units, and groups of fiber units within outside plant and premises optical fiber cables. This standard allows for fiber units to be identified by means of a printed legend. The legend will contain a corresponding printed numerical position number and/or color for use in identification.

TIA-598-C Fiber Color Code Chart

1	Blue	13	Blue with black tracer
2	Orange	14	Orange with black tracer
3	Green	15	Green with black tracer
4	Brown	16	Brown with black tracer
5	Slate	17	Slate with black tracer
6	White	18	White with black tracer
7	Red	19	Red with black tracer
8	Black	20	Black with black tracer
9	Yellow	21	Yellow with black tracer
10	Violet	22	Violet with black tracer
11	Rose	23	Rose with black tracer
12	Aqua	24	Aqua with black tracer

Contact Customer Service for fiber cable minimum order quantities, lead times, and stocked availability.

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