

Opti-Core™ Fiber Optic Indoor/Outdoor Armored Cable with Tight Buffered Fibers - Americas

technical information

Panduit® Opti-Core® Indoor/Outdoor Armored Cable with tight buffered fibers are an integral part of the Panduit end-to-end fiber optic solution, designed to support today's data needs while meeting tomorrow's ever-advancing network requirements. This cable provides water blocking technology, high density, and easy installation in transitional aerial and duct applications and entrance facilities, and the 900µm tight-buffered fibers provide easy connectorization. The tight-buffered fibers surrounded by aramid yarn strength members combine usability indoors and out. Interlocking aluminum armor eliminates the need for inner duct or conduit to provide a smaller crush resistant pathway for improved design flexibility and lower installed cost. Cables with greater than 24 fibers feature a sub-unit design that simplifies fiber identification, provides easy access and routing of the fibers. It also increases cable durability with a dielectric central strength member. Opti-Core® Fiber Optic Indoor/Outdoor Riser (OFCR) and Plenum (OFCP) Rated Cable with tight buffered fibers are tested in accordance with Telcordia GR-20, Issue 2, GR-409 and with relevant EIA/TIA-455 series FOTPs for fiber optic cable. All multimode and singlemode cable is available in 6, 12, and 24 fiber counts as a "non-subunitized" design while 48, 72, and 96 fiber counts (144 for Riser) are available in singlemode as a "sub-unitized" design. All Opti-Core® fiber cable is RoHS compliant.



applications

These cables provide an effective solution for inter-building and building transition applications utilizing field installable connectors. This cable is available in both riser rated and plenum rated version for deployment in any inside plant fire-code application. The UV-resistant outer jacket, coupled with dry water-blocking technology, address environmental concerns for outdoor use.

standards

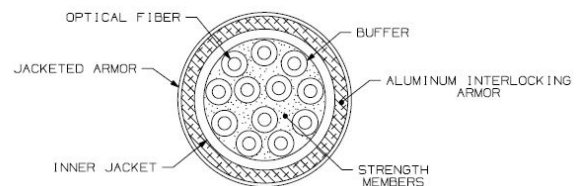
TIA/EIA-568
ANSI/ICEA S-104-696
UL-1666
NFPA 262
ROHS Compliant

ANSI/ICEA S-83-596
CSA 22.2
Telcordia GR-409
Telcordia GR-20

cable construction

6 to 24 fibers

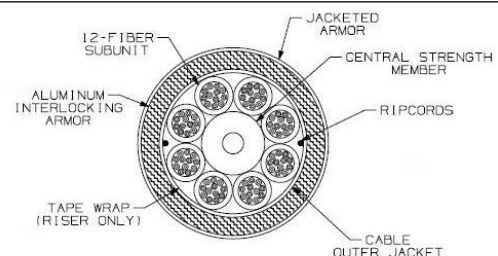
900µm tight buffered fibers, aramid strength members and dry water blocking elements are contained in a flame-retardant inner jacket (black). Aluminum interlocking armor is applied over the inner jacket and covered with a flame rated jacket (black).



(Representative cross-section with 12 fibers)

48 to 144 fibers

4 to 12 sub-units with 12 fibers per sub-unit. A glass reinforced (GRP) anti-buckling member is centrally located within the cable. Subunits are wrapped in tape (riser only) and held together with an outer jacket (black). Aluminum interlocking armor is applied over the outer jacket and covered with a flame rated jacket (black). Each sub-unit has twelve 900µm tight buffered fibers, aramid strength members and dry water blocking elements in a flame-retardant jacket (black).



(Representative cross-section with 96 fibers)

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mechanical properties

Tensile strength (Installation)	<p>Riser: 6 to 12-fibers: 100 lbs. 24-fibers: 300 lbs. 48 to 144-fibers (sub-unitized): 600 lbs.</p> <p>Plenum: 6-fibers: 100 lbs. 12 to 24-fibers: 150 lbs. 48-fibers (sub-unitized): 400 lbs. 72 to 96-fibers (sub-unitized): 600 lbs.</p>
Tensile strength (long-term)	<p>Riser: 6 to 12-fibers: 30 lbs. 24-fibers: 90 lbs. 48 to 144-fibers (sub-unitized): 180 lbs.</p> <p>Plenum: 6-fibers: 30 lbs. 12 to 24-fibers: 45 lbs. 48-fibers (sub-unitized): 120 lbs. 72 to 96-fibers (sub-unitized): 180 lbs</p>
Compressive strength (crush)	440 N/cm
Impact	Per FOTP 25
Torsion	Per FOTP 85
Kink	Per FOTP 104
Temperature range	<p>Shipping/Storage: (Riser) -40°F to +176°F (-40°C to +80°C) (Plenum) -40°F to +176°F (-40°C to +80°C)</p> <p>Installation: (Riser) +14°F to +140°F (-10°C to +60°C) (Plenum) +32°F to +140°F (0°C to +60°C)</p> <p>Operation: (Riser) -40°F to +176°F (-40°C to +80°C) (Plenum) -40°F to +176°F (-40°C to +80°C)</p>

physical properties-riser

Fiber Count	Cable Diameter Inches (mm)	Long-Term Bend Radius Inches (cm)	Installation Bend Radius Inches (cm)	Cable Weight Lb./kft. (kg/km)
6	0.56 (14.2)	5.6 (14.3)	11.2 (28.5)	132 (196)
12	0.59 (14.9)	5.9 (15.0)	11.8 (30.0)	146 (217)
24	0.65 (16.5)	6.5 (16.6)	13.0 (33.1)	158 (235)
48	0.95 (24.1)	9.5 (24.2)	19.0 (48.3)	368 (547)
72	1.10 (27.9)	11.0 (28.0)	22.0 (55.9)	472 (703)
96	1.29 (32.7)	12.9 (32.8)	25.8 (65.6)	569 (847)
144	1.35 (34.3)	13.5 (34.3)	27.0 (68.6)	676 (1006)

physical properties-plenum

Fiber Count	Cable Diameter Inches (mm)	Long-Term Bend Radius Inches (cm)	Installation Bend Radius Inches (cm)	Cable Weight Lb./kft. (kg/km)
6	0.47 (11.9)	4.7 (12.0)	9.4 (23.9)	87 (130)
12	0.51 (13.0)	5.1 (13.0)	10.2 (25.9)	95 (142)
24	0.58 (14.7)	5.8 (14.8)	11.6 (29.5)	131 (195)
48	0.938 (23.8)	8.1 (20.6)	16.2 (41.2)	243 (363)
72	1.052 (26.7)	9.4 (23.9)	18.8 (47.8)	361 (537)
96	1.189 (30.2)	10.9 (27.7)	21.8 (55.4)	511 (760)

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optical properties - maximum attenuation (cabled fiber)

Singlemode	0.7 dB/km @1310 nm, 0.7 dB/km @1550 nm
Multimode OM1	3.5 dB/km @850 nm, 1.0 dB/km @1300 nm
Multimode OM3 & OM4	3.0 dB/km @850 nm, 1.0 dB/km @1300 nm

fiber color sequence

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

Fibers 13 through 24 repeat this color sequence and have a black tracer. Fiber 20 is black with a white tracer.

ordering information

Example: FSLR912 Fiber, Indoor/Outdoor Tight Buffered Armored, Riser Rated, OS2, 12 Fiber

Character	1	2	3	4	5	6	7
Example	F	S	L	R	9	1	2

1 and 2 – Fiber Product Region

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

3 – Cable Construction

L = Indoor/Outdoor Tight Buffered Armored

4 – Flame Rating

R = Riser
P = Plenum

5 – Fiber Type

9 = Singlemode
6 = OM1 62.5/125µm (6, 12)
X = OM3 10G 50/125µm (6, 12, and 24 fiber only)
Z = OM4 10G 50/125µm (6, 12, and 24 fiber only)

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 (Riser only)

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