

Opti-Core® Gel-Free Indoor/Outdoor All-Dielectric Cable

Technical Information

Opti-Core® Gel-Free Indoor/Outdoor Cable is 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 riser rated or plenum rated cable provides UV resistance, water-blocking, high density and easy installation in transitional aerial and duct applications, and entrance facilities. Opti-Core® Gel-Free Indoor/Outdoor Cable is tested in accordance with Telcordia GR-20, Issue 2, GR-409 and with relevant EIA/TIA-455 series FOTPs for fiber optic cables. Opti-Core® 10Gig Gel-Free Indoor/Outdoor Cable features the highest quality OM3 laser optimized fiber to support 10 Gb/s applications while maintaining compatibility with existing 50µm multimode systems. Standard RoHS multimode and singlemode indoor/outdoor cables are available in 2, 4, 6, and 12 fiber and 12-fiber counts in a "central loose tube" design and in 24, 36, 48, 60, 72, 96 and 144-fiber counts in a "stranded loose tube" design.



Application

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

Construction

Water blocking	Waterblocking yarns
Inner sheath	<12 Fiber: PVC/ or PVDF >12 Fiber: NA
Outer sheath	PVC/ or PVDF

Standards

TIA/EIA- 568
ANSI/ICEA S-83-596
Telcordia GR-409
CSA 22.2 No. 230
Telcordia GR-20
ANSI/ICEA S-104-696
RoHS Compliant
UL-1666
NFPA 262

Mechanical Properties

Tensile strength (< 12 fibers)	Installation: 300 lb. (1335 N) Long Term: 90 lb. (400 N)
Tensile strength (>12 fibers)	Installation: 600 lb. (2700 N) Long Term: 200 lb. (890 N)
Compressive strength (crush)	<12 Fibers: 57lbs/inch >12 Fibers: 125lbs/inch
Impact	3 at 4.4 N*m
Torsion	10 cycles
Kink	IEC 60794-1-2 Method G7
Temperature range	Shipping and Storage: -40°F to +167°F (-40°C to +85°C) Installation: -22°F to +140°F (-20°C to +60°C) Operation: -40°F to +158°F (-40°C to +75°C)

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Physical Properties–Riser

Fiber Count	Cable OD Inches	Long Term Bend Radius Inches	Installation Bend Radius Inches	Cable Weight Lb/kft
2	0.31	3.0	6.0	40
4	0.31	3.0	6.0	40
6	0.31	3.0	6.0	40
8	0.31	3.0	6.0	40
12	0.31	3.0	6.0	40
24	0.40	4.0	8.0	63
36	0.40	4.0	8.0	63
48	0.40	4.0	8.0	63
60	0.46	4.7	7.0	81
72	0.43	4.3	8.6	69
96	0.50	5.1	10.1	96
144	0.64	6.5	12.9	158

Physical Properties–Plenum

Fiber Count	Cable OD Inches	Installation Bend Radius Inches	Long Term Bend Radius Inches	Cable Weight Lb/kft
2	0.28	2.8	5.6	36
4	0.28	2.8	5.6	36
6	0.28	2.8	5.6	36
8	0.28	2.8	5.6	36
12	0.28	2.8	5.6	36
24	0.37	3.7	7.4	55
36	0.37	3.7	7.4	55
48	0.37	3.7	7.4	55
60	0.46	6.9	4.6	81
72	0.44	4.0	8.0	67
96	0.48	4.8	9.6	97

Technical Properties

	Singlemode	OM1	OM2	OM3	OM4
Cabled Attenuation (maximum)					
850nm		3.0dB/km	3.0dB/km	3.0dB/km	3.0dB/km
1300nm		1.0dB/km	1.0dB/km	1.0dB/km	1.0dB/km
1310nm	.7dB/km				
1550nm	.7dB/km				
Core Diameter	8.2µm *				
Cladding Diameter	125µm ± 0.7µm	62.5µm ± 2.5µm	50µm ± 2.5µm	50µm ± 2.5µm	50µm ± 2.5µm
Coating Diameter	245µm ± 10µm	245µm ± 10µm	245µm ± 5µm	245µm ± 5µm	245µm ± 5µm
Overfilled Bandwidth- 850nm (MHz-km)	—	≥200	≥500	≥1500	≥3500
Overfilled Bandwidth- 1300nm (HMz-km)	—	≥500	≥500	≥500	≥500
Effective Modal Bandwidth- 850nm (MHz-km)	—	≥220	≥950	≥2000	≥4700
Compliance	ITU-T G.652 (A,B,C, D), ITU-T G.657.A1 IEC 60793-2-50, ISO 11801 OS2, TIA-492-CAAB, Telcordia GR-20	TIA-492AAAA IEC 60793-2-10	TIA-492AAAB, TIA-492AAAC, TIA-492AAAD, IEC 60793-2-10	TIA-492AAAB, TIA-492AAAC, TIA-492AAAD, IEC 60793-2-10	TIA-492AAAB, TIA-492AAAC, TIA-492AAAD, IEC 60793-2-10

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Fiber Color Code

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

CHARACTER	1	2	3	4	5	6	7	8
EXAMPLE*	F	O	C	R	Z	0	6	Y

*Example: FOCRZ06Y– Fiber, Indoor/Outdoor, Central Tube Riser rated, OM4, 6-fiber

1 and 2 Fiber Product

FS = Fiber- OM1, OM2, OS2

FO = Fiber- OM3, OM4

3- Cable Construction

C = Indoor/Outdoor Central Tube (up to 12 fiber)

N = Indoor/Outdoor Stranded Tube (24 fiber and greater)

4- Flame Rating

R = Riser

P = Plenum

5- Fiber Type

9 = Singlemode (OS2 ITU G.652.D)

6 = Multimode (OM1)

5 = Multimode (OM2)

X = Multimode (OM3)

Z = Multimode (OM4)

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

60 = 60-fiber

72 = 72-fiber

96 = 96-fiber

1A = 144-fiber

8- RoHS Compliant

Y = Yes

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