

# 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

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

<b>Tensile strength (&lt; 12 fibers)</b>	Installation: 300 lb. (1335 N) Long Term: 90 lb. (400 N)
<b>Tensile strength (&gt;12 fibers)</b>	Installation: 600 lb. ( 2700 N) Long Term: 200 lb. (890 N)
<b>Compressive strength (crush)</b>	<12 Fibers: 57lbs/inch >12 Fibers: 125lbs/inch
<b>Impact</b>	3 at 4.4 N*m
<b>Torsion</b>	10 cycles
<b>Kink</b>	IEC 60794-1-2 Method G7
<b>Temperature range</b>	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)

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

## 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

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

## Fiber Color Code

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

## 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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