

technical information

Opti-Core® Fiber Optic Distribution 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. Opti-Core® Fiber Optic Distribution Cable is used within buildings to provide high-density connectivity and ease of installation. Applications include intra building backbones, routing between telecommunications rooms and connectorized cables in riser and plenum environments. Opti-Core® Fiber Optic Distribution Cable meets or exceeds the requirements of Telcordia GR-409 and with relevant EIA/TIA-455 series FOTPs for fiber optic cables. Opti-Core® Fiber Optic Distribution Cable features the highest quality OM3 and OM4 laser optimized fiber to support 10 Gb/s applications while maintaining compatibility with existing 50µm multimode systems. Standard singlemode and multimode distribution cable is available in fiber counts from 6 to 144 fibers. Distribution cable in 6, 12, and 24-fiber counts in a "single jacket" designs feature 900µm tight-buffered fibers surrounded by aramid yarn strength members. Larger distribution cable (36 fibers and greater) features a "sub-unit" design that simplifies fiber identification, provides easy access and routing of the fibers and increases cable durability with a dielectric central strength member.



application

For indoor use in intra-building and horizontal installations.

standards

UL-1666
NFPA 262
ROHS Compliant

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

construction

Inner sheath	PVC	
Outer sheath	PVC	
Mechanical Properties	Riser	Plenum
Tensile strength (< 12 fibers)	Installation: 300 lb. (1335 N) Long term: 100 lb. (440 N)	Installation: 100 lb. (440 N) Long term: 30 lb. (132 N)
Tensile strength (>24 fibers)	Installation: 600 lb. (2670 N) Long term: 180 lb. (800 N)	Installation: 300 lb. (1335 N) Long term: 100 lb. (440 N)
Compressive strength (crush)	57lbs/inch for up to 24 fibers and 125lbs/inch for higher fiber counts	
Impact	3 at 4.4 Nm	
Torsion	10 Cycles	
Temperature range	Storage: -40°F to 158°F (-40°C to 70°C) Operation: -4°F to 158°F (-20°C to 70°C) Installation: 4°F to 158°F (-20°C to 70°C)	40°F to 158°F (40°C to 70°C) -4°F to 158°F (-20°C to 70°C) 32°F to 140°F (-0°C to 60°C)

Opti-Core® Fiber Optic Distribution Cable

physical properties – riser

Fiber Count	Cable OD Inches	Long Term Bend Radius Inches	Installation Bend Radius Inches	Cable Weight Lb/kft
2	0.19	3.7	1.9	15
4	0.22	4.4	2.2	19
6	0.24	4.7	2.3	21
8	0.25	4.9	2.5	23
12	0.28	5.5	2.8	30
24	0.32	6.4	3.2	43
36	0.65	12.9	6.5	155
48	0.63	12.6	6.3	135
60	0.66	6.6	9.9	165
72	0.79	16.0	8.0	204
96	0.92	18.4	9.2	282
144	0.95	19.0	9.5	333

physical properties – plenum

Fiber Count	Cable OD Inches	Installation Bend Radius Inches	Long Term Bend Radius Inches	Cable Weight Lb/kft
2	0.16	3.2	1.6	9
4	0.17	3.4	1.7	14
6	0.18	3.6	1.8	15
8	0.20	4.0	2.0	18
12	0.23	4.6	2.3	22
24	0.30	6.0	3.0	42
36	0.66	13.2	6.6	177
48	0.66	13.2	6.6	166
60	0.62	9.3	6.2	168
72	0.79	15.7	7.9	257
96	0.91	18.2	9.1	356
144	0.89	13.4	9.0	318

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-492AAD, IEC 60793-2-10	TIA-492AAAB, TIA-492AAAC, TIA-492AAD, IEC 60793-2-10	TIA-492AAAB, TIA-492AAAC, TIA-492AAD, IEC 60793-2-10

Opti-Core® Fiber Optic Distribution 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

*Example: FODRZ12Y – Fiber, Distribution, Riser rated, OM4, 12-fiber

Character	1	2	3	4	5	6	7	8
Example*	F	O	D	R	Z	1	2	Y

1 & 2 – Fiber Product

FS = Fiber – OM1, OM2, OS1

FO = Fiber – OM3, OM4

3 – Cable Construction

D = Distribution

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 & 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

Y = Yes

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