

Opti-Core® Gel-Free Outside Plant Cable – Armored and Unarmored

Opti-Core® Gel-Free Outside Plant Cable offers dry water-blocking technology, UV resistance, and high density to provide standards compliance and flexibility for outdoor use. Opti-Core® Gel-Free Outside Plant Cable is available in all-dielectric and armored cable designs to meet your specific installation requirements. Opti-Core® Gel-Free Outside Plant All-Dielectric Cable, for aerial and duct applications, features a non-metallic construction that eliminates the need to ground or bond. Opti-Core® Gel-Free Outside Plant Armored Cable has corrugated steel armor to provide superior crush resistance for direct burial applications. Opti-Core® Gel Free Outside Plant Cable complies with RUS 7 CFR 1755.900 requirements for fiber optic service entrance cables. It also meets or exceeds the performance requirements of Telcordia GR-20, Issue 2 and ICEA 640 to withstand harsh outdoor environmental demands. Opti-Core® Gel-Free Outside Plant Cable is available in singlemode (meets OS1 and proposed OS2 standards) and multimode (OM1, OM2, laser optimized OM3 and OM4) fiber types, and in fiber counts up to 144 fibers as a “stranded loose tube” design. All Opti-Core® Fiber Optic Cable is RoHS compliant.



Application

For use outdoors in aerial or duct applications.
Corrugated steel armored cable provides superior crush resistance for extended durability in direct burial applications.

Construction

Water blocking	Waterblocking
Inner sheath	PE
Outer sheath	PE

Standards

Tested in accordance with TIA 455 series FOTPS for fiber optic cables
ICEA 640
Telcordia GR-20
IEC 60794-3-11
RUS 7 DVR 1755 (PE90 listed)

Mechanical Properties

Tensile strength (Installation)	600 lbf (2700 N)
Tensile strength (long term)	200 blf (890 N)
Compressive strength (crush)	Short term: 125 lbf/in (220 N/cm) Long term: 63 lbf/in (110 N/cm)
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 +176°F (-40°C to +75°C) Installation: -22°F to +140°F (-30°C to +60°C) Operation: -40°F to +158°F (-40°C to +70°C) nice

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Physical Properties–Unarmored

Fiber Count	Cable OD Inches	Long Term Bend Radius Inches	Installation Bend Radius Inches	Cable Weight Lb/kft
2	.40	4.0	8.0	43
4	.40	4.0	8.0	43
6	.40	4.0	8.0	43
8	.40	4.0	8.0	43
12	.40	4.0	8.0	43
24	.40	4.0	8.0	43
36	.40	4.0	8.0	43
48	.40	4.0	8.0	43
60	.40	4.0	8.0	43
72	.43	4.0	10.0	50
96	.55	5.0	11.0	65
144	.63	6.0	13.0	105

Physical Properties–Armored

Fiber Count	Cable OD Inches	Long Term Bend Radius Inches	Installation Bend Radius Inches	Cable Weight Lb/kft
2	.50	5.0	9.0	89
4	.50	5.0	9.0	89
6	.50	5.0	9.0	89
8	.50	5.0	9.0	89
12	.50	5.0	9.0	89
24	.50	5.0	9.0	89
36	.50	5.0	9.0	89
48	.50	5.0	9.0	89
60	.46	5.0	9.0	89
72	.60	5.0	10.0	97
96	.80	6.0	12.0	116
144	1.20	7.0	14.0	176

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

Ordering Information

CHARACTER	1	2	3	4	5	6	7
EXAMPLE*	F	O	T	N	X	1	2

*Example: FOTNX12- Fiber, Unarmored Outside Plant Cable, Non Rated, OM3, 12-Fiber

1 and 2- Fiber Product

FS = Fiber- OM1, OM2, OS1
FO = Fiber- OM3, OM4

3- Cable Construction

T = Outside Plant Cable, Unarmored
W = Outside Plant Cable, Armored

4- Flame Rating

N = Non Rated

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 Product

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

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