

Opti-Core® Dielectric Conduited Fiber Cable

technical information

Opti-Core® Dielectric Conduited Fiber (DCF) 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. Rugged conduit extruded over cable outer jacket eliminates the need for additional channel protection and provides a smaller crush resistant pathway for improved design flexibility and lower installed cost. All-dielectric construction eliminates the need for grounding and bonding, thereby reducing installation time and cost. All Opti-Core® Dielectric Conduited Fiber (DCF) are Riser rated (OFNR) and compliant with Low Smoke Zero Halogen (LSZH) specifications. Opti-Core® Dielectric Conduited Fiber (DCF) fiber types include OM1, OM2, OM3 and OM4 multimode, and OS2 singlemode. Available in 2, 4, 6, 8, and 12 fiber counts.



application

Designed for use in horizontal installations and backbones within buildings to provide high-density connectivity and ease of installation. Rugged, durable, with crush resistance six times greater than unarmored cable, the need to route through conduit is eliminated.

construction

Cable type:	Dielectric conduited fiber cable
Cable jacket ratings:	Riser, Low Smoke Zero Halogen
Fiber types:	Singlemode: OS2 9/125µm Multimode: OM1 62.5/125µm OM2 50/125µm OM3 50/125µm OM4 50/125µm
Fiber count:	2, 4, 6, 8, 12
Conduit rating:	C(UL)/UL listed riser UL 2024
Conduit color:	Singlemode- Yellow OM1, OM2- Orange OM3, OM4- Aqua Also available in Black

optical properties

Fiber attenuation:	Multimode: 3.5dB/km @ 850nm @ 850nm 1.5dB/km @ 1300nm @ 1300nm Singlemode: 0.7dB/km @ 1310nm @ 1310nm 0.7dB/km @ 1550nm @ 1550nm
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physical properties

Conduit outside diameter (OD):	10.0mm +/- 0.5mm
Bend radius, minimum (installation):	20 x Conduit OD
Cable tensile strength (installation):	1320N
Cable compressive load:	600 N/cm
Armor Compression Load:	725 N/cm
Cable flex:	500 cycles
Conduit inner diameter (OD):	10mm
Bend radius, minimum (installed):	10 x Conduit OD
Cable tensile strength (installed):	396N
Cable impact resistance, maximum:	5.88 N-m
12-fiber conduit and cable weight:	68.2448 kg/km

environmental properties

Operating temperature:	-10°C to +60°C (14°F to 140°F)
Installation temperature:	-10°C to +50°C (14°F to 122°F)
Storage and shipping temperature:	-10°C to +50°C (14°F to 122°F)

standards

Dual-Rated LSZH Inner Cable	Conduit
NEC article 770: NEC compliance	NEC article 770: NEC compliance
UL 1666: North American flame test	UL 2024: North American flame test
OFNR-LS (UL) OFN-LS (UL): North American fire safety listing	C(UL)/UL listed riser UL 2024: North American fire safety listing
RoHS 2002/95/EC: Compliant	RoHS 2002/95/EC: Compliant
ICEA-S-83-596: Compliant	
NES-713: Toxicity index of inner cable/conduit	
IEC-60332-3C: Test on electric and optical fibre cables under fire conditions – Part 3	
IEC 60754-2: Acid gas generation of inner jacket	
IEC 61034-2: Measurement of smoke density of cables burning under defined conditions – Part 2	
GR-409: Horizontal backbone cable	

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part number

Character	1	2	3	4	5	6	7	8	9	10
Example	F	S	A	D	5	1	2	-	B	L

1 and 2 – Fiber Product

FS = OM1, OM2, OS2 Fiber

FO = OM3, OM4 Fiber

3 – Cable Construction

A = Dielectric conduited distribution (indoor)

4 – Flame/Smoke Rating

D = Riser, Low Smoke Zero Halogen

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

*8, 9, and 10 – Conduit

-BL = Black Conduit

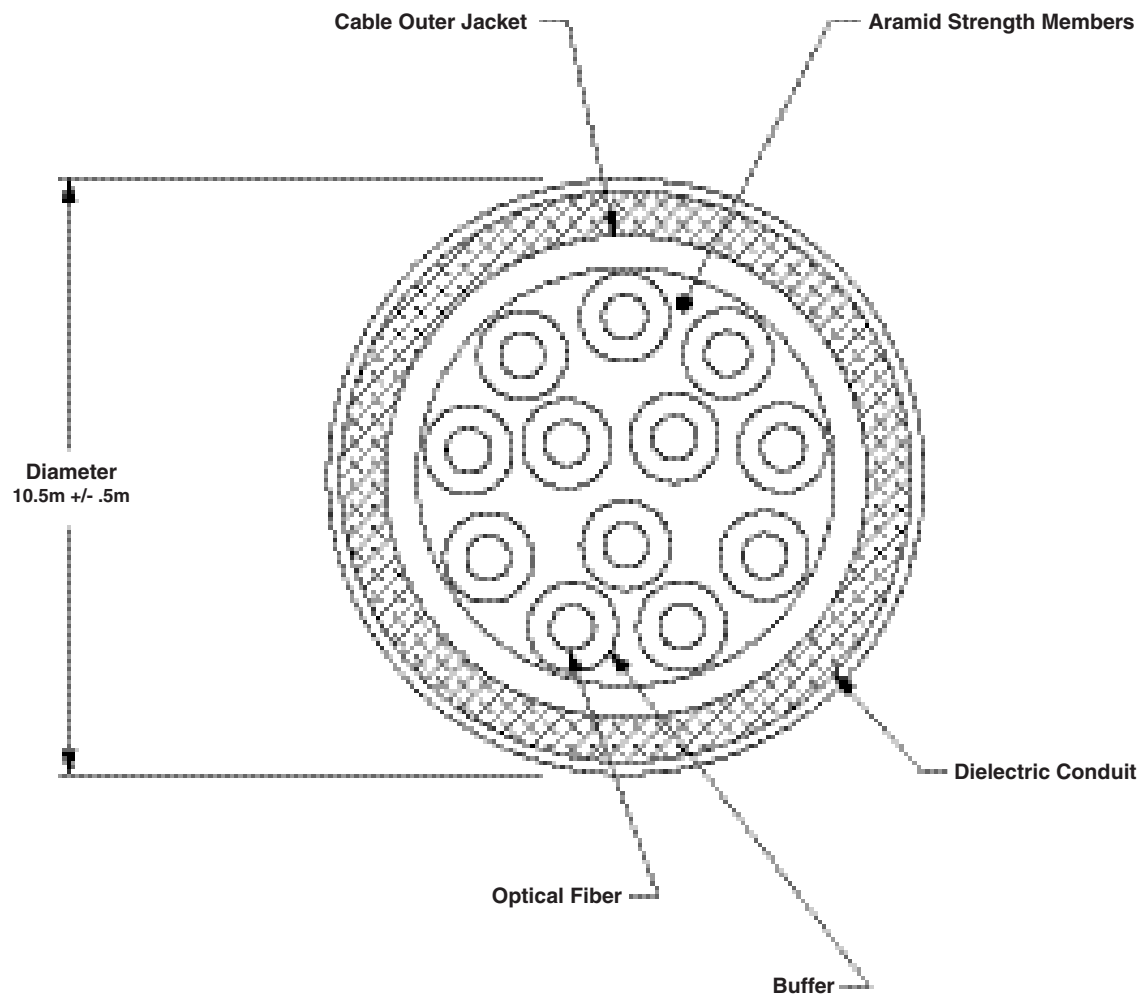
*Opti-Core Dielectric Conduited Fiber Cable conduit colors are:

Singlemode = Yellow

Multimode = Orange and Aqua

If black conduit is desired, please add -BL to end of part number.

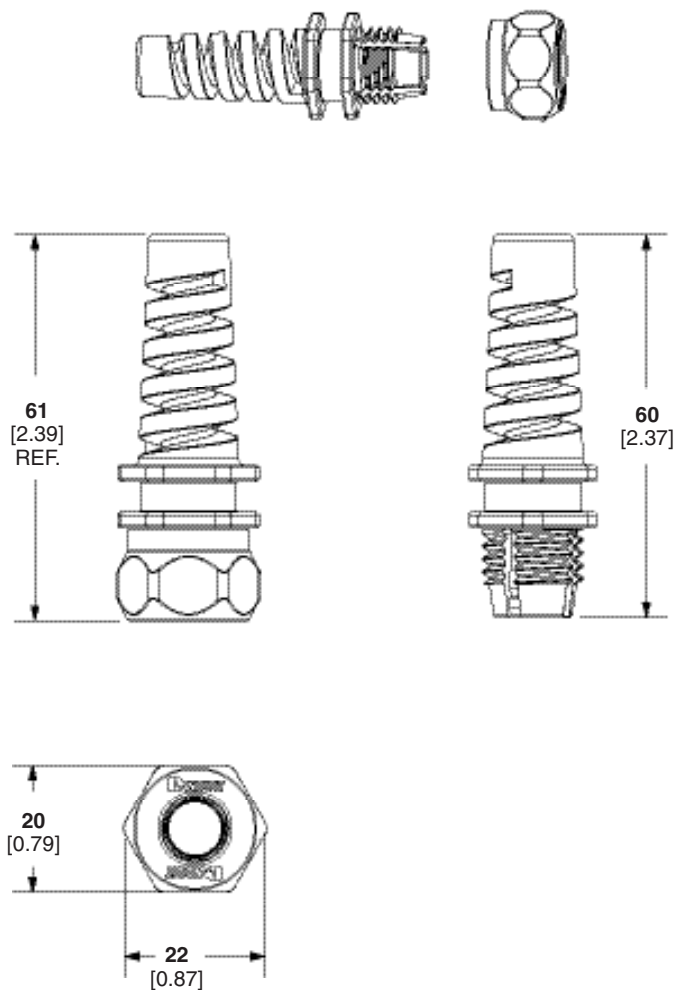
Dielectric Conduited Fiber Cable



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DCF Fiber Strain Relief

The DCF Fiber Strain Relief (FCCSR10BL) is used with the DCF (Dielectric Conduited Fiber Cable) to control the bend radius at the transition of fiber distribution or breakout cables where they exit an armored conduit. The armored conduit fiber cable will be typically installed inside a zone enclosure or at a machine center panel. Installing the DCF Fiber Strain Relief with the DCF fiber cables can prevent any possible reliability issues related to bend radius.



FCCSR10BL



FCCSR10BL

Dimensions are in inches. [Dimensions in brackets are metric].

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