ActiFi™ Composite Cable, Loose Tube, Indoor/Outdoor, Interlocking Armored, FREEDM® Riser

Features and Benefits

2-in-1 composite cable design
One cable meets power and signal needs

12, 14, 16, 18 or 20 AWG copper conductors
Power transmission with flexibility in design

2, 4, 6, 8, 12 or 24 ClearCurve® ZBL or SMF-28® Ultra fibers
Reliable performance in challenging routes

Mutual capacitance between adjacent conductors
<50 pF/ft

Conductor insulation material and thickness
PVC insulation, thickness varies depending on AWG size

Conductor color code
Closely follows NAFTA Telcordia fiber color code

Individual fibers
Easily accessible for termination

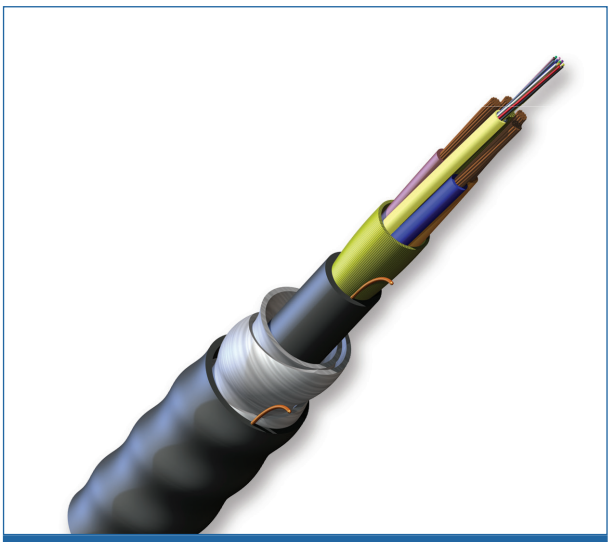
Common installations
Compliant with ICEA S-104-696

Flexible, interlocking armor
Seven times the crush

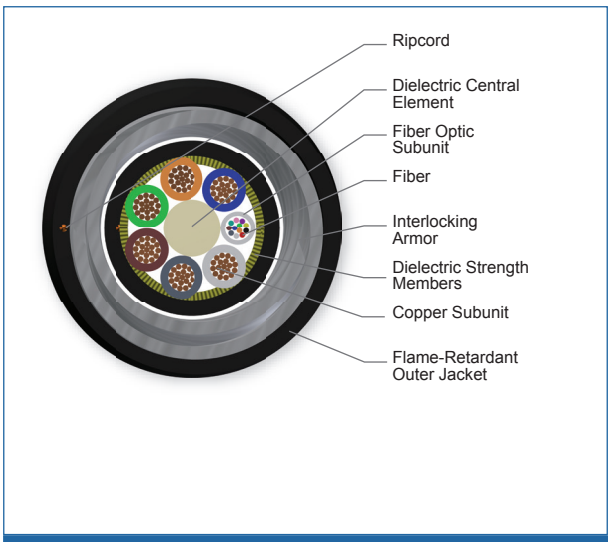
Corning's ActiFi® FREEDM® Composite Class 3 Limited Power Cables provide the ultimate solution for indoor-outdoor remote powering of distributed antenna systems, optical networks, small cells and more. The design uses fiber and linear laid copper conductors rated at 300 VAC. These cables are suitable for use with Digital Electricity™ and +/ -190VDC installations in accordance with NEC Article 830.15. They may also be used with low-voltage installations in accordance with NEC Article 725.

The ActiFi Interlocking Armor Composite Cables also provide a time- and cost-saving solution for installations requiring remotely powered equipment. By integrating linear-laid copper and loose-tube fiber in one cable, ActiFi cables eliminate the need to install separate power and fiber cables. This saves installation time, labor costs and duct or tray space.

The core is protected by a flexible, spirally wrapped, aluminum interlocking armor that offers easy, one-step installation and up to seven times the crush protection of unarmored cables. With a flame-retardant outer jacket, this cable is particularly useful for heavy traffic or more challenging mechanical exposure conditions and applications requiring extra rugged cables.



ActiFi™ Composite Cable, Interlocking Armored, Indoor/Outdoor Riser, 12-Fibers



ActiFi™ Composite Cable, Interlocking Armored, Indoor/Outdoor Riser, 12-Fibers

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Standards

Approvals and Listings	CSA certified listed to UL 444, CSA C22.2, No. 214 NEC Article 725 Class 3 (CL3R)
Common Installations	Compliant with ICEA S-104-696 (compliant at tensile loads listed in the specifications table)
Design and Test Criteria	ICEA S-120-742, UL 13, 300 VAC, 80 C

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	0 °C to 60 °C (32 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Fiber Count	Number of Conductors	Weight	Nominal Outer Diar	Min. Bend Radius Install	Min. Bend Radius Oper.	Max Tensile Strength Long	Max Tensile Strength Short
3.00 mm MIC® 250 with 12 AWG							
4 - 12	4	352 kg/km (236 lb/1000 ft)	16.6 mm (0.65 in)	249 mm (9.80 in)	166 mm (6.54 in)	249 N (9.80 lbf	166 N (6.54 lbf
4 - 6	6	455 kg/km (305 lb/1000 ft)	21.3 mm (0.84 in)	319.5 mm (12.58 in)	213 mm (8.39 in)	319.5 N (12.58 lbf)	213 N (8.39 lbf
6 - 12	12	839 kg/km (559.5 lb/1000 ft)	38 mm (1.50 in)	570 mm (22.44 in)	380 mm (14.96 in)	570 N (22.44 lbf)	380 N (14.96 lbf)
12	6	504 kg/km (338 lb/1000 ft)	22.9 mm (0.90 in)	343.5 mm (13.52 in)	229 mm (9.02 in)	343.5 N (13.52 lbf)	229 N (9.02 lbf
24	12	871 kg/km (583.6 lb/1000 ft)	38 mm (1.50 in)	570 mm (22.44 in)	380 mm (14.96 in)	570 N (22.44 lbf	380 N (14.96 lbf)
3.00 mm MIC® 250 with 14 AWG							
6 - 12	4	284 kg/km (190 lb/1000 ft)	17.3 mm (0.68 in)	259.5 mm (10.22 in)	173 mm (6.81 in)	259.5 N (10.22 lbf)	173 N (6.81 lbf)
6	2	207 kg/km (139 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)	219 N (8.62 lbf)	146 N (5.75 lbf)
6	6	249 kg/km (167 lb/1000 ft)	18.1 mm (0.71 in)	271.5 mm (10.69 in)	181 mm (7.13 in)	271.5 N (10.69 lbf)	181 N (7.13 lbf)
6	12	399 kg/km (267 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)	348 N (13.70 lbf)	232 N (9.13 lbf)

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Fiber Count	Number of Conductors	Weight	Nominal Outer Dia.	Min. Bend Radius Install	Min. Bend Radius Oper.	Max Tensile Strength Long	Max Tensile Strength Short
12	2	208 kg/km (139 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)	219 N (8.62 lbf)	146 N (5.75 lbf)
12	6	249 kg/km (167 lb/1000 ft)	17.20 mm (0.67 in)	271.5 mm (10.69 in)	181 mm (7.13 in)	271.5 N (10.69 lbf)	181 N (7.13 lbf)
12	12	400 kg/km (268 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)	348 N (13.70 lbf)	232 N (9.13 lbf)
24	2	236 kg/km (158 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)	240 N (9.45 lbf)	160 N (6.30 lbf)
24	4	301 kg/km (202 lb/1000 ft)	17.3 mm (0.68 in)	259.5 mm (10.22 in)	173 mm (6.81 in)	259.5 N (10.22 lbf)	173 N (6.81 lbf)
24	12	405 kg/km (271 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)	348 N (13.70 lbf)	232 N (9.13 lbf)
MIC® 250 2.0 with 16 AWG							
6 - 24	2	107 kg/km (72 lb/1000 ft)	13.3 mm (0.52 in)	199.5 mm (7.85 in)	133 mm (5.24 in)	199.5 N (7.85 lbf)	133 N (7.85 lbf)
6 - 12	4	136 kg/km (91 lb/1000 ft)	15 mm (0.59 in)	225 mm (8.86 in)	150 mm (5.91 in)	225 N (8.86 lbf)	150 N (8.86 lbf)
6 - 12	6	170 kg/km (114 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)	219 N (8.62 lbf)	146 N (8.62 lbf)
6 - 24	12	249 kg/km (167 lb/1000 ft)	18.1 mm (0.71 in)	271.5 mm (10.69 in)	181 mm (7.13 in)	271.5 N (10.69 lbf)	181 N (10.69 lbf)
24	4	183 kg/km (123 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)	240 N (9.45 lbf)	160 N (9.45 lbf)
24	6	183 kg/km (123 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)	240 N (9.45 lbf)	160 N (9.45 lbf)
MIC® 250 2.0 with 18 AWG							
2	2	138.55 kg/km (93.10 lb/1000 ft)	12.4 mm (0.48 in)	186 mm (4.19 in)	124 mm (4.88 in)	107 N (24 lbf)	356 N (80 lbf)
4	2	138.55 kg/km (93.10 lb/1000 ft)	12.4 mm (0.48 in)	186 mm (4.19 in)	124 mm (4.88 in)	107 N (24 lbf)	356 N (80 lbf
6	2	138.55 kg/km (93.10 lb/1000 ft)	12.4 mm (0.48 in)	186 mm (4.19 in)	124 mm (4.88 in)	107 N (24 lbf)	356 N (80 lbf)
8	2	138.55 kg/km (93.10 lb/1000 ft)	12.4 mm (0.48 in)	186 mm (4.19 in)	124 mm (4.88 in)	107 N (24 lbf)	356 N (80 lbf)
12	2	138.55 kg/km (93.10 lb/1000 ft)	12.4 mm (0.48 in)	186 mm (4.19 in)	124 mm (4.88 in)	107 N (24 lbf)	356 N (80 lbf)
2	4	179.61 kg/km (120.69 lb/1000 ft)	14.3 mm (0.56 in)	214.5 mm 4.84 in)	143 mm (5.62 in)	133 N 29l bf)	445 N (100 lbf)
4	4	179.61 kg/km (120.69 lb/1000 ft)	14.3 mm (0.56 in)	214.5mm (4.84 in)	143 mm (5.62 in)	133 N (29 lbf)	445 N (100 lbf)
6	4	179.61 kg/km (120.69 lb/1000 ft)	14.3 mm (0.56 in)	214.5 mm (4.84 in)	143 mm (5.62 in)	133 N (29 lbf)	445 N (100 lbf)

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Fiber Count	Number of Conductors	Weight	Nominal Outer Dia.	Min. Bend Radius Installl	Min. Bend Radius Oper.	Max Tensile Strength Long	Max Tensile Strength Short
8	4	179.61 kg/km (120.69 lb/1000 ft)	14.3 mm (0.56 in)	214.5 mm (4.84 in)	143 mm (5.62 in)	133 N (29 lbf)	445 N (100 lbf)
12	4	179.61 kg/km (120.69 lb/1000 ft)	14.3 mm (0.56 in)	214.5 mm 4.84 in)	143 mm (5.62 in	133 N (29 lbf)	445 N (100 lbf)
2	6	222.87 kg/km (149.76 lb/1000 ft)	15.7 mm (0.62 in)	235.5 mm (5.90 in)	157 mm (6.18 in)	200 N (44 lbf)	667 N (149 lbf)
4	6	222.87 kg/km (149.76 lb/1000 ft)	15.7 mm (0.62 in)	235.5 mm (5.90 in)	157 mm (6.18 in)	200 N (44 lbf)	667 N (149 lbf)
6	6	222.87 kg/km (149.76 lb/1000 ft)	15.7 mm (0.62 in)	235.5 mm (5.90 in)	157 mm (6.18 in)	200 N (44 lbf)	667 N (149 lbf)
8	6	222.87 kg/km (149.76 lb/1000 ft)	15.7 mm (0.62 in)	235.5 mm (5.90 in)	157 mm (6.18 in)	200 N (44 lbf)	667 N (149 lbf)
12	6	222.87 kg/km (149.76 lb/1000 ft)	15.7 mm (0.62 in)	235.5 mm (5.90 in)	157 mm (6.18 in)	200 N (44 lbf)	667 N (149 lbf)
6	12	300.65 kg/km (202.02 lb/1000 ft)	17.2 mm (0.67 in)	258 mm (5.90 in)	172 mm (6.77 in)	400 N (89 lbf)	1334 N (299 lbf)
12	12	300.65 kg/km (202.02 lb/1000 ft)	17.2 mm (0.67 in)	258 mm (5.90 in)	172 mm (6.77 in)	400 N (89 lbf)	1334 N (299 lbf)
24	12	300.65 kg/km (202.02 lb/1000 ft)	17.2 mm (0.67 in)	258 mm (5.90 in)	172 mm (6.77 in)	400 N (89 lbf)	1334 N (299 lbf)
MIC® 250 2.0 with 20AWG							
2 - 12	2	32.93 kg/km (22.13 lb/1000 ft)	5.3 mm (0.21 in)	80.01 mm (3.15 in)	53.34 mm (2.10 in)		
2 - 12	4	50.84 kg/km (34.16 lb/1000 ft)	6.0 mm (0.24 in)	91.44 mm (3.60 in)	60.96 mm (2.40 in)		
2 - 12	6	68.23 kg/km (45.85 lb/1000 ft)	6.9 mm (0.27 in)	102.87 mm (4.05 in)	68.58 mm (2.70 in)		
6 - 24	12	122.10 kg/km (82.05 lb/1000 ft)	9.0 mm (0.35 in)	133.35 mm (5.25 in)	88.90 mm (3.50 in)		

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Transmission Performance

Single-mode		
Fiber Name	ClearCurve® ZBL	SMF-28® Ultra fiber
Fiber Category	G.657.B3/G.652.D	ITU-T G.657.A1
Fiber Code	U	Z
Performance Option Code	01	01
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3	0.4/0.4/0.3
Typical Attenuation* (dB/km)	0.35/0.35/0.20	0.33/0.33/0.19

** For more information on typical attenuation please see the Corning whitepaper at http://csmedia.corning.com/opcomm//Resource_Documents/whitepapers_rl/LAN-1863-AEN.pdf*

** * SMF-28® Ultra fiber delivers up to 10x better macrobend loss performance compared to the G.652.D standard and up to 33 percent better macrobend loss performance than the G.657.A1 standard for 10mm radii bends.*

Ordering Information | *Note: Contact Customer Care at 1-800-743-2675 for other options.*

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1 2 3 4 5 6 7 8 9 10

1 Select fiber count.
002 = 2 fiber 008 = 8 fiber
004 = 4 fiber 012 = 12 fiber
006 = 6 fiber 024 = 24 fiber

2 Defines fiber type.
U = ClearCurve® ZBL (OS2)
Z = SMF28® Ultra fiber (OS2)

3 Select cable construction.
T = MIC® 250 2.0
D = 3.0 mm MIC® 250

4 Defines outer jacket.
F = Indoor/Outdoor riser

5 Select number of copper conductors.
2 = 2 conductors
4 = 4 conductors
6 = 6 conductors
M = 12 conductors

6 Defines unit of measure.
1 = Feet
2 = Meter

7 Select cable construction.
Z = MIC 250 2.0 with 20 AWG
Y = MIC 250 2.0 with 16 AWG
V = MIC 250 2.0 with 18 AWG
X = 3.00 mm MIC 250 with 14 AWG
W = 3.00 mm MIC 250 with 12 AWG

8 Defines performance option code.
01 = Single-mode, OS2
(Max. attenuation 0.4/0.4/0.3 dB/km)

9 Defines cable construction.
M = Hybrid (composite) cable

10 Defines print code.
A1 = Interlocking armored

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Notes

RoHS COMPLIANT

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