

ActiFi™ Composite Cable, Loose Tube, Indoor, Plenum

CORNING

Features and Benefits

Mutual capacitance between adjacent conductors
<50 pF/ft

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

Individual fibers
Easily accessible for splicing

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

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

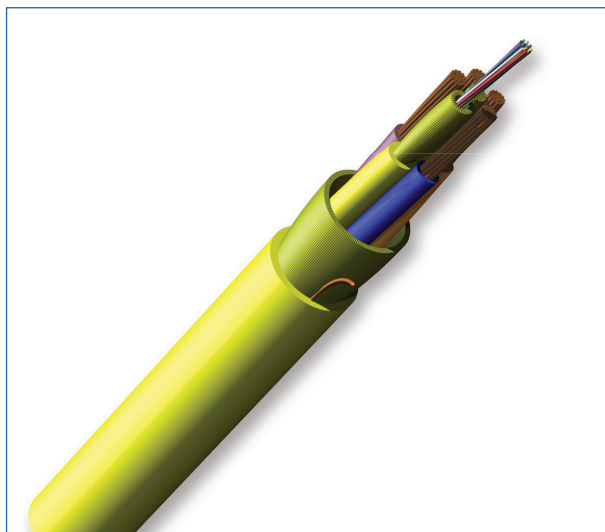
Common Installations
Compliant with ICEA S-83-596 (compliant at tensile loads listed in the specifications table)

Conductor color code
Closely follows NAFTA Telcordia fiber color code

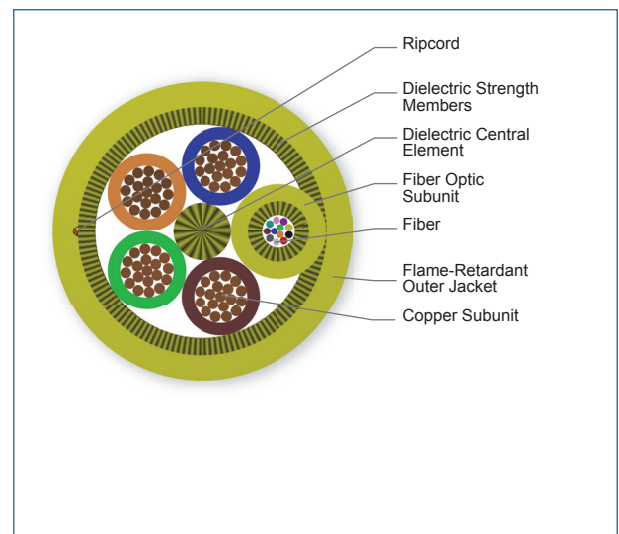
12, 14, 16, 18 or 20 AWG copper conductors
Power transmission with flexibility in design

Corning's ActiFi® Composite Class 3 Limited Power Cables provide the ultimate solution for indoor 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.

Corning's ActiFi® 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. This compact and versatile design is available with an interlocking armor option for additional protection where conduit may not be feasible.



ActiFi™ Composite Cable, Indoor, Plenum, 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 (CL3P)

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	0 °C to 70 °C (32 °F to 158 °F)

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
3.0 mm MIC 250 with 12AWG							
2 - 12	2	150.23 kg/km (100.95 lb/1000 ft)	10.3 mm (0.41 in)	156.21 mm (6.15 in)	104.14 mm (4.10 in)	156.21 N (6.15 lbf)	104.14 N (4.10 lbf)
2 - 12	4	225.95 kg/km (151.83 lb/1000 ft)	11.0 mm (0.43 in)	163.83 mm (6.45 in)	109.22 mm (4.30 in)	163.83 N (6.45 lbf)	109.22 N (4.30 lbf)
2 - 12	6	305.61 kg/km (205.36 lb/1000 ft)	12.0 mm (0.47 in)	179.07 mm (7.05 in)	119.38 mm (4.70 in)	179.07 N (7.05 lbf)	119.38 N (4.70 lbf)
6 - 24	12	558.27 kg/km (375.14 lb/1000 ft)	16.0 mm (0.63 in)	240.03 mm (9.45 in)	160.02 mm (6.30 in)	240.03 N (9.45 lbf)	160.02 N (6.30 lbf)
24	2	167.51 kg/km (112.56 lb/1000 ft)	11.5 mm (0.45 in)	171.45 mm (6.75 in)	114.30 mm (4.50 in)	171.45 N (6.75 lbf)	114.30 N (4.50 lbf)
24	4	241.89 kg/km (162.54 lb/1000 ft)	12.0 mm (0.47 in)	179.07 mm (7.05 in)	119.38 mm (4.70 in)	179.07 N (7.05 lbf)	119.38 N (4.70 lbf)
24	6	321.65 kg/km (216.14 lb/1000 ft)	13.0 mm (0.51 in)	194.31 mm (7.65 in)	129.54 mm (5.10 in)	194.31 N (7.65 lbf)	129.54 N (5.10 lbf)
3.0mm MIC 250 with 14AWG							
2 - 12	4	139.10 kg/km (93.47 lb/1000 ft)	9.5 mm (0.38 in)	144.78 mm (5.70 in)	96.52 mm (3.80 in)	144.78 N (5.70 lbf)	96.52 N (3.80 lbf)
2 - 12	6	211.84 kg/km (142.35 lb/1000 ft)	11.2 mm (0.44 in)	167.64 mm (6.60 in)	111.76 mm (4.40 in)	167.64 N (6.60 lbf)	111.76 N (4.40 lbf)
4 - 12	2	87.01 kg/km (58.47 lb/1000 ft)	8.3 mm (0.33 in)	125.73 mm (4.95 in)	83.82 mm (3.30 in)	125.73 N (4.95 lbf)	83.82 N (3.30 lbf)
6 - 24	12	378.05 kg/km (254.04 lb/1000 ft)	14.0 mm (0.55 in)	209.55 mm (8.25 in)	139.70 mm (5.50 in)	209.55 N (8.25 lbf)	139.70 N (5.50 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
24	2	100.27 kg/km (67.38 lb/1000 ft)	9.1 mm (0.36 in)	137.16 mm (5.40 in)	91.44 mm (3.60 in)	137.16 N (5.40 lbf)	91.44 N (3.60 lbf)
24	4	151.60 kg/km (101.87 lb/1000 ft)	10.5 mm (0.41 in)	156.21 mm (6.15 in)	104.14 mm (4.10 in)	156.21 N (6.15 lbf)	104.14 N (4.10 lbf)
24	6	229.53 kg/km (154.24 lb/1000 ft)	12.5 mm (0.49 in)	186.69 mm (7.35 in)	124.46 mm (4.90 in)	186.69 N (7.35 lbf)	124.46 N (4.90 lbf)
MIC 250 2.0 with 16AWG							
2 - 12	2	51.70 kg/km (34.74 lb/1000 ft)	6.6 mm (0.26 in)	99.06 mm (3.90 in)	66.04 mm (2.60 in)	99.06 N (3.90 lbf)	66.04 N (2.60 lbf)
2 - 12	6	116.64 kg/km (78.38 lb/1000 ft)	7.6 mm (0.30 in)	114.3 mm (4.50 in)	76.2 mm (3.00 in)	114.3 N (4.50 lbf)	76.2 N (3.00 lbf)
4 - 12	4	87.94 kg/km (59.09 lb/1000 ft)	7.3 mm (0.29 in)	110.49 mm (4.35 in)	73.66 mm (2.90 in)	110.49 N (4.35 lbf)	73.66 N (2.90 lbf)
6 - 24	12	234.43 kg/km (157.53 lb/1000 ft)	11.2 mm (0.44 in)	167.64 mm (6.60 in)	111.76 mm (4.40 in)	167.64 N (6.60 lbf)	111.76 N (4.40 lbf)
24	4	90.12 kg/km (60.56 lb/1000 ft)	7.8 mm (0.31 in)	118.11 mm (4.65 in)	78.74 mm (3.10 in)	118.11 N (4.65 lbf)	78.74 N (3.10 lbf)
24	6	134.98 kg/km (90.70 lb/1000 ft)	9.0 mm (0.35 in)	133.35 mm (5.25 in)	88.9 mm (3.50 in)	133.35 N (5.25 lbf)	88.9 N (3.50 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
MIC 250 2.0 with 18AWG							
2	2	40.99 kg/km (27.5 lb/1000 ft)	6.2 mm (0.24 in)	93 mm (3.66 in)	62 mm (2.44 in)	107 N (24 lbf)	356 N (80 lbf)
4	2	40.99 kg/km (27.5 lb/1000 ft)	6.2 mm (0.24 in)	93 mm (3.66 in)	62 mm (2.44 in)	107 N (24 lbf)	356 N (80 lbf)
6	2	40.99 kg/km (27.5 lb/1000 ft)	6.2 mm (0.24 in)	93 mm (3.66 in)	62 mm (2.44 in)	107 N (24 lbf)	356 N (80 lbf)
8	2	40.99 kg/km (27.5 lb/1000 ft)	6.2 mm (0.24 in)	93 mm (3.66 in)	62 mm (2.44 in)	107 N (24 lbf)	356 N (80 lbf)
12	2	40.99 kg/km (27.5 lb/1000 ft)	6.2 mm (0.24 in)	93 mm (3.66 in)	62 mm (2.44 in)	107 N (24 lbf)	356 N (80 lbf)
4	4	67.07 kg/km (45 lb/1000 ft)	6.9 mm (0.27 in)	103.5 mm (4.07 in)	69 mm (2.71 in)	133 N (30 lbf)	445 N (100 lbf)
6	4	67.07 kg/km (45 lb/1000 ft)	6.9 mm (0.27 in)	103.5 mm (4.07 in)	69 mm (2.71 in)	133 N (30 lbf)	445 N (100 lbf)
8	4	67.07 kg/km (45 lb/1000 ft)	6.9 mm (0.27 in)	103.5 mm (4.07 in)	69 mm (2.71 in)	133 N (30 lbf)	445 N (100 lbf)
12	4	67.07 kg/km (45 lb/1000 ft)	6.9 mm (0.27 in)	103.5 mm (4.07 in)	69 mm (2.71 in)	133 N (30 lbf)	445 N (100 lbf)
24	4	70.35 kg/km (47.2 lb/1000 ft)	7.4 mm (0.29 in)	111 mm (4.37 in)	74 mm (2.91 in)	133 N (30 lbf)	445 N (100 lbf)
2	6	86.33 kg/km (58 lb/1000 ft)	7.3 mm (0.28 in)	109.5 mm (4.31 in)	73 mm (2.87 in)	200 N (45 lbf)	667 N (149 lbf)
4	6	86.33 kg/km (58 lb/1000 ft)	7.3 mm (0.28 in)	109.5mm (4.31 in)	73 mm (2.87 in)	200 N (45 lbf)	667 N (149 lbf)
6	6	86.33 kg/km (58 lb/1000 ft)	7.3 mm (0.28 in)	109.5 mm (4.31in)	73 mm (2.87 in)	200 N (45 lbf)	667 N (149 lbf)
8	6	86.33 kg/km (58 lb/1000 ft)	7.3 mm (0.28 in)	109.5mm (4.31 in)	73 mm (2.87 in)	200 N (45 lbf)	667 N (149 lbf)
12	6	86.33 kg/km (58 lb/1000 ft)	7.3 mm (0.28 in)	109.5mm (4.31in)	73 mm (2.87 in)	200 N (45 lbf)	667 N (149 lbf)
24	6	104.21 kg/km (70 lb/1000 ft)	8.7 mm (0.34 in)	130.5 mm (5.13 in)	87 mm (3.42 in)	200 N (45 lbf)	667 N (149 lbf)
6	12	169.54 kg/km (113.9 lb/1000 ft)	10.0 mm (0.39 in)	150 mm (5.90 in)	100 mm (3.93 in)	400 N (90 lbf)	1334 N (300 lbf)
12	12	169.54 kg/km (113.9 lb/1000 ft)	10.0 mm (0.39 in)	150 mm (5.90 in)	100 mm (3.93 in)	400 N (90 lbf)	1334 N (300 lbf)
24	12	169.54 kg/km (113.90lb/1000 ft)	10.0 mm (0.39 in)	150 mm (5.90 in)	100 mm (3.93 in)	400 N (90 lbf)	1334 N (300 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
MIC 250 2.0 with 20AWG							
2-12	4	54.60 kg/km (36.69lb/1000 ft)	6.4 mm (0.24 in)	95.25 mm (3.75 in)	63.5 mm (2.50 in)	107 N (24 lbf)	356 N (80 lbf)
2-12	6	67.93 kg/km (45.65 lb/1000 ft)	7.0 mm (0.28 in)	106.68 mm (4.20 in)	71.12 mm (2.80 in)	107 N (24 lbf)	356 N (80 lbf)
6-24	12	134.37 kg/km (90.29 lb/1000 ft)	9.3 mm (0.37 in)	140.97 mm (5.55 in)	93.98 mm (3.70 in)	107 N (24 lbf)	356 N (80 lbf)

Chemical Characteristics

RoHS

Free of hazardous substances according to RoHS 2011/65/EU

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

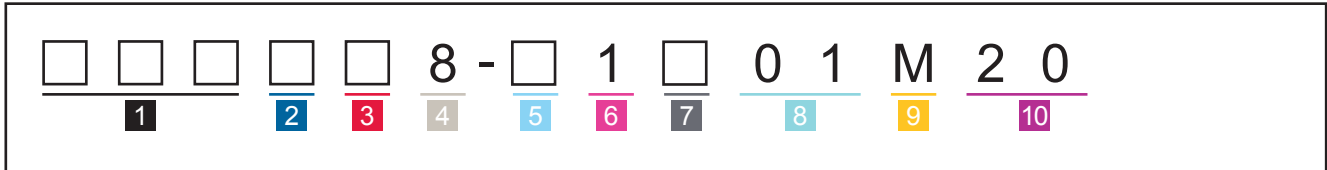
** SMF-28® Ultra fiber delivers up to 10x better macrobend loss performance compared to the G.652.D standard and up to 33 percent better macrobend loss performance than the G.657.A1 standard for 10mm radii bends.

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



1 Select fiber count.

002 = 2 fiber 008 = 8 fiber
 004 = 4 fiber 012 = 12 fiber
 006 = 6 fiber 024 = 24 fiber

2 Select 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.

8 = Plenum indoor

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
 V = MIC 250 2.0 with 18 AWG
 Y = MIC 250 2.0 with 16 AWG
 X = 3.0 mm MIC 250 with 14 AWG
 W = 3.0 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.

20 = Non-armored



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