

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 24 F, Single-mode (OS2)

CORNING

Part Number:
024EAE-T4C01A20

Corning SOLO® ADSS optical cables are all-dielectric, self-supporting (ADSS) cables designed for easy and economical one-step installation in campus backbones with self-supporting installations where metallic messengers cannot be used. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunications-grade optical fiber. The cable design can span distances in excess of 500 m (1650 ft) in NESC heavy conditions. This cable incorporates innovative waterblocking materials, eliminating the need for traditional flooding compound and providing efficient and craft-friendly cable preparation. While the concentric, self-supporting cable design allows easy, one-step installation using standard hardware and installation methods, the SZ-stranded, loose tube design isolates optical fibers from installation and environmental rigors and facilitates mid-span access. The ADSS optical cables are also available with a proprietary track-resistant polyethylene (TRPE) jacket suitable for installation in electric field potentials up to 25 kV.

Features and Benefits

Loose tube design

Stable performance and compatibility with all common fiber types

Self-supporting

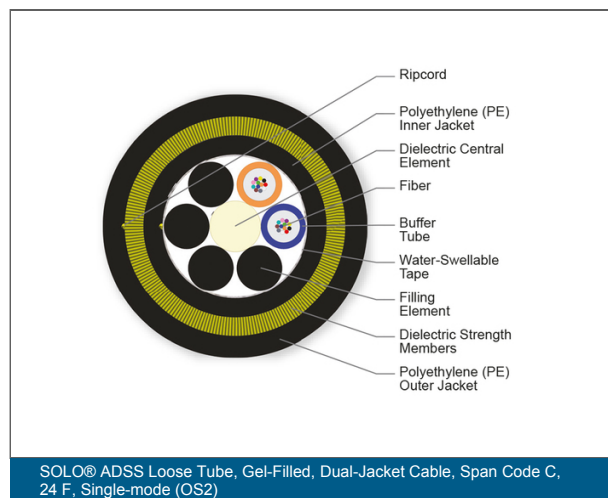
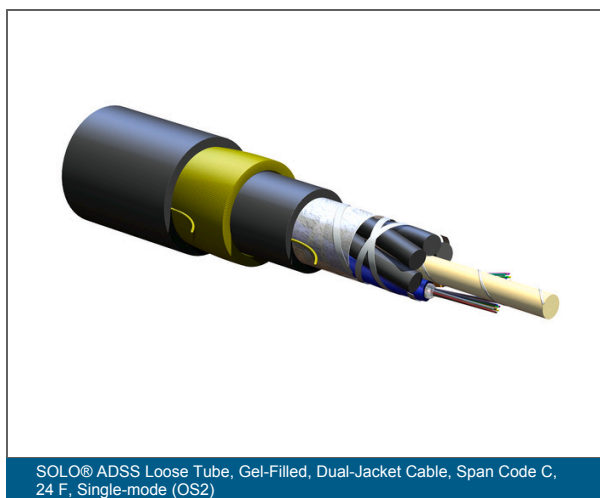
Easy, one-step installation

Track-resistant jacket available

Suitable for installations up to 25 kV electric field potential

Innovative waterblocking cable core

Provides efficient and craft-friendly cable preparation



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Specifications

General Specifications

Cable Type	Loose Tube
Environment	Outdoor
Product Type	Self-Supporting, ADSS
Fiber Category	Single-mode (OS2)
Cable geometry	Other

Standards

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Approvals and Listings	USDA Rural Development Programs
Common Installations	Outdoor self-supporting aerial
Design and Test Criteria	ANSI/ICEA S-87-640

Environmental Conditions

Temperature Range, Installation	-30 °C to 70 °C (-22 °F to 158 °F)
Temperature Range, Operation	-40 °C to 70 °C (-40 °F to 158 °F)
Temperature Range, Storage	-40 °C to 75 °C (-40 °F to 167 °F)

Cable Design

Central Element	Dielectric
Fiber Count	24
Number of Ripcords	3
Outer Jacket Color	Black
Outer Jacket Material	Polyethylene (PE)
Tensile Strength Elements and/or Armoring - Layer 1	Dielectric strength members
Buffer Tube Color	Blue, Orange
Buffer Tube Diameter	2.85 mm (0.11 in)

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Cable Design

Inner Jacket Material	Polyethylene (PE)
Number of Active Tubes	2
Number of Filling Elements	4
Number of Tube Positions	6
Tape	Water-swellable
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Color Code Standards	Telcordia

Mechanical Specifications

Nominal Outer Diameter	16.8 mm (0.66 in)
Span Code	C
Min. Bend Diameter Installation	504 mm (19.84 in)
Min. Bend Diameter Operation	336 mm (13.23 in)

Optical Characteristics

Fiber Code	E
Performance Option Code	01
Fiber Category	OS2
Fiber Type	Single-mode (OS2) / 250 µm
Fiber Name	Single-mode (OS2)
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km
Wavelengths	1310 nm / 1383 nm / 1550 nm
Fiber Compliance	ITU-T G.652.D

Dimensions

Cable Weight	207 kg/km (139.1 lb/1000 ft)
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Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
Fiber Count 24								
15 m (49.2 ft)	1 %	387 N (87 lbf)	0.6 %	718 N (161.4 lbf)	1.7 %	955 N (214.7 lbf)	2 %	1,500 N (337.2 lbf)
30 m (98.4 ft)	1 %	774 N (174 lbf)	0.6 %	1,389 N (312.3 lbf)	1.8 %	1,815 N (408 lbf)	2.2 %	2,768 N (622.3 lbf)
46 m (150.9 ft)	1 %	1,160 N (260.8 lbf)	0.6 %	2,026 N (455.5 lbf)	1.9 %	2,615 N (587.9 lbf)	2.4 %	3,912 N (879.5 lbf)
61 m (200.1 ft)	1 %	1,547 N (347.8 lbf)	0.6 %	2,639 N (593.3 lbf)	1.9 %	3,372 N (758.1 lbf)	2.5 %	4,974 N (1,118.2 lbf)
76 m (249.3 ft)	1 %	1,934 N (434.8 lbf)	0.7 %	3,231 N (726.4 lbf)	2 %	4,097 N (921 lbf)	2.6 %	5,977 N (1,343.7 lbf)
91 m (298.5 ft)	1 %	2,321 N (521.8 lbf)	0.7 %	3,808 N (856.1 lbf)	2 %	4,795 N (1,078 lbf)	2.7 %	6,933 N (1,558.6 lbf)
107 m (351 ft)	1 %	2,707 N (608.6 lbf)	0.7 %	4,370 N (982.4 lbf)	2.1 %	5,471 N (1,229.9 lbf)	2.7 %	7,853 N (1,765.4 lbf)
122 m (400.2 ft)	1 %	3,094 N (695.6 lbf)	0.7 %	4,922 N (1,106.5 lbf)	2.1 %	6,130 N (1,378.1 lbf)	2.8 %	8,742 N (1,965.3 lbf)
137 m (449.4 ft)	1 %	3,481 N (782.6 lbf)	0.7 %	5,463 N (1,228.1 lbf)	2.2 %	6,774 N (1,522.9 lbf)	2.9 %	9,605 N (2,159.3 lbf)
152 m (498.6 ft)	1 %	3,868 N (869.6 lbf)	0.7 %	5,996 N (1,348 lbf)	2.2 %	7,404 N (1,664.5 lbf)	3 %	10,445 N (2,348.1 lbf)
168 m (551 ft)	1 %	4,254 N (956.3 lbf)	0.7 %	6,521 N (1,466 lbf)	2.2 %	8,022 N (1,803.4 lbf)	3 %	11,266 N (2,532.7 lbf)
183 m (600.2 ft)	1 %	4,641 N (1,043.3 lbf)	0.7 %	7,039 N (1,582.4 lbf)	2.3 %	8,630 N (1,940.1 lbf)	3.1 %	12,070 N (2,713.4 lbf)
198 m (649.4 ft)	1 %	5,028 N (1,130.3 lbf)	0.7 %	7,551 N (1,697.5 lbf)	2.3 %	9,228 N (2,074.5 lbf)	3.1 %	12,858 N (2,890.6 lbf)

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	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
213 m (698.6 ft)	1 %	5,415 N (1,217.3 lbf)	0.7 %	8,057 N (1,811.3 lbf)	2.3 %	9,818 N (2,207.2 lbf)	3.2 %	13,633 N (3,064.8 lbf)
229 m (751.1 ft)	1 %	5,802 N (1,304.3 lbf)	0.7 %	8,558 N (1,923.9 lbf)	2.3 %	10,400 N (2,338 lbf)	3.2 %	14,394 N (3,235.9 lbf)
244 m (800.3 ft)	1 %	6,188 N (1,391.1 lbf)	0.8 %	9,055 N (2,035.7 lbf)	2.4 %	10,976 N (2,467.5 lbf)	3.3 %	15,144 N (3,404.5 lbf)
259 m (849.5 ft)	1 %	6,575 N (1,478.1 lbf)	0.8 %	9,547 N (2,146.2 lbf)	2.4 %	11,544 N (2,595.2 lbf)	3.3 %	15,884 N (3,570.9 lbf)
274 m (898.7 ft)	1 %	6,962 N (1,565.1 lbf)	0.8 %	10,036 N (2,256.2 lbf)	2.4 %	12,107 N (2,721.8 lbf)	3.4 %	16,614 N (3,735 lbf)
290 m (951.2 ft)	1 %	7,349 N (1,652.1 lbf)	0.8 %	10,521 N (2,365.2 lbf)	2.4 %	12,664 N (2,847 lbf)	3.4 %	17,334 N (3,896.8 lbf)
305 m (1,000.4 ft)	1 %	7,735 N (1,738.9 lbf)	0.8 %	11,002 N (2,473.3 lbf)	2.5 %	13,216 N (2,971.1 lbf)	3.4 %	18,046 N (4,056.9 lbf)
320 m (1,049.6 ft)	1 %	8,122 N (1,825.9 lbf)	0.8 %	11,480 N (2,580.8 lbf)	2.5 %	13,763 N (3,094.1 lbf)	3.5 %	18,751 N (4,215.4 lbf)
335 m (1,098.8 ft)	1 %	8,509 N (1,912.9 lbf)	0.8 %	11,955 N (2,687.6 lbf)	2.5 %	14,306 N (3,216.1 lbf)	3.5 %	19,448 N (4,372.1 lbf)
351 m (1,151.3 ft)	1 %	8,896 N (1,999.9 lbf)	0.8 %	12,428 N (2,793.9 lbf)	2.5 %	14,845 N (3,337.3 lbf)	3.5 %	20,138 N (4,527.2 lbf)
366 m (1,200.5 ft)	1 %	9,283 N (2,086.9 lbf)	0.8 %	12,898 N (2,899.6 lbf)	2.5 %	15,379 N (3,457.3 lbf)	3.6 %	20,821 N (4,680.8 lbf)
381 m (1,249.7 ft)	1 %	9,669 N (2,173.7 lbf)	0.8 %	13,365 N (3,004.6 lbf)	2.6 %	15,910 N (3,576.7 lbf)	3.6 %	21,499 N (4,833.2 lbf)
396 m (1,298.9 ft)	1 %	10,056 N (2,260.7 lbf)	0.8 %	13,830 N (3,109.1 lbf)	2.6 %	16,437 N (3,695.2 lbf)	3.6 %	22,170 N (4,984 lbf)

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Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
411 m (1,348.1 ft)	1 %	10,443 N (2,347.7 lbf)	0.8 %	14,293 N (3,213.2 lbf)	2.6 %	16,961 N (3,813 lbf)	3.7 %	22,836 N (5,133.7 lbf)
427 m (1,400.6 ft)	1 %	10,830 N (2,434.7 lbf)	0.8 %	14,754 N (3,316.8 lbf)	2.6 %	17,482 N (3,930.1 lbf)	3.7 %	23,497 N (5,282.3 lbf)
442 m (1,449.8 ft)	1 %	11,216 N (2,521.5 lbf)	0.8 %	15,213 N (3,420 lbf)	2.6 %	18,000 N (4,046.6 lbf)	3.7 %	24,153 N (5,429.8 lbf)
457 m (1,499 ft)	1 %	11,603 N (2,608.5 lbf)	0.8 %	15,670 N (3,522.8 lbf)	2.6 %	18,514 N (4,162.1 lbf)	3.8 %	24,804 N (5,576.2 lbf)
472 m (1,548.2 ft)	1 %	11,990 N (2,695.5 lbf)	0.8 %	16,125 N (3,625.1 lbf)	2.7 %	19,026 N (4,277.2 lbf)	3.8 %	25,450 N (5,721.4 lbf)
488 m (1,600.6 ft)	1 %	12,377 N (2,782.5 lbf)	0.8 %	16,579 N (3,727.1 lbf)	2.7 %	19,536 N (4,391.9 lbf)	3.8 %	26,092 N (5,865.7 lbf)
503 m (1,649.8 ft)	1 %	12,763 N (2,869.2 lbf)	0.8 %	17,031 N (3,828.7 lbf)	2.7 %	20,043 N (4,505.9 lbf)	3.8 %	26,730 N (6,009.1 lbf)
518 m (1,699 ft)	1 %	13,150 N (2,956.2 lbf)	0.8 %	17,481 N (3,929.9 lbf)	2.7 %	20,548 N (4,619.4 lbf)	3.9 %	27,364 N (6,151.7 lbf)
533 m (1,748.2 ft)	1 %	13,537 N (3,043.2 lbf)	0.8 %	17,930 N (4,030.8 lbf)	2.7 %	21,050 N (4,732.2 lbf)	3.9 %	27,994 N (6,293.3 lbf)
549 m (1,800.7 ft)	1 %	13,924 N (3,130.2 lbf)	0.8 %	18,378 N (4,131.5 lbf)	2.7 %	21,550 N (4,844.6 lbf)	3.9 %	28,621 N (6,434.3 lbf)
564 m (1,849.9 ft)	1 %	14,311 N (3,217.2 lbf)	0.8 %	18,824 N (4,231.8 lbf)	2.7 %	22,048 N (4,956.6 lbf)	3.9 %	29,244 N (6,574.3 lbf)
579 m (1,899.1 ft)	1 %	14,697 N (3,304 lbf)	0.8 %	19,269 N (4,331.8 lbf)	2.7 %	22,544 N (5,068.1 lbf)	4 %	29,864 N (6,713.7 lbf)
594 m (1,948.3 ft)	1 %	15,084 N (3,391 lbf)	0.8 %	19,713 N (4,431.7 lbf)	2.8 %	23,038 N (5,179.1 lbf)	4 %	30,480 N (6,852.2 lbf)

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	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
610 m (2,000.8 ft)	1 %	15,471 N (3,478 lbf)	0.8 %	20,156 N (4,531.2 lbf)	2.8 %	23,530 N (5,289.8 lbf)	4 %	31,093 N (6,990 lbf)
625 m (2,050 ft)	1 %	15,858 N (3,565 lbf)	0.9 %	20,597 N (4,630.4 lbf)	2.8 %	24,021 N (5,400.1 lbf)	4 %	31,704 N (7,127.3 lbf)
640 m (2,099.2 ft)	1 %	16,244 N (3,651.8 lbf)	0.9 %	21,038 N (4,729.5 lbf)	2.8 %	24,509 N (5,509.8 lbf)	4.1 %	32,311 N (7,263.8 lbf)
655 m (2,148.4 ft)	1 %	16,631 N (3,738.8 lbf)	0.9 %	21,477 N (4,828.2 lbf)	2.8 %	24,996 N (5,619.3 lbf)		
671 m (2,200.9 ft)	1 %	17,018 N (3,825.8 lbf)	0.9 %	21,915 N (4,926.7 lbf)	2.8 %	25,482 N (5,728.6 lbf)		



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