

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 144 F, 50 µm multimode (OM2)

CORNING

Part Number: 144TAE-T4C31A20

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

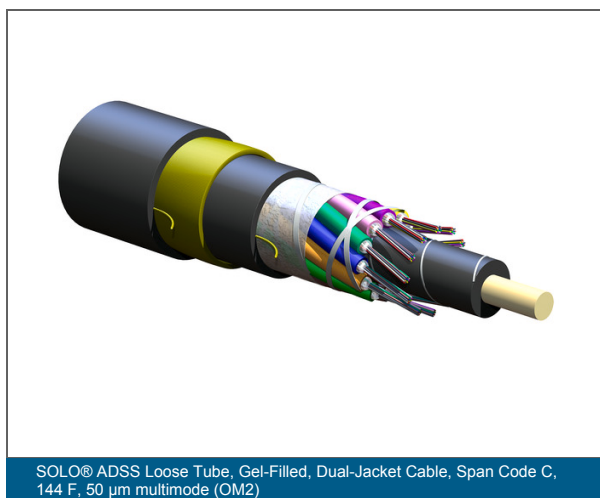
Easy, one-step installation

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	50 µm MM (OM2)
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	144
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, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua

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Cable Design

Buffer Tube Diameter	2.85 mm (0.11 in)
Inner Jacket Material	Polyethylene (PE)
Number of Active Tubes	12
Number of Tube Positions	12
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	21.1 mm (0.83 in)
Span Code	C
Min. Bend Diameter Installation	634 mm (24.96 in)
Min. Bend Diameter Operation	422 mm (16.61 in)

Optical Characteristics

Fiber Code	T
Fiber Name	50 µm MM (OM2)
Fiber Type	Multimode
Fiber Compliance	IEC 60793-2-10
Performance Option Code	31
Fiber Core Diameter	50 µm
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Min. Overfilled Launch (OFL) Bandwidth	700 MHz*km / 500 MHz*km
Serial 1 Gigabit Ethernet	750 m / 600 m
Serial 10 Gigabit Ethernet	150 m / -
Wavelengths	850 nm / 1300 nm
Fiber Category	OM2

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Dimensions

Cable Weight	337 kg/km (226.45 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 144								
15 m (49.2 ft)	1 %	629 N (141.4 lbf)	0.7 %	956 N (214.9 lbf)	1.7 %	1,193 N (268.2 lbf)	2 %	1,788 N (402 lbf)
30 m (98.4 ft)	1 %	1,258 N (282.8 lbf)	0.7 %	1,844 N (414.6 lbf)	1.8 %	2,256 N (507.2 lbf)	2.2 %	3,270 N (735.1 lbf)
46 m (150.9 ft)	1 %	1,886 N (424 lbf)	0.8 %	2,688 N (604.3 lbf)	1.9 %	3,246 N (729.7 lbf)	2.4 %	4,605 N (1,035.2 lbf)
61 m (200.1 ft)	1 %	2,515 N (565.4 lbf)	0.8 %	3,502 N (787.3 lbf)	1.9 %	4,186 N (941 lbf)	2.5 %	5,847 N (1,314.5 lbf)
76 m (249.3 ft)	1 %	3,144 N (706.8 lbf)	0.8 %	4,294 N (965.3 lbf)	2 %	5,090 N (1,144.3 lbf)	2.6 %	7,024 N (1,579.1 lbf)
91 m (298.5 ft)	1 %	3,773 N (848.2 lbf)	0.8 %	5,068 N (1,139.3 lbf)	2 %	5,967 N (1,341.4 lbf)	2.7 %	8,151 N (1,832.4 lbf)
107 m (351 ft)	1 %	4,401 N (989.4 lbf)	0.8 %	5,827 N (1,310 lbf)	2.1 %	6,821 N (1,533.4 lbf)	2.8 %	9,239 N (2,077 lbf)
122 m (400.2 ft)	1 %	5,030 N (1,130.8 lbf)	0.8 %	6,575 N (1,478.1 lbf)	2.1 %	7,656 N (1,721.1 lbf)	2.8 %	10,296 N (2,314.6 lbf)
137 m (449.4 ft)	1 %	5,659 N (1,272.2 lbf)	0.8 %	7,313 N (1,644 lbf)	2.2 %	8,477 N (1,905.7 lbf)	2.9 %	11,325 N (2,546 lbf)
152 m (498.6 ft)	1 %	6,288 N (1,413.6 lbf)	0.8 %	8,043 N (1,808.1 lbf)	2.2 %	9,284 N (2,087.1 lbf)	3 %	12,331 N (2,772.1 lbf)
168 m (551 ft)	1 %	6,916 N (1,554.8 lbf)	0.9 %	8,765 N (1,970.5 lbf)	2.2 %	10,080 N (2,266.1 lbf)	3 %	13,317 N (2,993.8 lbf)

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Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
183 m (600.2 ft)	1 %	7,545 N (1,696.2 lbf)	0.9 %	9,481 N (2,131.4 lbf)	2.3 %	10,865 N (2,442.6 lbf)	3.1 %	14,286 N (3,211.6 lbf)
198 m (649.4 ft)	1 %	8,174 N (1,837.6 lbf)	0.9 %	10,192 N (2,291.2 lbf)	2.3 %	11,642 N (2,617.2 lbf)	3.1 %	15,239 N (3,425.9 lbf)
213 m (698.6 ft)	1 %	8,803 N (1,979 lbf)	0.9 %	10,897 N (2,449.7 lbf)	2.3 %	12,411 N (2,790.1 lbf)	3.2 %	16,178 N (3,637 lbf)
229 m (751.1 ft)	1 %	9,431 N (2,120.2 lbf)	0.9 %	11,598 N (2,607.3 lbf)	2.3 %	13,173 N (2,961.4 lbf)	3.2 %	17,105 N (3,845.4 lbf)
244 m (800.3 ft)	1 %	10,060 N (2,261.6 lbf)	0.9 %	12,295 N (2,764 lbf)	2.3 %	13,929 N (3,131.4 lbf)	3.2 %	18,020 N (4,051.1 lbf)
259 m (849.5 ft)	1 %	10,689 N (2,403 lbf)	0.9 %	12,988 N (2,919.8 lbf)	2.4 %	14,678 N (3,299.8 lbf)	3.3 %	18,924 N (4,254.3 lbf)
274 m (898.7 ft)	1 %	11,318 N (2,544.4 lbf)	0.9 %	13,678 N (3,074.9 lbf)	2.4 %	15,423 N (3,467.2 lbf)	3.3 %	19,819 N (4,455.5 lbf)
290 m (951.2 ft)	1 %	11,946 N (2,685.6 lbf)	0.9 %	14,366 N (3,229.6 lbf)	2.4 %	16,162 N (3,633.4 lbf)	3.4 %	20,706 N (4,654.9 lbf)
305 m (1,000.4 ft)	1 %	12,575 N (2,827 lbf)	0.9 %	15,050 N (3,383.4 lbf)	2.4 %	16,897 N (3,798.6 lbf)	3.4 %	21,584 N (4,852.3 lbf)
320 m (1,049.6 ft)	1 %	13,204 N (2,968.4 lbf)	0.9 %	15,732 N (3,536.7 lbf)	2.4 %	17,628 N (3,962.9 lbf)	3.4 %	22,454 N (5,047.9 lbf)
335 m (1,098.8 ft)	1 %	13,833 N (3,109.8 lbf)	0.9 %	16,411 N (3,689.3 lbf)	2.4 %	18,355 N (4,126.4 lbf)	3.5 %	23,317 N (5,241.9 lbf)
351 m (1,151.3 ft)	1 %	14,461 N (3,251 lbf)	0.9 %	17,089 N (3,841.8 lbf)	2.5 %	19,078 N (4,288.9 lbf)	3.5 %	24,174 N (5,434.5 lbf)
366 m (1,200.5 ft)	1 %	15,090 N (3,392.4 lbf)	0.9 %	17,764 N (3,993.5 lbf)	2.5 %	19,798 N (4,450.8 lbf)	3.5 %	25,024 N (5,625.6 lbf)

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Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
381 m (1,249.7 ft)	1 %	15,719 N (3,533.8 lbf)	0.9 %	18,438 N (4,145 lbf)	2.5 %	20,515 N (4,612 lbf)	3.5 %	25,869 N (5,815.6 lbf)
396 m (1,298.9 ft)	1 %	16,348 N (3,675.2 lbf)	0.9 %	19,110 N (4,296.1 lbf)	2.5 %	21,229 N (4,772.5 lbf)	3.6 %	26,708 N (6,004.2 lbf)
411 m (1,348.1 ft)	1 %	16,976 N (3,816.4 lbf)	0.9 %	19,780 N (4,446.7 lbf)	2.5 %	21,941 N (4,932.5 lbf)	3.6 %	27,542 N (6,191.7 lbf)
427 m (1,400.6 ft)	1 %	17,605 N (3,957.8 lbf)	0.9 %	20,449 N (4,597.1 lbf)	2.5 %	22,649 N (5,091.7 lbf)	3.6 %	28,371 N (6,378.1 lbf)
442 m (1,449.8 ft)	1 %	18,234 N (4,099.2 lbf)	0.9 %	21,116 N (4,747.1 lbf)	2.5 %	23,356 N (5,250.6 lbf)	3.6 %	29,195 N (6,563.3 lbf)
457 m (1,499 ft)	1 %	18,863 N (4,240.6 lbf)	0.9 %	21,782 N (4,896.8 lbf)	2.6 %	24,060 N (5,408.9 lbf)	3.7 %	30,015 N (6,747.6 lbf)
472 m (1,548.2 ft)	1 %	19,491 N (4,381.8 lbf)	0.9 %	22,447 N (5,046.3 lbf)	2.6 %	24,761 N (5,566.5 lbf)	3.7 %	30,831 N (6,931.1 lbf)
488 m (1,600.6 ft)	1 %	20,120 N (4,523.2 lbf)	0.9 %	23,111 N (5,195.6 lbf)	2.6 %	25,461 N (5,723.9 lbf)		
503 m (1,649.8 ft)	1 %	20,749 N (4,664.6 lbf)	0.9 %	23,773 N (5,344.4 lbf)	2.6 %	26,159 N (5,880.8 lbf)		
518 m (1,699 ft)	1 %	21,378 N (4,806 lbf)	0.9 %	24,435 N (5,493.2 lbf)	2.6 %	26,855 N (6,037.2 lbf)		
533 m (1,748.2 ft)	1 %	22,006 N (4,947.1 lbf)	0.9 %	25,095 N (5,641.6 lbf)	2.6 %	27,550 N (6,193.5 lbf)		
549 m (1,800.7 ft)	1 %	22,635 N (5,088.6 lbf)	1 %	25,755 N (5,790 lbf)	2.6 %	28,242 N (6,349.1 lbf)		
564 m (1,849.9 ft)	1 %	23,264 N (5,230 lbf)	1 %	26,414 N (5,938.1 lbf)	2.6 %	28,933 N (6,504.4 lbf)		

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Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
579 m (1,899.1 ft)	1 %	23,893 N (5,371.4 lbf)	1 %	27,072 N (6,086 lbf)	2.6 %	29,623 N (6,659.5 lbf)		



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