

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Part Number:
012EAE-T4501A20

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

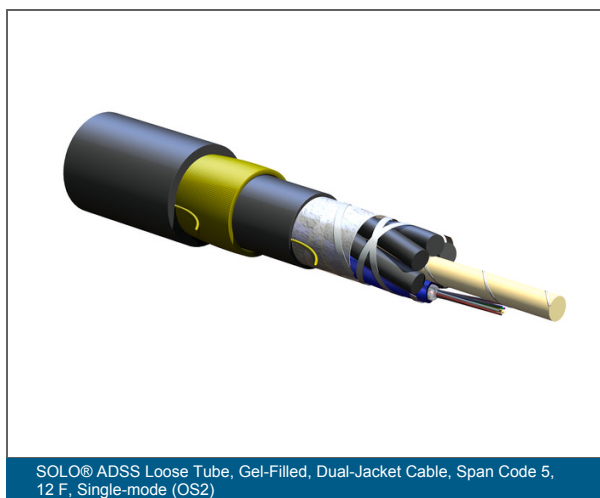
Easy, one-step installation

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



SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable, Span Code 5, 12 F, Single-mode (OS2)

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

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	12
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
Buffer Tube Diameter	2.85 mm (0.11 in)

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Cable Design

Inner Jacket Material	Polyethylene (PE)
Number of Active Tubes	1
Number of Filling Elements	5
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	14 mm (0.55 in)
Span Code	5
Min. Bend Diameter Installation	420 mm (16.54 in)
Min. Bend Diameter Operation	280 mm (11.02 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	148 kg/km (99.45 lb/1000 ft)
--------------	------------------------------

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
Fiber Count 12								
15 m (49.2 ft)	1 %	275 N (61.8 lbf)	0.5 %	615 N (138.3 lbf)	1.6 %	851 N (191.3 lbf)	2.1 %	1,317 N (296.1 lbf)
30 m (98.4 ft)	1 %	550 N (123.6 lbf)	0.5 %	1,153 N (259.2 lbf)	1.8 %	1,555 N (349.6 lbf)	2.4 %	2,331 N (524 lbf)
46 m (150.9 ft)	1 %	825 N (185.5 lbf)	0.6 %	1,648 N (370.5 lbf)	1.9 %	2,187 N (491.7 lbf)	2.6 %	3,220 N (723.9 lbf)
61 m (200.1 ft)	1 %	1,100 N (247.3 lbf)	0.6 %	2,114 N (475.2 lbf)	2 %	2,774 N (623.6 lbf)	2.7 %	4,034 N (906.9 lbf)
76 m (249.3 ft)	1 %	1,375 N (309.1 lbf)	0.6 %	2,560 N (575.5 lbf)	2.1 %	3,329 N (748.4 lbf)	2.9 %	4,797 N (1,078.4 lbf)
91 m (298.5 ft)	1 %	1,650 N (370.9 lbf)	0.6 %	2,990 N (672.2 lbf)	2.2 %	3,860 N (867.8 lbf)	3 %	5,521 N (1,241.2 lbf)
107 m (351 ft)	1 %	1,925 N (432.8 lbf)	0.6 %	3,407 N (765.9 lbf)	2.2 %	4,372 N (982.9 lbf)	3.1 %	6,215 N (1,397.2 lbf)
122 m (400.2 ft)	1 %	2,200 N (494.6 lbf)	0.6 %	3,813 N (857.2 lbf)	2.3 %	4,868 N (1,094.4 lbf)	3.2 %	6,884 N (1,547.6 lbf)
137 m (449.4 ft)	1 %	2,475 N (556.4 lbf)	0.7 %	4,211 N (946.7 lbf)	2.3 %	5,350 N (1,202.7 lbf)	3.3 %	7,532 N (1,693.3 lbf)
152 m (498.6 ft)	1 %	2,750 N (618.2 lbf)	0.7 %	4,601 N (1,034.3 lbf)	2.4 %	5,821 N (1,308.6 lbf)	3.4 %	8,162 N (1,834.9 lbf)
168 m (551 ft)	1 %	3,025 N (680 lbf)	0.7 %	4,984 N (1,120.5 lbf)	2.4 %	6,283 N (1,412.5 lbf)	3.5 %	8,777 N (1,973.2 lbf)
183 m (600.2 ft)	1 %	3,300 N (741.9 lbf)	0.7 %	5,362 N (1,205.4 lbf)	2.5 %	6,735 N (1,514.1 lbf)	3.6 %	9,379 N (2,108.5 lbf)
198 m (649.4 ft)	1 %	3,575 N (803.7 lbf)	0.7 %	5,734 N (1,289 lbf)	2.5 %	7,180 N (1,614.1 lbf)	3.6 %	9,968 N (2,240.9 lbf)

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
213 m (698.6 ft)	1 %	3,850 N (865.5 lbf)	0.7 %	6,102 N (1,371.8 lbf)	2.6 %	7,618 N (1,712.6 lbf)	3.7 %	10,547 N (2,371.1 lbf)
229 m (751.1 ft)	1 %	4,125 N (927.3 lbf)	0.7 %	6,466 N (1,453.6 lbf)	2.6 %	8,050 N (1,809.7 lbf)	3.8 %	11,116 N (2,499 lbf)
244 m (800.3 ft)	1 %	4,400 N (989.2 lbf)	0.7 %	6,825 N (1,534.3 lbf)	2.6 %	8,475 N (1,905.3 lbf)	3.8 %	11,675 N (2,624.7 lbf)
259 m (849.5 ft)	1 %	4,674 N (1,050.8 lbf)	0.7 %	7,182 N (1,614.6 lbf)	2.7 %	8,896 N (1,999.9 lbf)	3.9 %	12,227 N (2,748.7 lbf)
274 m (898.7 ft)	1 %	4,949 N (1,112.6 lbf)	0.7 %	7,535 N (1,693.9 lbf)	2.7 %	9,312 N (2,093.4 lbf)	3.9 %	12,771 N (2,871 lbf)
290 m (951.2 ft)	1 %	5,224 N (1,174.4 lbf)	0.7 %	7,885 N (1,772.6 lbf)	2.7 %	9,724 N (2,186 lbf)	4 %	13,309 N (2,992 lbf)
305 m (1,000.4 ft)	1 %	5,499 N (1,236.2 lbf)	0.8 %	8,233 N (1,850.8 lbf)	2.8 %	10,131 N (2,277.5 lbf)	4 %	13,839 N (3,111.1 lbf)
320 m (1,049.6 ft)	1 %	5,774 N (1,298 lbf)	0.8 %	8,578 N (1,928.4 lbf)	2.8 %	10,535 N (2,368.4 lbf)	4.1 %	14,364 N (3,229.2 lbf)
335 m (1,098.8 ft)	1 %	6,049 N (1,359.9 lbf)	0.8 %	8,920 N (2,005.3 lbf)	2.8 %	10,935 N (2,458.3 lbf)	4.1 %	14,884 N (3,346.1 lbf)
351 m (1,151.3 ft)	1 %	6,324 N (1,421.7 lbf)	0.8 %	9,261 N (2,082 lbf)	2.8 %	11,331 N (2,547.3 lbf)	4.2 %	15,397 N (3,461.4 lbf)
366 m (1,200.5 ft)	1 %	6,599 N (1,483.5 lbf)	0.8 %	9,599 N (2,157.9 lbf)	2.9 %	11,725 N (2,635.9 lbf)	4.2 %	15,906 N (3,575.8 lbf)
381 m (1,249.7 ft)	1 %	6,874 N (1,545.3 lbf)	0.8 %	9,936 N (2,233.7 lbf)	2.9 %	12,115 N (2,723.6 lbf)		
396 m (1,298.9 ft)	1 %	7,149 N (1,607.2 lbf)	0.8 %	10,271 N (2,309 lbf)	2.9 %	12,503 N (2,810.8 lbf)		

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
411 m (1,348.1 ft)	1 %	7,424 N (1,669 lbf)	0.8 %	10,604 N (2,383.9 lbf)	2.9 %	12,888 N (2,897.3 lbf)		
427 m (1,400.6 ft)	1 %	7,699 N (1,730.8 lbf)	0.8 %	10,935 N (2,458.3 lbf)	3 %	13,271 N (2,983.4 lbf)		
442 m (1,449.8 ft)	1 %	7,974 N (1,792.6 lbf)	0.8 %	11,265 N (2,532.5 lbf)	3 %	13,651 N (3,068.9 lbf)		
457 m (1,499 ft)	1 %	8,249 N (1,854.5 lbf)	0.8 %	11,594 N (2,606.4 lbf)	3 %	14,030 N (3,154.1 lbf)		
472 m (1,548.2 ft)	1 %	8,524 N (1,916.3 lbf)	0.8 %	11,921 N (2,679.9 lbf)	3 %	14,406 N (3,238.6 lbf)		
488 m (1,600.6 ft)	1 %	8,799 N (1,978.1 lbf)	0.8 %	12,247 N (2,753.2 lbf)	3 %	14,779 N (3,322.4 lbf)		
503 m (1,649.8 ft)	1 %	9,074 N (2,039.9 lbf)	0.8 %	12,571 N (2,826.1 lbf)	3.1 %	15,151 N (3,406.1 lbf)		
518 m (1,699 ft)	1 %	9,349 N (2,101.7 lbf)	0.8 %	12,895 N (2,898.9 lbf)	3.1 %	15,522 N (3,489.5 lbf)		
533 m (1,748.2 ft)	1 %	9,624 N (2,163.6 lbf)	0.8 %	13,217 N (2,971.3 lbf)	3.1 %	15,890 N (3,572.2 lbf)		
549 m (1,800.7 ft)	1 %	9,899 N (2,225.4 lbf)	0.8 %	13,539 N (3,043.7 lbf)				
564 m (1,849.9 ft)	1 %	10,174 N (2,287.2 lbf)	0.8 %	13,859 N (3,115.6 lbf)				
579 m (1,899.1 ft)	1 %	10,449 N (2,349 lbf)	0.8 %	14,178 N (3,187.3 lbf)				
594 m (1,948.3 ft)	1 %	10,724 N (2,410.8 lbf)	0.8 %	14,497 N (3,259.1 lbf)				
610 m (2,000.8 ft)	1 %	10,999 N (2,472.7 lbf)	0.8 %	14,814 N (3,330.3 lbf)				

SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable 12 F, Single-mode (OS2)

CORNING

Installation Characteristics								
	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
Span	SAG	Tension	SAG	Tension	SAG	Tension	SAG	Tension
625 m (2,050 ft)	1 %	11,274 N (2,534.5 lbf)	0.8 %	15,131 N (3,401.6 lbf)				
640 m (2,099.2 ft)	1 %	11,549 N (2,596.3 lbf)	0.8 %	15,447 N (3,472.6 lbf)				
655 m (2,148.4 ft)	1 %	11,824 N (2,658.1 lbf)	0.8 %	15,762 N (3,543.4 lbf)				



Corning Optical Communications LLC • 4200 Corning Place • Charlotte, NC • 28216 • United States
800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/opcomm

A complete listing of the trademarks of Corning Optical Communications is available at www.corning.com/opcomm/trademarks. All other trademarks are the properties of their respective owners. Corning Optical Communications is ISO 9001 certified. © 2026 Corning Optical Communications. All rights reserved.