

SOLO® ADSS Short-Span, Loose Tube, Gel-Filled Cable 24 F, 50 µm multimode (OM4)

CORNING

Part Number: 024TN4-T4S90A20

Corning SOLO® ADSS short-span 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 economical single-jacket design can span distances up to 600 ft in NESC light conditions, 500 ft in NESC medium conditions and 300 ft in NESC heavy conditions (see sag and tension chart for details). 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

Mechanical ruggedness and environmental durability

Self-supporting

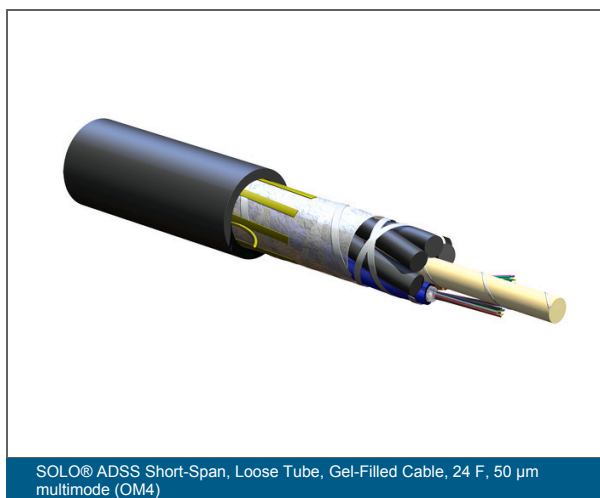
Easy, one-step installation

Track-resistant polyethylene (TRPE) jacket available

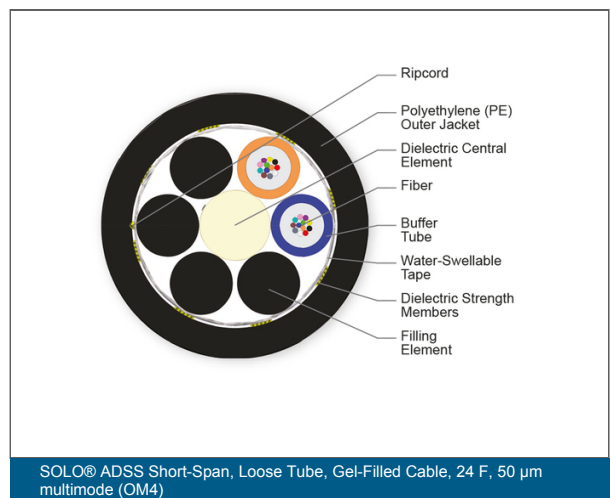
Suitable for installations up to 25 kV electric field potential

Innovative waterblocking design

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 (OM4)
Cable geometry	Other

Standards

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Approvals and Listings	RDUP 7 CFR 1755.900 (formerly RUS)
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 70 °C (-40 °F to 158 °F)

Cable Design

Central Element	Dielectric
Fiber Count	24
Number of Ripcords	1
Buffer Tube Color Coding, Layer 1	Blue, Orange
Outer Jacket Color	Black
Outer Jacket Material	Polyethylene (PE)
Tensile Strength Elements and/or Armoring - Layer 1	Dielectric strength members
Buffer Tube Diameter	2.5 mm (0.1 in)

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Cable Design

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

Mechanical Specifications

Nominal Outer Diameter	10.9 mm (0.43 in)
Min. Bend Diameter Installation	328 mm (12.91 in)
Min. Bend Diameter Operation	218 mm (8.58 in)

Optical Characteristics

Fiber Code	T
Performance Option Code	90
Fiber Category	OM4
Fiber Type	Multimode
Fiber Name	50 µm MM (OM4)
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Wavelengths	850 nm / 1300 nm
Fiber Compliance	IEC 60793-2-10
Fiber Core Diameter	50 µm
Serial 1 Gigabit Ethernet	1000 m / 600 m
Serial 10 Gigabit Ethernet	550 m / -
Minimum Effective Modal Bandwidth (EMB)	4700 MHz*km / -
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km

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Dimensions

Cable Weight	92 kg/km (61.82 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 %	171 N (38.4 lbf)	0.4 %	485 N (109 lbf)	1.7 %	690 N (155.1 lbf)	2.4 %	1,024 N (230.2 lbf)
30 m (98.4 ft)	1 %	343 N (77.1 lbf)	0.5 %	846 N (190.2 lbf)	2 %	1,173 N (263.7 lbf)	2.9 %	1,705 N (383.3 lbf)
46 m (150.9 ft)	1 %	514 N (115.5 lbf)	0.5 %	1,167 N (262.4 lbf)	2.2 %	1,594 N (358.4 lbf)	3.2 %	2,292 N (515.3 lbf)
61 m (200.1 ft)	1 %	685 N (154 lbf)	0.5 %	1,463 N (328.9 lbf)	2.3 %	1,980 N (445.1 lbf)	3.5 %	2,827 N (635.5 lbf)
76 m (249.3 ft)	1 %	857 N (192.7 lbf)	0.6 %	1,744 N (392.1 lbf)	2.5 %	2,342 N (526.5 lbf)	3.7 %	3,326 N (747.7 lbf)
91 m (298.5 ft)	1 %	1,028 N (231.1 lbf)	0.6 %	2,014 N (452.8 lbf)	2.6 %	2,687 N (604.1 lbf)	3.9 %	3,799 N (854 lbf)
107 m (351 ft)	1 %	1,199 N (269.6 lbf)	0.6 %	2,274 N (511.2 lbf)	2.7 %	3,019 N (678.7 lbf)	4.1 %	4,252 N (955.9 lbf)
122 m (400.2 ft)	1 %	1,371 N (308.2 lbf)	0.6 %	2,527 N (568.1 lbf)	2.8 %	3,339 N (750.6 lbf)	4.2 %	4,688 N (1,053.9 lbf)
137 m (449.4 ft)	1 %	1,542 N (346.7 lbf)	0.6 %	2,774 N (623.6 lbf)	2.9 %	3,650 N (820.5 lbf)	4.4 %	5,111 N (1,149 lbf)
152 m (498.6 ft)	1 %	1,713 N (385.1 lbf)	0.7 %	3,016 N (678 lbf)	3 %	3,954 N (888.9 lbf)	4.5 %	5,523 N (1,241.6 lbf)
168 m (551 ft)	1 %	1,885 N (423.8 lbf)	0.7 %	3,254 N (731.5 lbf)	3 %	4,251 N (955.7 lbf)		
183 m (600.2 ft)	1 %	2,056 N (462.2 lbf)	0.7 %	3,488 N (784.1 lbf)	3.1 %	4,543 N (1,021.3 lbf)		
198 m (649.4 ft)	1 %	2,227 N (500.6 lbf)	0.7 %	3,719 N (836.1 lbf)	3.2 %	4,829 N (1,085.6 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 %	2,399 N (539.3 lbf)	0.7 %	3,947 N (887.3 lbf)	3.2 %	5,111 N (1,149 lbf)		
229 m (751.1 ft)	1 %	2,570 N (577.8 lbf)	0.7 %	4,172 N (937.9 lbf)	3.3 %	5,388 N (1,211.3 lbf)		
244 m (800.3 ft)	1 %	2,742 N (616.4 lbf)	0.7 %	4,394 N (987.8 lbf)				
259 m (849.5 ft)	1 %	2,913 N (654.9 lbf)	0.7 %	4,615 N (1,037.5 lbf)				
274 m (898.7 ft)	1 %	3,084 N (693.3 lbf)	0.7 %	4,834 N (1,086.7 lbf)				
290 m (951.2 ft)	1 %	3,256 N (732 lbf)	0.8 %	5,051 N (1,135.5 lbf)				
305 m (1,000.4 ft)	1 %	3,427 N (770.4 lbf)	0.8 %	5,266 N (1,183.8 lbf)				
320 m (1,049.6 ft)	1 %	3,598 N (808.9 lbf)	0.8 %	5,479 N (1,231.7 lbf)				



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