

SOLO® ADSS Short-Span, Loose Tube, Gel-Filled Cable

144 F, 50 µm multimode (OM4)

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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

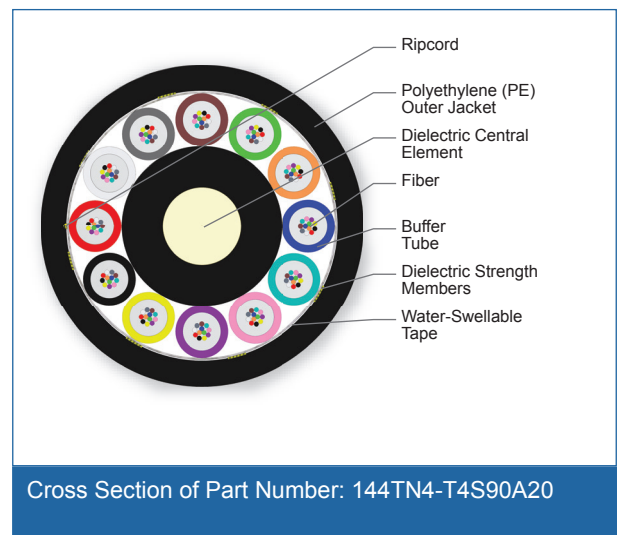
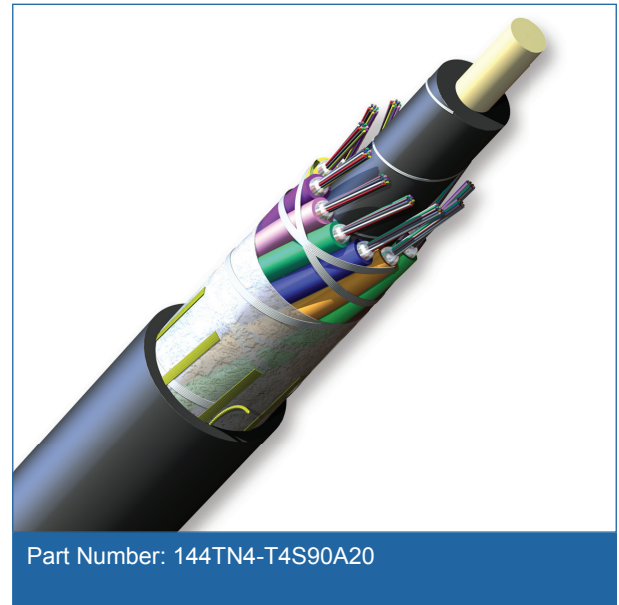
Provides efficient and craft-friendly cable preparation

Standards

Approvals and Listings	RDUP 7 CFR 1755.900 (formerly RUS)
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Common Installations	Outdoor self-supporting aerial
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Design and Test Criteria	ANSI/ICEA S-87-640
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Specifications

General Specifications

Environment	Outdoor
Application	Self-Supporting
Cable Type	Loose Tube
Product Type	Self-Supporting
Fiber Category	50 µm MM (OM4)

Temperature Range

Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-30 °C to 70 °C (-22 °F to 158 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Cable Design

Central Element	Dielectric
Fiber Count	144
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Number of Tube Positions	12
Number of Active Tubes	12
Buffer Tube Color Coding, Layer 1	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Buffer Tube Diameter	2.5 mm (0.1 in)
Tape	Water-swellaable
Tensile Strength Elements and/or Armoring - Layer 1	Dielectric strength members
Number of Ripcords	2
Outer Jacket Material	Polyethylene (PE)
Outer Jacket Color	Black

Mechanical Characteristics Cable

Weight	196 kg/km (132 lb/1000 ft)
Nominal Outer Diameter	16.1 mm (0.63 in)
Min. Bend Radius Installation	242 mm (9.5 in)
Min. Bend Radius Operation	161 mm (6.3 in)

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Installation Conditions

Span m (ft)	Initial Installation		NESC Light		NESC Medium		NESC Heavy	
	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)
15 (50)	1.0	368 (83)	0.6	723 (163)	1.7	904 (203)	2.4	1274 (286)
30 (100)	1.0	737 (166)	0.6	1277 (287)	2.0	1559 (351)	2.8	2141 (481)
46 (150)	1.0	1105 (248)	0.7	1779 (400)	2.2	2143 (482)	3.1	2901 (652)
61 (200)	1.0	1473 (331)	0.7	2254 (507)	2.3	2688 (604)	3.4	3601 (809)
76 (250)	1.0	1842 (414)	0.8	2711 (610)	2.5	3208 (721)	3.6	4261 (958)
91 (300)	1.0	2210 (497)	0.8	3156 (710)	2.6	3709 (834)	3.7	4893 (1100)
107 (350)	1.0	2579 (580)	0.8	3591 (807)	2.6	4196 (943)	-	
122 (400)	1.0	2947 (663)	0.8	4019 (903)	2.7	4672 (1050)	-	
137 (450)	1.0	3315 (745)	0.8	4441 (998)	-		-	
152 (500)	1.0	3684 (828)	0.8	4857 (1092)	-		-	

Chemical Characteristics

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

Optical Characteristics (cabled)

Fiber Core Diameter	50 µm
Fiber Category	OM4
Fiber Code	T
Performance Option Code	90
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Serial 1 Gigabit Ethernet	1100 m / 600 m
Serial 10 Gigabit Ethernet	550 m / -
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	4700 MHz*km / -

* Assumes 1.0 dB maximum total connector/splice loss.

* Meets 0.75 ns optical skew when used in all Corning Plug and Play™/EDGE™ systems solutions.

- Notes:
- 1) 50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.
 - 2) Improved attenuation and bandwidth options available.
 - 3) Bend-insensitive single-mode fibers available on request.
 - 4) Contact a Corning Customer Care Representative for additional information.

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Ordering Information

Part Number	144TN4-T4S90A20
Product Description	SOLO® ADSS Short-Span, Loose Tube, Gel-Filled Cable, 144 F, 50 µm multimode (OM4)
EAN Code	4056418148984



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