24 F, 50 µm multimode, extended 10G distance (OM4)



Corning SOLO® ADSS medium-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 of 800 ft in NESC light conditions, 650 ft in NESC medium conditions and 450 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

Ripcord Polyethylene (PE) Outer Jacket Dielectric Central Element Fiber Buffer Tube Water-Swellable Tape Dielectric Strength Members Filling Element Cross Section of Part Number: 024TN4-T4M91A20

Standards

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

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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	24
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Number of Tube Positions	6
Number of Active Tubes	2
Buffer Tube Color Coding	Blue, Orange
Buffer Tube Diameter	2.5 mm (0.1 in)
Number of Filling Elements	4
Tape	Water-swellable
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	97 kg/km (65 lb/1000 ft)	
Nominal Outer Diameter	11.3 mm (0.45 in)	
Min. Bend Radius Installation	170 mm (6.7 in)	
Min. Bend Radius Operation	113 mm (4.5 in)	



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Installation Conditions								
	Initial Inst	allation	NESC Lig	ht	NESC Me	dium	NESC He	avy
Span m (ft)	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)	SAG %	Tension N (lbf)
107 (350)	1.0	1283 (288)	0.6	2493 (560)	2.5	3337 (750)	3.7	4754 (1069)
122 (400)	1.0	1466 (330)	0.6	2777 (624)	2.6	3698 (831)	3.8	5248 (1180)
137 (450)	1.0	1649 (371)	0.6	3053 (686)	2.7	4048 (910)	3.9	5726 (1287)
152 (500)	1.0	1833 (412)	0.6	3324 (747)	2.7	4389 (987)	-	-
168 (550)	1.0	2016 (453)	0.7	3590 (807)	2.8	4723 (1062)	-	-
183 (600)	1.0	2199 (494)	0.7	3851 (866)	2.8	5050 (1135)	-	-
198 (650)	1.0	2382 (536)	0.7	4108 (924)	2.9	5371 (1208)	-	-
213 (700)	1.0	2566 (577)	0.7	4362 (981)	-	-	-	-
229 (750)	1.0	2749 (618)	0.7	4613 (1037)	-	-	-	-
244 (800)	1.0	2932 (659)	0.7	4861 (1093)	-	-	-	-

Chemical Characteristics	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Fiber Specifications

Optical Characteristics (cabled)		
Fiber Core Diameter	50 μm	
Fiber Category	OM4 Extended Distance	
Fiber Code	Т	
Performance Option Code	91	
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	600 m / -	
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km	
Minimum Effective Modal Bandwidth (EMB)	5350 MHz*km / -	

^{*} Assumes 0.7 dB maximum total connector/splice loss.

Notes: 1) 50 μ m multimode fiber macrobend loss \leq 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.



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

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	024TN4-T4M91A20
Product Description	SOLO® ADSS Medium-Span, Loose Tube, Gel-Filled Cable, 24 F, 50 µm multimode, extended 10G distance (OM4)



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