

ALTOS® Figure-8 Gel-Free Cables

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Features and Benefits

Fully waterblocked loose tube all-dielectric gel-free design

Simple access and no clean up

Polyethylene jacket

Rugged, durable and easy to strip

Figure-8 cable design

Easy, one-step installation

Available in 62.5 μm , 50 μm , single-mode and hybrid versions

Ready for any application including Gigabit Ethernet and 10 Gigabit Ethernet

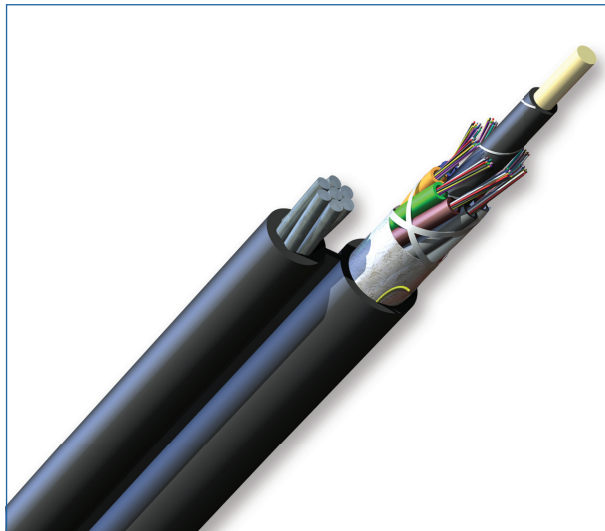
Corning ALTOS® figure-8 gel-free cables are self-supporting aerial cables designed for easy and economical one-step installation. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunications-grade optical fiber. The gel-free design is fully waterblocked using craft-friendly water-swellable materials, making cable access simple and requiring no clean up.

While the flexible, craft-friendly buffer tubes are easy to route in closures, the SZ-stranded, loose tube design isolates optical fibers from installation and environmental rigors and facilitates mid-span access. The figure-8 cable design allows easy, one-step installation using standard hardware and installation methods. These cables have a medium-density polyethylene jacket that is rugged, durable and easy to strip.

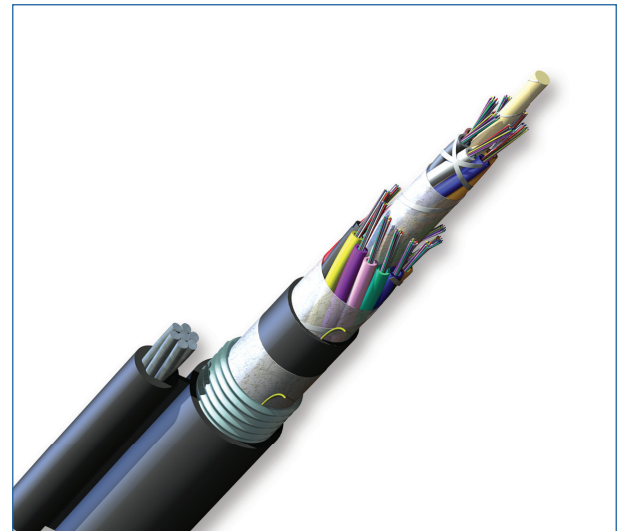
Standards

Common Installations Outdoor self-supporting aerial

Design and Test Criteria ANSI/ICEA S-87-640



ALTOS Figure-8 Loose Tube, Gel-Free Cable, 96 Fibers | Photo PIM0521

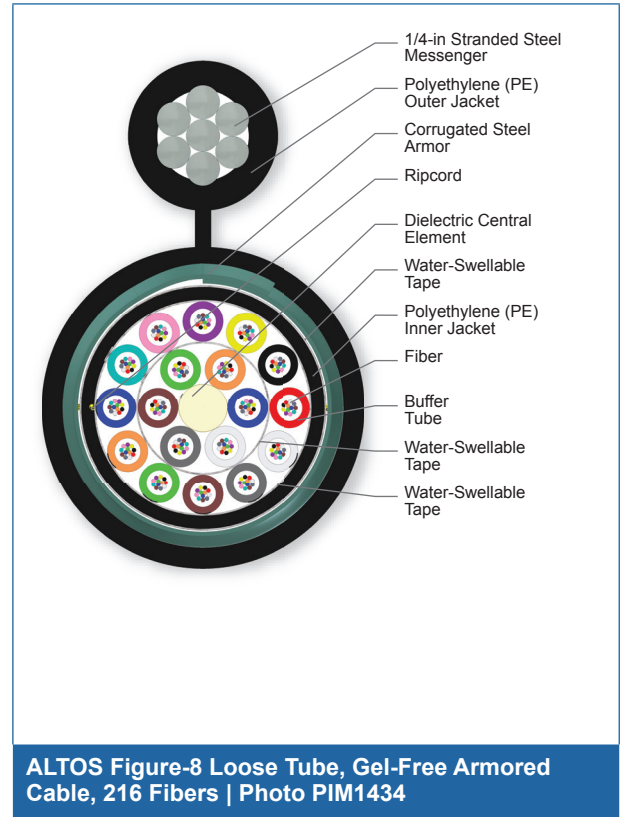
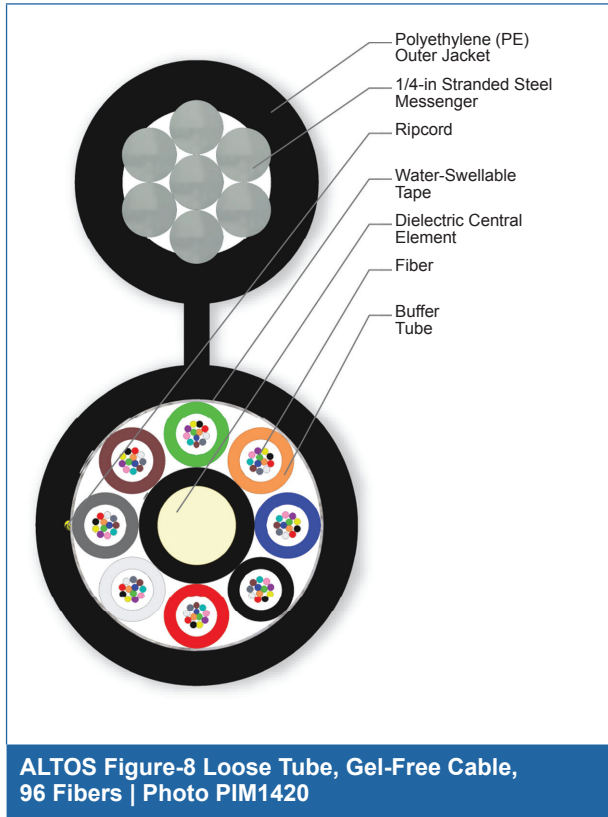


ALTOS Figure-8 Loose Tube, Gel-Free Armored Cable, 216 Fibers | Photo PIM0535

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Specifications

| 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) |

| Fiber Count | Number of Tube Positions | Number of Active Tubes | Weight | Nominal Outer Diameter | Nominal Cable Height | Min. Bend Radius Installation | Min. Bend Radius Operation |
|--------------------|--------------------------|------------------------|----------------------------|------------------------|----------------------|-------------------------------|----------------------------|
| Figure-8 (Armored) | | | | | | | |
| 12 - 72 | 6 | 1 - 6 | 396 kg/km (266 lb/1000 ft) | 14.3 mm (0.56 in) | 25.9 mm (1.02 in) | 215 mm (8.4 in) | 143 mm (5.6 in) |
| 96 | 8 | 8 | 432 kg/km (290 lb/1000 ft) | 16.0 mm (0.63 in) | 27.6 mm (1.09 in) | 240 mm (9.4 in) | 160 mm (6.3 in) |
| 144 | 12 | 12 | 527 kg/km (353 lb/1000 ft) | 19.7 mm (0.78 in) | 31.3 mm (1.23 in) | 296 mm (11.6 in) | 197 mm (7.8 in) |

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| Fiber Count | Number of Tube Positions | Number of Active Tubes | Weight | Nominal Outer Diameter | Nominal Cable Height | Min. Bend Radius Installation | Min. Bend Radius Operation |
|-------------------------------|--------------------------|------------------------|-------------------------------|------------------------|----------------------|-------------------------------|----------------------------|
| 192 - 216 | 18 | 16 - 18 | 513 kg/km (344 lb/1000 ft) | 19.9 mm (0.78 in) | 31.5 mm (1.24 in) | 299 mm (11.8 in) | 199 mm (7.8 in) |
| Figure-8 (Non-Armored) | | | | | | | |
| 12 - 72 | 6 | 1 - 6 | 297 kg/km (199 lb/1000 ft) | 10.5 mm (0.41 in) | 22.1 mm (0.87 in) | 158 mm (6.2 in) | 105 mm (4.1 in) |
| 96 | 8 | 8 | 321 kg/km (215 lb/1000 ft) | 12.2 mm (0.48 in) | 23.8 mm (0.94 in) | 183 mm (7.2 in) | 122 mm (4.8 in) |
| 144 | 12 | 12 | 386 kg/km (259 lb/1000 ft) | 15.8 mm (0.62 in) | 27.4 mm (1.08 in) | 237 mm (9.3 in) | 158 mm (6.2 in) |
| 192 - 216 | 18 | 16 - 18 | 371 kg/km (249 lb/1000 ft) | 16.0 mm (0.63 in) | 27.6 mm (1.09 in) | 240 mm (9.4 in) | 160 mm (6.3 in) |
| 288 | 24 | 24 | 420 kg/km (282 lb/1000 ft) | 18.2 mm (0.72 in) | 29.8 mm (1.17 in) | 273 mm (10.7 in) | 182 mm (7.2 in) |

| Number of Tube Positions | Maximum Span with 1% Installation Sag, NESC Light | Maximum Span with 1% Installation Sag, NESC Medium | Maximum Span with 1% Installation Sag, NESC Heavy |
|-------------------------------|---|--|---|
| Figure-8 (Armored) | | | |
| 6 | 189 m (620 ft) | 189 m (620 ft) | 140 m (460 ft) |
| 8 | 189 m (620 ft) | 186 m (610 ft) | 131 m (430 ft) |
| 12 | 171 m (560 ft) | 162 m (530 ft) | 116 m (380 ft) |
| 18 | 162 m (530 ft) | 158 m (520 ft) | 116 m (380 ft) |
| Figure-8 (Non-Armored) | | | |
| 6 | 241 m (790 ft) | 235 m (770 ft) | 168 m (550 ft) |
| 8 | 241 m (790 ft) | 229 m (750 ft) | 158 m (520 ft) |
| 12 | 216 m (710 ft) | 201 m (660 ft) | 140 m (460 ft) |
| 18 | 207 m (680 ft) | 198 m (650 ft) | 137 m (450 ft) |
| 24 | 183 m (600 ft) | 183 m (600 ft) | 137 m (450 ft) |

Chemical Characteristics

RoHS

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

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Transmission Performance

| Multimode | | | | |
|--|----------|----------|----------|----------|
| Fiber Core Diameter (µm) | 62.5 | 50 | 50 | 50 |
| Fiber Category | OM1 | OM2 | OM3 | OM4 |
| Fiber Code | K | T | T | T |
| Performance Option Code | 30 | 31 | 80 | 90 |
| Wavelengths (nm) | 850/1300 | 850/1300 | 850/1300 | 850/1300 |
| Maximum Attenuation (dB/km) | 3.4/1.0 | 3.0/1.0 | 3.0/1.0 | 3.0/1.0 |
| Serial 1 Gigabit Ethernet (m) | 300/550 | 750/500 | 1000/600 | 1100/600 |
| Serial 10 Gigabit Ethernet (m) | 33/- | 150/- | 300/- | 550/- |
| Min. Overfilled Launch (OFL) Bandwidth (MHz*km) | 200/500 | 700/500 | 1500/500 | 3500/500 |
| Minimum Effective Modal Bandwidth (EMB) (MHz*km) | 220/- | 950/- | 2000/- | 4700/- |

| Single-mode | | | | | |
|------------------------------|----------------|-----------------------|-------------------|-------------------|----------------|
| Fiber Name | SMF-28e+® LL | SMF-28® Ultra fiber** | Single-mode (OS2) | Single-mode (OS2) | LEAF® fiber |
| Fiber Category | G.652.D | G.652.D/G.657.A1 | G.652.D | G.652.D | G.655 |
| Fiber Code | L | Z | E | E | F |
| Performance Option Code | 22 | 22 | 00 | 01 | 01 |
| Wavelengths (nm) | 1310/1383/1550 | 1310/1383/1550 | 1310/1383/1550 | 1310/1383/1550 | 1310/1383/1550 |
| Maximum Attenuation (dB/km) | 0.34/0.34/0.22 | 0.34/0.34/0.22 | 0.35/0.35/0.25 | 0.4/0.4/0.3 | -/-/0.25 |
| Typical Attenuation* (dB/km) | 0.32/0.32/0.18 | 0.32/0.32/0.18 | - | - | -/-/0.19 |
| Fiber Name | SMF-28® ULL | | | | |
| Fiber Category | G.652 | | | | |
| Fiber Code | P | | | | |
| Performance Option Code | 19 | | | | |
| Wavelengths (nm) | 1310/1383/1550 | | | | |
| Maximum Attenuation (dB/km) | 0.33/-/0.19 | | | | |
| Typical Attenuation* (dB/km) | 0.31/-/0.17 | | | | |

* For more information on typical attenuation please see the Corning whitepaper at http://csmedia.corning.com/opcomm//Resource_Documents/whitepapers_r/ LAN-1863-AEN.pdf

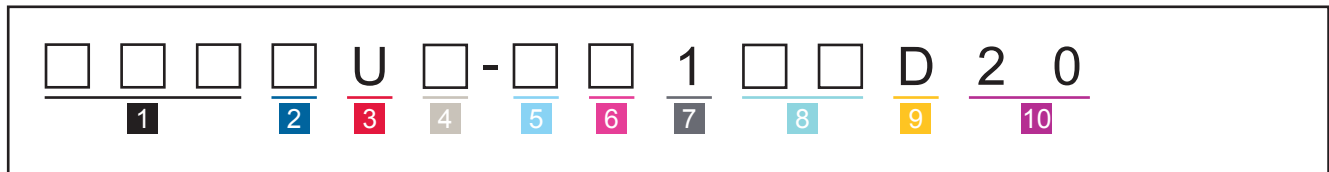
** SMF-28® Ultra fiber delivers up to 10x better macrobend loss performance compared to the G.652.D standard and up to 33 percent better macrobend loss performance than the G.657.A1 standard for 10mm radii bends.

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Ordering Information | Note: Contact Customer Care at 1-800-743-2675 for other options.



1 Select fiber count.

Standard offerings:

012 048 096 216
024 060 144 288
036 072 192

**288-fibers only available in non-armored*

2 Select fiber code.

K = 62.5 μm multimode (OM1)
T = 50 μm multimode (OM2/OM3/OM4)
E = Single-mode (G.652.D)
L = Single-mode (G.652.D) SMF-28e+® LL
Z = Single-mode (G.652.D/ G.657.A1) SMF-28® Ultra
P = Single-mode (G.652) SMF-28® ULL
F = Single-mode (G.655) LEAF®

3 Defines cable type.

U = ALTOS® Loose Tube Cable with 2.5 mm buffer tubes

4 Select outer jacket.

A = Non-armored, Figure-8
B = Armored, Figure-8

5 Select fiber placement.

T = 12 fibers/buffer tube (standard)
6 = 6 fibers/buffer tube
See Note 1.

6 Select length markings.

3 = Markings in meters
4 = Markings in feet (standard)

7 Defines tensile strength.

1 = See specifications

8 Select performance option code.

30 = 62.5 μm multimode (OM1)
31 = 50 μm multimode (OM2)
80 = 50 μm multimode (OM3)
90 = 50 μm multimode (OM4)
01 = Single-mode (OS2) (Max. attenuation 0.4/0.4/0.3 dB/km)
00 = Single-mode (OS2) (Max. attenuation 0.35/0.35/0.25 dB/km)
22 = Single-mode (OS2) (Max. attenuation 0.34/0.34/0.22 dB/km)
19 = Single-mode (Ultra Low-Loss) (Max. attenuation 0.33/-/0.19 dB/km)
01 = Single-mode NZDSF* (Max. attenuation -/-/0.25 dB/km)

**Non-Zero Dispersion-Shifted Single-mode Fiber*

9 Defines cable type.

D = Gel-Free Cable

10 Defines special requirements.

20 = No special requirements

1) Cable outer diameter may change. Example: 48 F cable with 6 fibers per tube will require 8 active buffer and have an OD like a standard 96 F cable.



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