

ALTOS® Low-Temperature Cables, 12-288 Fibers, Enhanced

CORNING

Features and Benefits

Extended operating temperature range of -50° to +70°C (-58° to +158°F)

Allows for operation at extreme low temperatures

Flexible, craft-friendly buffer tubes

Facilitate easy routing in closures

Innovative waterblocking technology

Eliminates the need for traditional flooding compound and provides efficient and craft-friendly cable preparation

SZ-stranded, loose tube design

Isolates fibers from installation and environmental rigors and facilitates mid-span access

Dielectric central strength member

No preferential bend and requires no bonding or grounding

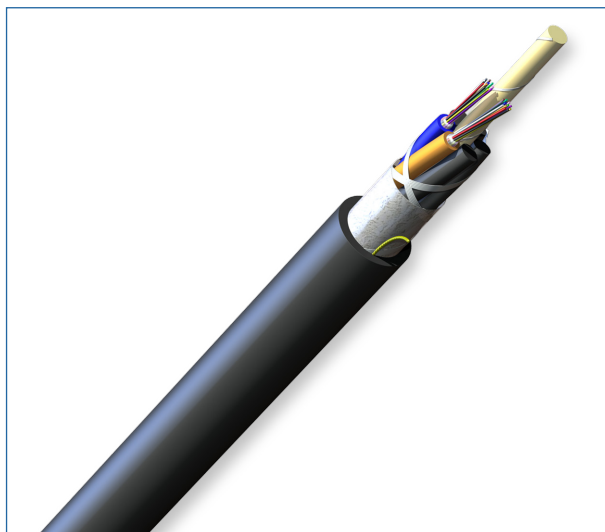
Medium-density polyethylene jacket

Makes cable rugged and durable while being flexible and easy to strip

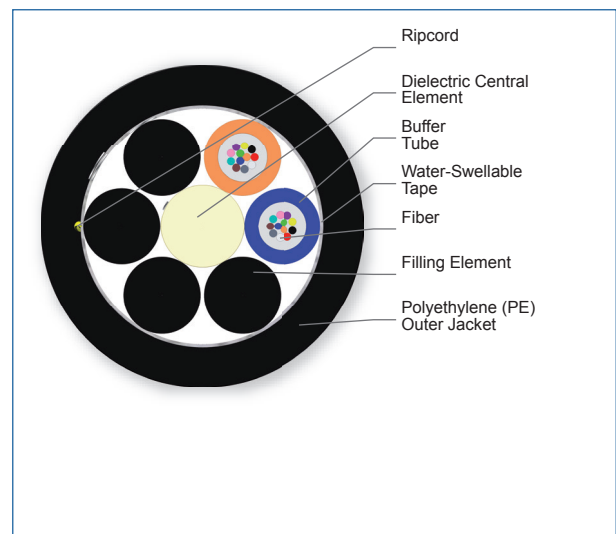
ALTOS® low-temperature cables are designed for extreme cold temperature environments with an extended operating range of -50° to +70°C (-58° to +158°F). Dielectric and armored jackets allow for duct, direct-bured or aerial (lashed) installations. See specification section for application selection.

Standards

Design and Test Criteria ANSI/ICEA S-87-640
Telcordia GR-20
RDUP PE-90



ALTOS® Low-Temperature Dielectric Cables,
24-Fibers | Photo PIM1360

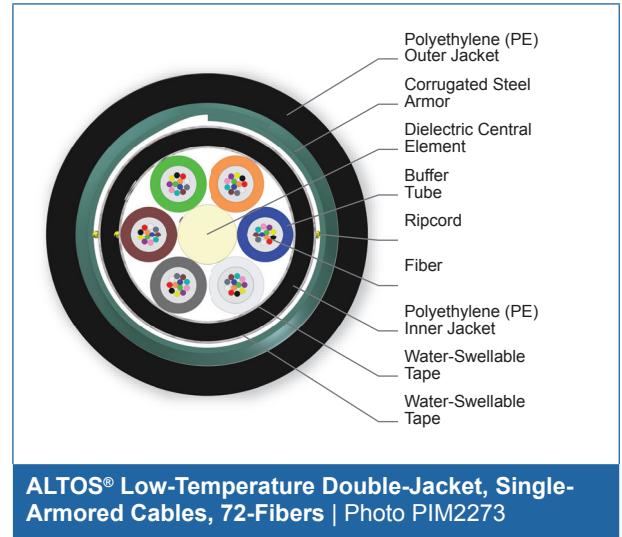
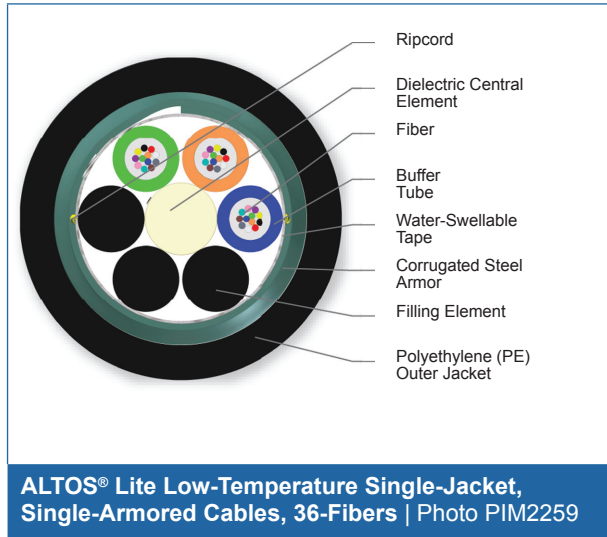


ALTOS® Low-Temperature Dielectric Cables,
24-Fibers | Photo PIM2258

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Specifications

Temperature Range	
Storage	-50 °C to 70 °C (-58 °F to 158 °F)
Installation	-30 °C to 70 °C (-22 °F to 158 °F)
Operation	-50 °C to 70 °C (-58 °F to 158 °F)

* Note: Corning recommends storing cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.

Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	890 N (200 lbf)

Mechanical Characteristics Cable						
Fiber Count	Number of Tube Positions	Number of Active Tubes	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
Low-Temperature ALTOS® Cables, All-Dielectric, 12-288 Fibers Designed for Duct and Aerial Applications						
12 - 72	6	1 - 6	80 kg/km (54 lb/1000 ft)	10.5 mm (0.41 in)	158 mm (6.2 in)	105 mm (4.1 in)

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Mechanical Characteristics Cable						
Fiber Count	Number of Tube Positions	Number of Active Tubes	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
96	8	8	108 kg/km (72 lb/1000 ft)	12.2 mm (0.48 in)	183 mm (7.2 in)	122 mm (4.8 in)
144	12	12	177 kg/km (119 lb/1000 ft)	15.8 mm (0.62 in)	237 mm (9.3 in)	158 mm (6.2 in)
192 - 216	18	16 - 18	169 kg/km (113 lb/1000 ft)	16 mm (0.63 in)	240 mm (9.4 in)	160 mm (6.3 in)
288	24	24	226 kg/km (152 lb/1000 ft)	18.2 mm (0.72 in)	273 mm (10.7 in)	182 mm (7.2 in)
Low-Temperature ALTOS® Cables, Single-Jacket/Single-Armored, 12-288 Fibers Designed for Direct-Buried and Aerial Applications						
12 - 72	6	1 - 6	136 kg/km (91 lb/1000 ft)	12.1 mm (0.48 in)	182 mm (7.1 in)	121 mm (4.8 in)
96	8	8	173 kg/km (116 lb/1000 ft)	13.8 mm (0.54 in)	207 mm (8.1 in)	138 mm (5.4 in)
144	12	12	262 kg/km (176 lb/1000 ft)	17.5 mm (0.69 in)	263 mm (10.3 in)	175 mm (6.9 in)
192 - 216	18	16 - 18	256 kg/km (172 lb/1000 ft)	17.7 mm (0.7 in)	266 mm (10.5 in)	177 mm (7 in)
288	24	24	323 kg/km (217 lb/1000 ft)	20 mm (0.79 in)	300 mm (11.8 in)	200 mm (7.9 in)

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Mechanical Characteristics Cable

Fiber Count	Number of Tube Positions	Number of Active Tubes	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
Low-Temperature ALTOS® Cables, Double-Jacket/Single-Armored, 12-288 Fibers Designed for Direct-Buried Applications						
12 - 72	6	1 - 6	179 kg/ km (120 lb/1000 ft)	14.3 mm (0.56 in)	215 mm (8.4 in)	143 mm (5.6 in)
96	8	8	219 kg/ km (147 lb/1000 ft)	16 mm (0.63 in)	240 mm (9.4 in)	160 mm (6.3 in)
144	12	12	318 kg/ km (213 lb/1000 ft)	19.7 mm (0.78 in)	296 mm (11.6 in)	197 mm (7.8 in)
192 - 216	18	16 - 18	312 kg/ km (209 lb/1000 ft)	19.9 mm (0.78 in)	299 mm (11.8 in)	199 mm (7.8 in)
288	24	24	384 kg/ km (257 lb/1000 ft)	22.2 mm (0.87 in)	333 mm (13.1 in)	222 mm (8.7 in)

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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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+® fiber	SMF-28e+® fiber	SMF-28e+® LL	SMF-28® Ultra**	ClearCurve® XB**
Fiber Category	G.652.D	G.652.D	G.652.D	G.652.D/G.657.A1	G.652.D/G.657.A1
Fiber Code	E	E	L	Z	H
Performance Option Code	01	00	22	22	01
Wavelengths (nm)	1310/1383/1550	1310/1383/1550	1310/1383/1550	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3	0.35/0.35/0.25	0.34/0.34/0.22	0.34/0.34/0.22	0.4/0.4/0.3
Typical Attenuation* (dB/km)	0.33/0.33/0.19	0.33/0.33/0.19	0.32/0.32/0.18	0.32/0.32/0.18	0.35/0.35/0.20
Fiber Name	LEAF®	SMF-28® ULL			
Fiber Category	G.655	G.652			
Fiber Code	F	P			
Performance Option Code	01	19			
Wavelengths (nm)	1310/1383/1550	1310/1383/1550			
Maximum Attenuation (dB/km)	-/-/0.25	0.33/-/0.19			
Typical Attenuation* (dB/km)	-/-/0.19	0.31/-/0.17			

* Typical attenuation values match the attenuation values listed in the optical fiber specifications. See www.corning.com/opticalfiber for Corning optical fiber specifications. Better attenuation performance options are available for some fiber and cable types. Contact Customer Care for additional fiber options.

** SMF-28® Ultra and ClearCurve® XB fiber deliver 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.

				U		-			1			C	2	0
1	2	3	4	5	6	7	8	9	10					

1 Select fiber count.

Standard offerings:
012-288 (Increments of 12)

2 Select fiber code.

K = 62.5 µm multimode (OM1)
T = 50 µm multimode (OM2/OM3/OM4)
E = Single-mode (G.652.D) SMF-28e+®
L = Single-mode (G.652.D) SMF-28e+® LL
Z = Single-mode (G.652.D/G.657.A1) SMF-28® Ultra
H = Single-mode (G.652.D/G.657.A1) ClearCurve® XB
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 jacket.

4 = Dielectric
C = Single-jacket, single-armored
5 = Double-jacket, single-armored
See Note 1.

5 Select fiber placement.

T = 12 fibers/buffer tube (standard)
6 = 6 fibers/buffer tube
See Note 2.

6 Select length markings.

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

7 Defines tensile strength.

1 = 2700 N/600 lbf (standard)

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.

C = ALTOS® Low-Temperature Gel-Filled Cable

10 Defines special requirements.

20 = No special requirements

1) See specifications section for application.

2) 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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