

Industrial Fiber Optic Cables, LSZH™ Corrugated Armored Cable, 12-288 Fibers

CORNING

Features and Benefits

Corrugated armor

Mechanical protection

Low-smoke/zero-halogen (LSZH™) sheath

Key life-safety benefit

Meets cyclic impact and chemical resistance test

Superior performance

Tray-rated per UL 13; UL 444; UL 1277; UL 1685; CSA C22.2 No. 230 and No. 232

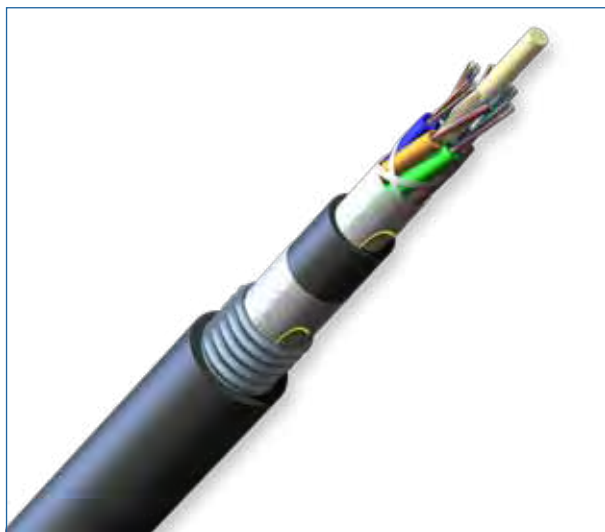
Tested to industrial ruggedness standards

Listed OFCR-LS and CSA OFC FT4-ST1; IEC 60332-3, IEC 61034 and IEC 60754-2

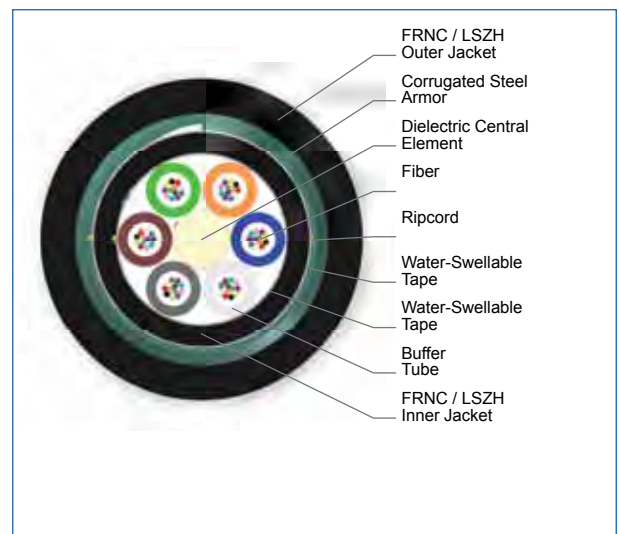
Meets burn test criteria

Corning Cable Systems LSZH™ Industrial Fiber Optic Cables are designed for industrial building backbones and harsh environments atypical of traditional datacom systems. Based on proven stranded loose tube cable designs, these tray-rated industrial cables are flame-retardant and have been tested to meet mechanical/environmental conditions exceeding the requirements set for traditional datacom cables. When tested to specified “tray” application requirements, these cables have demonstrated superior performance levels for compressive loading, cyclic impact and chemical resistance. This ruggedized armored version offers additional mechanical protection and is also available in a gel-filled, cold temperature version. The 250 µm color-coded individual fibers offer quick and easy identification during installation, with 50 µm, 62.5 µm and single-mode versions available. A key benefit of the Corning Cable Systems Industrial Cables is the low-smoke/zero-halogen (LSZH) sheath.

Corning Cable Systems LSZH™ Industrial Cables provide life-safety benefits for industrial applications through the cables' construction. Many traditional data communication cables contain halogens in the jacket compound, which pose little risk in the controlled and protected environment of typical building air spaces, such as behind walls, under floors and in conduit. However, cables deployed in industrial applications, particularly on the plant floor, are typically exposed to greater risk of fire, extreme temperatures or chemical exposure. This often makes halogen cables inappropriate for industrial environments. When cables containing halogens ignite, they



Industrial LSZH™ Loose Tube, Gel-Free, Corrugated Armored Cables, 72-Fibers



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Standards

Approval and Listings National Electrical Code® (NEC®) OFCR-LS, CSA OFC FT4-ST1; Sunlight Resistant (SUN RES); IEEE-383 flame test; Suitable for Direct Burial (DIR BUR); IEC 60332-3, IEC 60754-2, IEC 61034

Common Installations Outdoor aerial and duct; indoor riser and general purpose horizontal according to NEC Article 770

Design and Test Criteria ANSI/ICEA S-104-696; UL 13; UL 444; UL 1277; UL 1666; CSA C22.2 No. 230 and No. 232

emit highly reactive gases that can be harmful if inhaled. When halogens combine with water, acids are formed. These acids damage both living tissue and inorganic materials, such as metal and electronic equipment. Corning Cable Systems LSZH Industrial Cables eliminate these risks in the event of a fire in the industrial environment. In addition, the LSZH compound does not drip when superheated; the material burns to ash, eliminating the onset of secondary fires.

Specifications

Temperature Range

Storage	-50 °C to 75 °C (-58 °F to 167 °F)
Installation	-30 °C to 60 °C (-22 °F to 140 °F)
Operation	-50 °C to 75 °C (-58 °F to 167 °F)

* Corning Cable Systems recommends storing indoor/outdoor cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.

Mechanical Characteristics Cable

Max. Tensile Strengths, Short-Term	2700 N (600 lbf)
Max. Tensile Strengths, Long-Term	810 N (180 lbf)

Fiber Count	Product Type	Fibers per Tube	Number of Tube	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
12 - 72	Corrugated armor	12	6	14.8 mm (0.58 in)	222 mm (8.7 in)	148 mm (5.8 in)	238 kg/km (160 lb/1000 ft)
96	Corrugated armor	12	8	16.5 mm (0.65 in)	248 mm (9.7 in)	165 mm (6.5 in)	286 kg/km (192 lb/1000 ft)
144	Corrugated armor	12	12	20.1 mm (0.79 in)	302 mm (11.9 in)	201 mm (7.9 in)	395 kg/km (266 lb/1000 ft)

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Fiber Count	Product Type	Fibers per Tube	Number of Tube	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
192 - 216	Corrugated armor	12	18	20.3 mm (0.8 in)	305 mm (12 in)	203 mm (8 in)	381 kg/km (256 lb/1000 ft)
288	Corrugated armor	12	24	22.5 mm (0.89 in)	338 mm (13.3 in)	225 mm (8.9 in)	465 kg/km (312 lb/1000 ft)

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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Transmission Performance

Fiber Type	Multimode	Multimode	Multimode	Multimode	Multimode	Bend-Improved Single-mode (OS2)	Single-mode
Fiber Core Diameter (μm)	62.5	50	50	50	50	9	8.2
Fiber Category	OM1	OM2	OM3	OM4	OM4 Extended Distance	OS2	OS2
Fiber Code	K	T	T	T	T	H	E
Performance Option Code	30	31	80	90	91	01	01
Wavelengths (nm)	850 / 1300	850 / 1300	850 / 1300	850 / 1300	850 / 1300	1310 / 1383 / 1550	1310 / 1383 / 1550
Maximum Attenuation (dB/km)	3.4 / 1.0	3.0 / 1.0	3.0 / 1.0	3.0 / 1.0	3.0 / 1.0	0.4 / 0.4 / 0.3	0.4 / 0.4 / 0.3
Serial 1 Gigabit Ethernet (m)	300 / 550	750 / 600	1000 / 600	1100 / 600	1100 / 600	5000 / - / -	5000 / - / -
Serial 10 Gigabit Ethernet (m)	33 / -	150 / -	300 / -	550 / -	600 / -	10000 / - / 40000	10000 / - / 40000
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	200 / 500	700 / 500	1500 / 500	3500 / 500	3500 / 500		
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	220 / -	950 / -	2000 / -	4700 / -	5350 / -		

* ITU-T G.652 D compliant.

* Meets 0.75 ns optical skew when used in all Corning Cable Systems Plug & Play™/Pretium EDGE® Systems Solutions.

* Assumes 1.0 dB maximum total connector/splice loss.

* Assumes 0.7 dB maximum total connector/splice loss.

Notes: 1) Improved attenuation and bandwidth options available.

2) Bend-insensitive single-mode fibers available on request.

3) Contact a Corning Cable Systems Customer Care Representative for additional information.

4) 50 μm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.

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Ordering Information | Contact Customer Care at 1-800-743-2671 for other options.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	U	V	-	T	4	1	<input type="text"/>	<input type="text"/>	D	2	N
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
E = Single-mode, OS2 SMF-28e®

3 Defines cable type.

U = Loose tube, gel-free

4 Defines outer jacket.

V = LSZH™ Corrugated Armored Cable

5 Defines fiber placement.

T = 12 fibers/buffer tube (standard)

6 Defines length markings.

4 = Markings in feet (standard)

7 Defines tensile strength.

1 = 2700 N/600 lb (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
91 = 50 µm multimode, OM4+
01 = Single-mode, OS2
(Max. attenuation .4 / .3 dB/km)

9 Defines cable type.

D = Loose tube, gel-free

10 Defines special manufacturing code.

2N = Standard



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