

# Industrial LSZH™ Tray-Rated, Loose Tube, Gel-Free, Interlocking Armored Cable

192 F, SMF-28® Ultra fiber, Single-mode (OS2)

CORNING

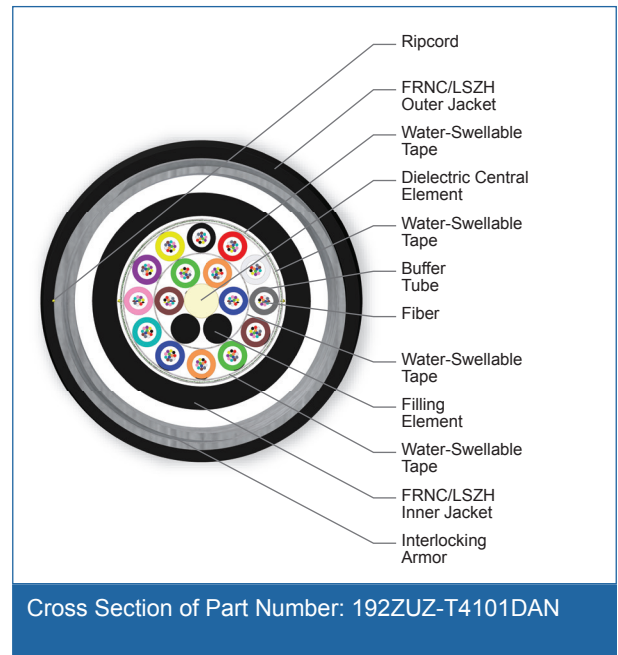
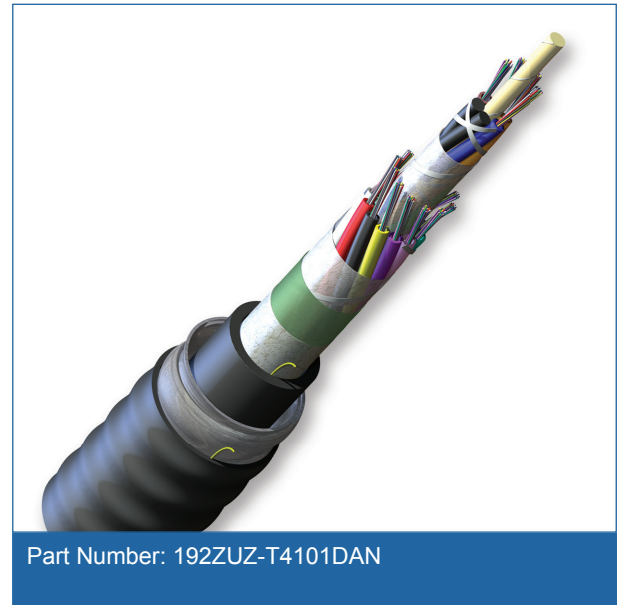
Corning Industrial LSZH™ fiber optic cables are designed for industrial building backbones and harsh environments atypical of traditional datacom systems. Based on proven stranded loose tube cable designs, these tray-rated industrial cables are flame-retardant and have been tested to meet mechanical/ environmental conditions exceeding the requirements set for traditional datacom cables. They have also demonstrated superior performance levels when tested to specified “tray” application requirements for compressive loading, cyclic impact and chemical resistance. The 250 µm color-coded individual fibers offer quick and easy identification during installation.

Corning Industrial LSZH™ 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 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 Industrial LSZH™ 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.

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*Note: This cable is available in 12 different jacket colors – blue, orange, green, brown, slate, white, red, black, yellow, violet, rose and aqua. The colored jacket allows for easy visual identification of the cables while still providing all of the required environmental protection of an indoor/ outdoor cable jacket. Black is the standard jacket color using the part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.*



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## Features and Benefits

### Low-smoke, zero-halogen sheath

Key life-safety benefit

### Meets cyclic impact and chemical resistance test

Superior performance

### Interlocking armor

Mechanical protection

### Common installations

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

## Standards

### Listings

National Electrical Code® (NEC®) OFCR-LS; Sunlight Resistant (SUN RES); IEEE-383/IEEE-1202 flame test; Suitable for Direct Burial (DIR BUR); IEC 60332-3, IEC 60754-2, IEC 61034

### 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; CSA OFC (FT-4-S1)

## Specifications

General Specifications	
Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, Tray Rated, (General Purpose Horizontal)
Cable Type	Loose Tube
Product Type	Interlocking armor
Flame Rating	LSZH™ (OFC-LS)
Fiber Category	SMF-28® Ultra fiber

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## Temperature Range

Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-30 °C to 60 °C (-22 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

## Cable Design

Central Element	Dielectric
Fiber Count	192
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Number of Tube Positions	18
Number of Active Tubes	16
Buffer Tube Color Coding, Layer 1	Blue, Orange, Green, Brown
Buffer Tube Diameter	2.5 mm (0.1 in)
Number of Filling Elements	2
Tape	Water-swellable
Buffer Tube Color Coding, Layer 2	Slate, White, Red, Black, Yellow, Violet, Rose, Aqua, Blue*, Orange*, Green*, Brown*
Tape, Layer 2	Water-swellable
Tape, Layer 3	Flame-retardant tape
Tape, Layer 4	Water-swellable
Inner Jacket Material	Flame-retardant, non-corrosive/low-smoke, zero-halogen (FRNC/LSZH) material
Tensile Strength Elements and/or Armoring - Layer 1	Interlocking armor
Number of Ripcords	2
Outer Jacket Material	Flame-retardant, non-corrosive/low-smoke, zero-halogen (FRNC/LSZH) material
Outer Jacket Color	Black

## Mechanical Characteristics Cable

Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	810 N (180 lbf)
Weight	567 kg/km (381 lb/1000 ft)
Nominal Outer Diameter	28.3 mm (1.11 in)
Min. Bend Radius Installation	425 mm (16.7 in)
Min. Bend Radius Operation	283 mm (11.1 in)

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## Chemical Characteristics

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

### Optical Characteristics (cabled)

Fiber Name	SMF-28® Ultra fiber
Fiber Category	G.657.A1
Fiber Code	Z
Performance Option Code	01
Wavelengths	1310 nm / 1383 nm / 1550 nm
Maximum Attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km
Typical Attenuation	0.33 dB/km / 0.33 dB/km / 0.19 dB/km

\* For more information on typical attenuation please see the Corning whitepaper at [http://csmedia.corning.com/opcomm//Resource\\_Documents/whitepapers\\_rl/LAN-1863-AEN.pdf](http://csmedia.corning.com/opcomm//Resource_Documents/whitepapers_rl/LAN-1863-AEN.pdf)

## Ordering Information

Part Number	192ZUZ-T4101DAN
Product Description	Industrial LSZH™ Tray-Rated, Loose Tube, Gel-Free, Interlocking Armored Cable, 192 F, SMF-28® Ultra fiber, Single-mode (OS2)



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