Fortex DT Light Armor Fiber Optic Cable

Lose the Gel with Durable, Totally Gel-Free Fiber Optic Cable for Cleaner, Faster Installations

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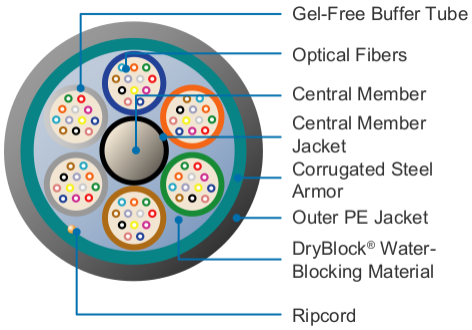
Features And Benefits

- Totally gel-free cable design for cleaner, faster installations
- Easy to handle and install
- Highly durable and reliable for underground duct and lashed aerial installations (including duct-to-lashed aerial) as well as general OSP installations, including direct buried in harsh environments
- PE coated ECCS armor offers additional crush resistance and protection from rodent attack
- Smaller, more flexible buffer tubes for easier installation and routing
- Fiber counts to 288
- Available with Lightera application-specific fibers including AllWave+ ZWP Single-Mode, TrueWave® RS LWP Single-Mode and Multimode optical fibers



Product Description

The Lightera Fortex™ DT Light Armor Loose Tube Cable delivers the rugged durability and reliability essential for outside plant (OSP) use in an innovative, completely gel-free cable design.
To construct this cable, the optical fibers are placed in space-efficient, 2.5 mm buffer tubes that contain a specially-engineered, super-absorbent yarn that delivers water blocking “on demand”. The color-coded buffer tubes are then stranded around a dielectric central member using the reverse oscillating lay (ROL) stranding technique for easy, mid-span fiber access. Additional gel-free, super-absorbent material is applied to the cable core for exceptional water-blocking performance and faster cable preparation. A layer of corrugated electrolytically chrome-coated steel (ECCS) armor is then applied lengthwise over the cable core to provide rugged durability. Finally, a ripcord and a durable polyethylene (PE) jacket are added to complete the cable construction.

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Why the Fortex DT Light Armor Cable?	As the industry's first 100% gel-free[1], loose tube cable to meet the water-blocking requirements of ANSI/ICEA and Telcordia OSP cable standards, the Fortex DT Light Armor Cable offers all the benefits of a standard light armor loose tube cable plus it's completely gel-free – even inside the buffer tubes! Unlike traditional OSP cables that use gels in direct contact with optical fibers, the Fortex DT Light Armor Cable replaces gels with a specially-designed, super-absorbent yarn in each buffer tube that provides water blocking "on demand". By eliminating gels and filling compounds, this cable offers virtually effortless splice preparation, while keeping your tools, workspace, closures, and cabinets cleaner. The Fortex DT Light Armor Cable is also lighter in weight, making it easier to handle and less of a load on your work crew and plant infrastructure.
Note	[1] "100% gel free" indicates that no oils, gels, or flooding compounds are used to block water penetration under the fiber optic cable sheath or through the core.

Specifications

Fiber Count	12, 24, 48	72	96	144	288
Outer Diameter in. (mm)	0.45 (11.5)	0.48 (12.1)	0.55 (13.9)	0.69 (17.4)	0.78 (19.8)
Weight lb/kft (kgm/km)	75 (111)	82 (122)	107 (159)	159 (236)	184 (274)

Performance Standard (all cables)

Performance Standard	Tested per Applicable Requirements of ANSI/ICEA S-87-640 and Telcordia GR-20-CORE Issue 4.

Handling

Minimum Bend Radius, With Load	15 X OD*
Minimum Bend Radius, With No Load	10 X OD
Minimum Bend Radius, Storage Coils	10 X OD
Maximum Rated Cable Load (MRCL)	600 lbf (2700 N)
Maximum Long Term Load	180 lbf (800 N)
Note	OD = Outer Diameter of Cable, minimum of 6 in. (15 cm). See Lightera Installation Procedure 042 for sheath preparation and coiling instructions.

Temperature

Installation	-30 °C to 60 °C (-22 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)
Storage	-40 °C to 75 °C (-40 °F to 167 °F)

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Fiber Type[2]							
Single-Mode Fiber	**Fiber (S1)**	**Fiber (S2)**	**Fiber (SF)**	**Fiber Standards**	**Wavelengths (nm)**	**Typical* Attenuation (dB/km)**	**Maximum Cable on Reel Attenuation (dB/km)**
AllWave+ ZWP Fiber	3	C	E	G.652.D/G.657.A1	1310/1385/1550	-	0.35/0.31/0.25
AllWave One Fiber	3	F	E	G.652.D/G.657.A1	1310/1385/1550	0.33/0.31/0.19	0.34/0.31/0.22
TrueWave RS LWP Fiber	6	2	6	G.655.C&D	1550	0.21	0.25
TeraWave Fiber	6	2	R	G.654.B	1550	0.19	0.25
TeraWave ULL Fiber	6	9	R	G.654.B	1550	0.18	0.22
Multimode Fiber	**Fiber (S1)**	**Fiber (S2)**	**Fiber (SF)**	**Fiber Standards**	**Wavelengths (nm)**	**Typical* Attenuation (dB/km)**	**Maximum Cable on Reel Attenuation (dB/km)**
62.5 µm Fiber	R	U	9	OM1 62.5 µm	850/1300	-	3.4/1.0
LaserWave FLEX 300 Fiber	L	F	2	OM3 50 µm	850/1300	-	2.4/0.7
LaserWave FLEX 550 Fiber	L	H	2	OM4 50 µm	850/1300	-	2.4/0.7

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Fortex DT Light Armor Loose Tube Cable Ordering Information	
Example	**AT-3BEH2YT-NNN[1]**
Part Number	**AT- S1 S2 SF S3 S4 S5 S6 NNN**
S1	Fiber Selection. See S1 in Fiber Type table above
S2	Fiber Transmission Performance. See S2 in Fiber Type table above
SF	Fiber Type[2]. See SF in Fiber Type table above
S3	Sheath Construction. H = Single Jacket, Single Armor
S4	Tensile Load. 2 = 600 lb (2700 N)
S5	Core Type. Y = Totally Gel-Free Loose Tube
S6	Fibers per Tube. T = 12 fibers
NNN	Fiber Count = 12, 24, 48, 72, 96, 144, and 288
Note	[1] Part Number shown is for a Fortex DT Light Armor Cable with standard AllWave ZWP attenuation and standard cable print. Maximum AllWave ZWP attenuation: 0.35/0.31/0.27/0.25/0.27 dB/km @ (1310/1385/1490/1550/1625 nm Standard Print, example for Fortex DT Light Armor Cable: LIGHTERA OPTICAL CABLE AT-3BEH2YT-NNN [MM-YY] [HANDSET SYMBOL] [NNN] F [SERIAL #] [2] Contact Lightera Order Management for information on other cable variations, including additional fiber types, attenuation, and custom cable print. For more information regarding typical attenuation as well as attenuation parameters on Link Design Value (LDV) (Maximum end-to-end attenuation over a concatenated span), please see Lightera Application Note AN-111 which can be downloaded at www.lightera.com or contact your Lightera representative.

Contact Information	For additional information please contact your sales representative. You can also visit our website at www.lightera.com or call 1-888-FIBERHELP (1-888-342-3743) USA or 1-770-798-5555 outside the USA. For a full list of our certifications, visit our website.
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