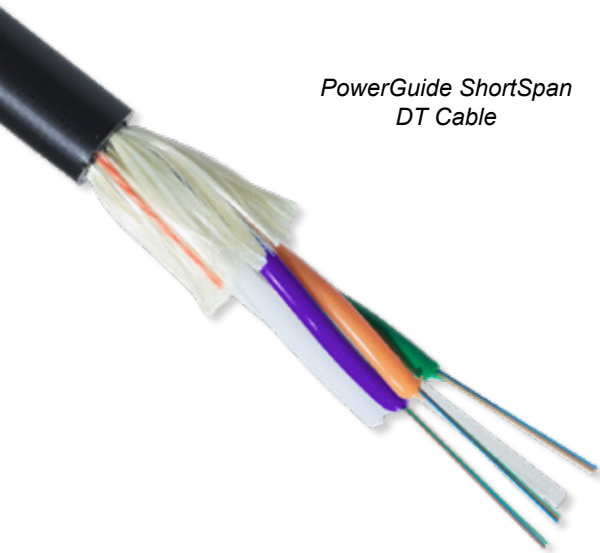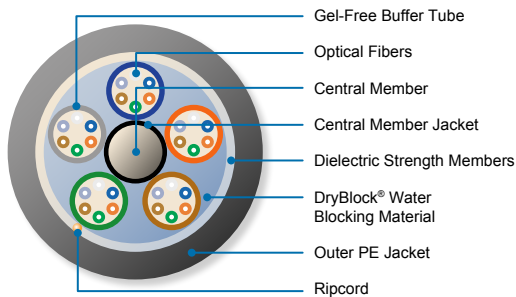# PowerGuide® ShortSpan DT Cable

Totally Gel-Free, ADSS Cable Enables Faster and Less Costly Installation for FTTH and Power Network Deployments

PowerGuide ShortSpan DT Cable

Features and Benefits

- Industry-first, gel-free ADSS cable for cleaner, faster and less costly deployments
- Efficient, cost-effective solution for short cable spans ranging up to 1,150 feet (350 meters) [1]
- Lighter weight, dry cable helps cut cable end preparation time [2]
- Enables significant cost savings from the use of less costly attachment hardware [3]
- Allows up to a 10% greater span length capability [4]
- Fiber counts up to 144
- Single polyethylene outer jacket for fast, convenient cable preparation (suitable for distribution and low voltage applications)
- Cleaner work environment helps support faster splicing with higher yields
- Small round profile minimizes wind and ice loading
- Environmentally-friendly cable helps reduce waste and the need for special cleaning solvents
- Single cable outer diameter for fiber counts of 2 to 60 for simplified hardware selection and splicing
- Available with OFS application-specific fibers including AllWave® Zero Water Peak (ZWP) and AllWave+ Single-Mode, TrueWave® *RS* Low Water Peak (LWP) and Multimode fibers
- Highly durable and reliable for short spans including FTTH deployments, distribution networks, direct use in ducts, aerial-to-duct transitions and aerial-to-underground installations

- Gel-Free Buffer Tube
- Optical Fibers
- Central Member
- Central Member Jacket
- Dielectric Strength Members
- DryBlock® Water Blocking Material
- Outer PE Jacket
- Ripcord

PowerGuide ShortSpan DT Cable Cross-Section

[1] Maximum span range from 400 feet to 1,150 feet, depending on loading conditions, fiber counts, installation conditions and clearance requirements. Contact OFS for specific details for your application.

Product Description

The groundbreaking, totally gel-free PowerGuide® ShortSpan DT All-Dielectric, Self-Supporting (ADSS) Loose Tube Cable helps enable faster deployment and reduced installation costs to offer an ideal, cost-effective solution for short cable spans ranging up to 1,150 feet (350 meters) [1] (including FTTH deployments, distribution networks and duct installations).

OFS' field-proven, gel-free loose tube design lies at the heart of each PowerGuide ShortSpan DT Cable. To construct this cable, optical fibers are placed in flexible buffer tubes that contain a specially-engineered, super-absorbent yarn that delivers water blocking "on demand" without the use of messy gels and filling compounds. This patented water-blocking system has been successfully deployed for eight years in our Fortex™ DT Cable product families. Next, the color-coded buffer tubes are 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 then applied to the cable core to offer exceptional water-blocking performance and faster cable preparation. Finally, aramid yarn strength elements are added and a robust polyethylene outer jacket is applied to complete the construction of a totally gel-free, lightweight cable that is durable, reliable and easy to handle and install.

Why the PowerGuide ShortSpan DT Cable?

As the world's first gel-free ADSS cable, PowerGuide ShortSpan DT Cable offers the same high performance and reliability as its gel-filled counterparts. Plus, it's completely gel-free, even inside of the buffer tubes. By eliminating gels and filling compounds, this cable helps enable substantial savings on installation time and labor costs. In fact, when compared with similar gel-filled ADSS cables, PowerGuide ShortSpan DT Cable can help cut cable end preparation time by up to 80%[2], helping to significantly reduce labor costs for splicing and terminations.

PowerGuide ShortSpan DT Cable also offers a significantly lower overall cable weight, which results in easier handling and lower operating tensions on the poles. This reduction in cable weight and operating tensions may also enable the use of less costly, lighter duty attachment hardware[3], and allows up to a 10% greater span length capability than similar, gel-filled cables[4]. In addition, this lightweight cable is easier to handle and install, creating less of a load on your work crew and plant infrastructure.

The PowerGuide ShortSpan DT Cable's gel-free design also helps save on labor costs by offering faster splicing with higher first pass yields due to a cleaner work environment. By removing nasty gels and filling compounds, this cable allows virtually effortless splice preparation, while keeping your tools, workspace, closures and cabinets cleaner and safer. This cable also enables additional cost savings by helping to minimize or eliminate the need for special cleaning solvents and wipes, along with the expense of cleaning splicer/cleaver equipment. These advantages combine to make PowerGuide ShortSpan DT Cable an "environmentally-friendly" solution that also helps save on deployment time and expense.

In summary, the PowerGuide ShortSpan DT Cable is an outstanding choice for short cable spans including FTTH deployments and distribution networks, and for aerial use (self-supporting), direct use in ducts, aerial-to-duct transitions and aerial-to-underground installations.

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[2] Based on field studies examining the time required to prepare cable ends for splicing and terminations for similar gel-filled ADSS cables as compared with PowerGuide ShortSpan DT Cable.

[3] For a typical 250-foot cable run, under NESC Medium Loading Conditions, the gel-free cable construction allows for the use of light duty attachment hardware, which costs on average 40% less per pole. Lighter duty and less costly attachment hardware may be used due to lower loading tensions made possible by the lighter weight, gel-free cable design.

[4] For a typical, gel-free 144-fiber ADSS cable at 500-foot span lengths under NESC Medium Loading Conditions, there can be a gain of up to a 10% increase in span length capability when compared with equivalent strength systems in similar, gel-filled cables.

[5] Fortex DT Loose Tube Cable was a Fiber Optic Technology 2003 Tech Award Winner.

[6] Fortex DT Loose Tube Cable was the industry's first gel-free loose tube cable to meet the water-blocking requirements of Telcordia Technologies' GR-20-CORE outside plant standards.

Specifications						
Fiber Count:		2-60	61-72	73-96	97-120	121-144
Outer Diameter - in. (mm)	CMEA Design	0.47 (11.8)	0.51 (12.8)	0.58 (14.8)	0.73 (18.6)	0.73 (18.6)
	CLGA Design	0.46 (11.7)	0.50 (12.7)	0.58 (14.7)	0.73 (18.5)	0.73 (18.5)
Weight - lb/kft (kgm/km)	CMEA Design	57 (85)	68 (101)	91 (136)	153 (227)	153 (227)
	CLGA Design	56 (83)	67 (100)	91 (135)	152 (226)	152 (226)

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*	Temperature:	Installation: -22 °F to 158 °F	(-30 °C to 70 °C)
Maximum Rated Cable Load (MRCL):	Variable		Operation: -40 °F to 158 °F	(-40 °C to 70 °C)
Maximum Long Term Load:	Variable		Storage: -40 °F to 167 °F	(-40 °C to 75 °C)
NOTE: OD = Outer Diameter of Cable				

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	B	E	G.652.D	1310/1385/1550	-	0.35/0.31/0.25
AllWave+ ZWP Fiber	3	C	E	G.652.D/G.657.A1	1310/1385/1550	-	0.35/0.31/0.25
AllWave FLEX ZWP Fiber	5	B	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
AllWave ULL Fiber	3	H	E	G.652.D/G.657.B	1310/1550	0.31/0.17	0.33/0.19
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						
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

PowerGuide ShortSpan DT ADSS Loose Tube Cable Ordering Information

Example: AT-3BE17NT-*NNN* - *CMEA*[1]   Part Number: **AT-** *S1 S2 SF S3 S4 S5 S6* **-** *NNN* - *XXXX*

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**
1 = Single Jacket All Dielectric

S4 = **Tensile Load**
7 = PowerGuide ShortSpan

S5 = **Core Type**
N = Totally Gel-Free ADSS Loose Tube

NNN = **Fiber Count** = 002 – 144

XXXX = **CMEA** or **CLGA** *(see footnote 3 below)*

[1] Part Number shown is for a PowerGuide ShortSpan DT 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 PowerGuide ShortSpan DT Cable: OFS OPTICAL CABLE AT-3BE17NT-NNN-CMEA [MM-YY] (UL) US TYPE OFNR [HANDSET SYMBOL] NNN] F [SERIAL #]

[2] Contact OFS Order Management for information on other cable variations, including additional fiber types, attenuation, and custom cable print.

[3] Custom/Special (XXXX): Consult with us regarding your application, span lengths, and loading conditions to complete the custom design and part number of your complete sheath strength system.

NOTE: 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 OFS Application Note AN-111 which can be downloaded at www.ofsoptics.com or contact your OFS representative.

For additional information please contact your sales representative.
You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.