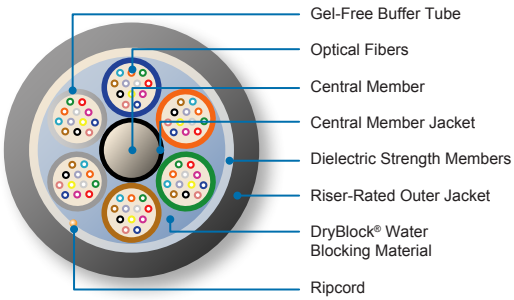
A Furukawa Company

OPTION1™ DT Outdoor/Indoor Cable

New Totally Gel-Free, Riser-Rated Cable Enables Faster, Less Costly Deployment for Inter-Building Applications

OPTION1 DT Cable



OPTION1 DT Cable Cross-Section

Features and Benefits

- Totally gel-free, reduced weight cable helps save on deployment time and expense
- Helps reduce cable preparation time by up to 80% [1]
- Streamlined installation with direct outdoor-to-indoor cable transitions
- Cleaner work environment helps support faster splicing with higher yields
- Enhances system performance by avoiding additional splice point attenuation loss
- Environmentally-friendly cable helps reduce waste and the need for special cleaning solvents
- Riser- and tray-rated; all-dielectric construction with OFNR approval; meets UL 1666 (riser-rated) and IEC 60332-3C for flame resistance
- UV-resistant jacket for reliable service in direct sunlight
- Fiber counts up to 288
- Available with OFS application-specific fibers including AllWave® Zero Water Peak (ZWP) and AllWave+ ZWP Single-Mode, TrueWave® *RS* LWP Single-Mode, and Multimode Fibers

Product Description

OPTION1 DT Riser-Rated, Outdoor/Indoor Fiber Optic Cable innovatively combines the safety features of an indoor, riser-rated cable with the durability critical to outside plant (OSP) use, all in a single, gel-free cable that helps enable faster deployment and reduced installation costs.

OFS' field-proven, totally gel-free loose tube design lies at the heart of each OPTION1 DT Cable. To construct this cable, optical fibers are placed within flexible 2.5 mm buffer tubes that contain a specially-engineered, super-absorbent yarn that delivers excellent water penetration resistance without the use of messy gels and filling compounds. Next, 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 then applied to the cable core to offer added water-blocking protection and faster cable preparation. Finally, dielectric strength elements, a ripcord and a durable outer jacket complete the cable construction.

Why the OPTION1 DT Cable?

The completely gel-free OPTION1 DT Cable offers the safety features needed for indoor riser use along with the durability required for OSP applications.

Unlike traditional loose tube cables that use gels in direct contact with optical fibers, the OPTION1 DT Cable replaces gels with a specially-engineered, super-absorbent yarn that provides outstanding water penetration resistance. 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 outdoor/indoor cables, the OPTION1 DT Cable can help cut cable end preparation time by up to 80%, helping to significantly reduce labor costs for splicing and terminations [1].

[1] In field trials, the gel-free OPTION1 DT Cable reduced the time required for cable end preparation for splicing and terminations by up to 80% as compared with OFS and competitor gel-filled loose tube cables.

Specifications

Fiber Count:	2-60	61-72	73-96	97-120	121-144	145-216	217-240	241-288
Outer Diameter - in. (mm)	0.52 (13.1)	0.52 (13.1)	0.58 (14.6)	0.64 (16.2)	0.71 (18.0)	0.71 (18.1)	0.74 (18.9)	0.82 (20.7)
Weight - lb/kft (kgm/km)	108 (160)	108 (160)	132 (196)	163 (243)	202 (300)	173 (257)	188 (280)	226 (337)

Performance Standard

Tested per Applicable Requirements of ANSI/ICEA S-87-640, Telcordia GR-20 CORE and UL® 1666 (Riser)

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)

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

***NOTE:** OD = Outer Diameter of Cable, minimum of 6 in. (15 cm). See OFS Installation Procedure 042 for sheath preparation and coiling instructions.*

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 *Low Loss* Fiber	3	A	E	G.652.D	1310/1385/1550	0.33/0.31/0.19	0.34/0.31/0.22
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							
62.5 µm Fiber	R	U	9	OM1 62.5 µm	850/1300	-	3.4/1.0
LaserWave® *FLEX* 300 Fiber	R	F	2	OM3 50 µm	850/1300	-	2.4/0.7
LaserWave *FLEX* 550 Fiber	R	H	2	OM4 50 µm	850/1300	-	2.4/0.7

OPTION1 DT Cable Ordering Information

Example: AT-3BE12RT-*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**
1 = Single Jacket All Dielectric

S4 = **Tensile Load**
2 = 600 lb (2700 N)

S5 = **Core Type**
R = Totally Gel-Free OPTION1 DT

S6 = **Fibers per Tube**
T = 12 fibers

NNN = **Fiber Count** = 002 – 288

[1] Part Number shown is for an OPTION1 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 OPTION1 DT Cable: OFS OPTICAL CABLE AT-3BE12RT-NNN [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.

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.

OFS Marketing Communications
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