FlexNAP™ Outside Plant System

CORNING

Features and Benefits

Factory-installed, sealed splice points (2, 4, 6, 8 or 12 fibers per tether)
Drastically reduces field splicing with a predetermined loss at each waterproof tether attachment point (TAP)

Flexible preterminated access points
Utilize traditional field-installation techniques for aerial, below-grade, and duct applications

Maximum of two tethers per attachment point
Up to 24 fibers at each designated TAP point

Distribution cables available in ALTOS® Loose Tube Gel-Free Cable, ALTOS Figure-8, ALTOS Lite™ Gel-Free Armored Cable and RPX® Ribbon Cable (buried N/A)
Field familiarity with traditional network cable types

OptiSheath® MultiPort Terminals may be configured with four, six, eight or 12 OptiTap® Connector Adapters
Allow multiple configuration variations that are suitable for aerial, below-ground and duct applications

Corning FlexNAP™ outside plant system provides the most cost-effective method of deploying optical fiber in outside plant distribution networks at speeds significantly faster than traditional field installations. The FlexNAP system utilizes optical fiber cables upon which network access points are pre-installed at customer-specified locations along the length of the cable. The cable and network access points are tested and shipped as a complete distribution cable/terminal system.

Compatible with both aerial (overlash, dedicated messenger and self-support) and below-ground (direct-buried and 1.25 in duct) outside plant distribution applications, Corning FlexNAP system significantly reduces installation time by as much as 50 percent per network access point.

The increased speed of network deployment, along with the reliability of factory testing, offers significant value to the end user in the following key areas: deployment velocity, risk avoidance, workforce efficiency, capital avoidance, and deferment.

Standards

Design and Test Criteria	GR-3122, GR-771, GR-3120, GR-3152

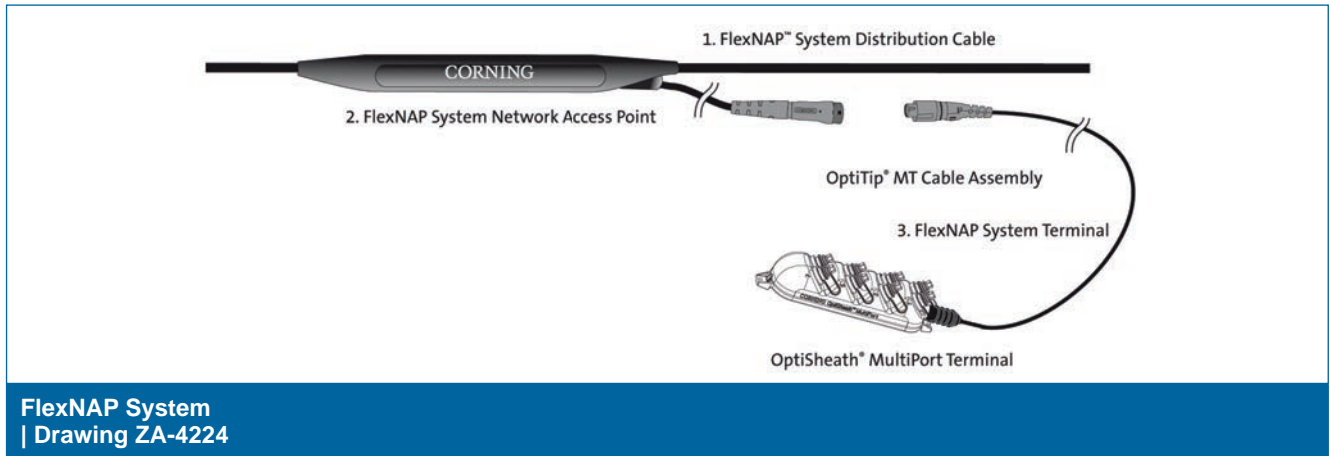**OptiSheath MultiPort Terminal - 6/8-Port**
| Photo TRCLS026

OptiTip MT Cable Assembly
| Photo CCA202

CORNING

FlexNAP™ Outside Plant System

Designing A FlexNAP™ System
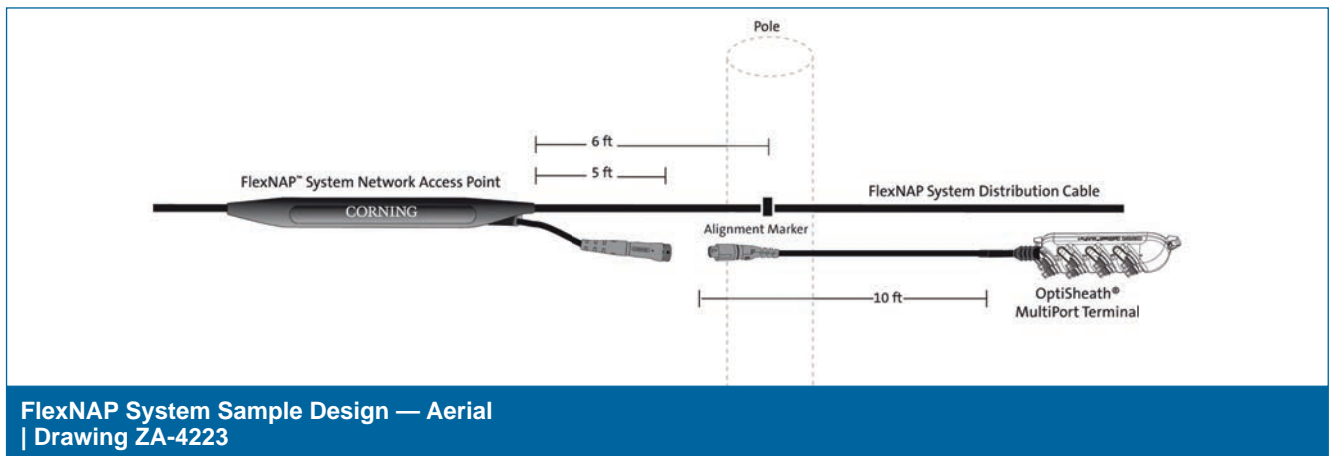

FlexNAP System
| Drawing ZA-4224

A FlexNAP System cable consists of three components:
1. FlexNAP System distribution cable
2. FlexNAP System network access points (with OptiTip® MT Cable Assembly)
3. FlexNAP System terminal (with OptiSheath® MultiPort Terminal) and OptiTip MT Cable Assembly (ordered separately)

Sample Design Layouts
Aerial FlexNAP™ System Portfolio

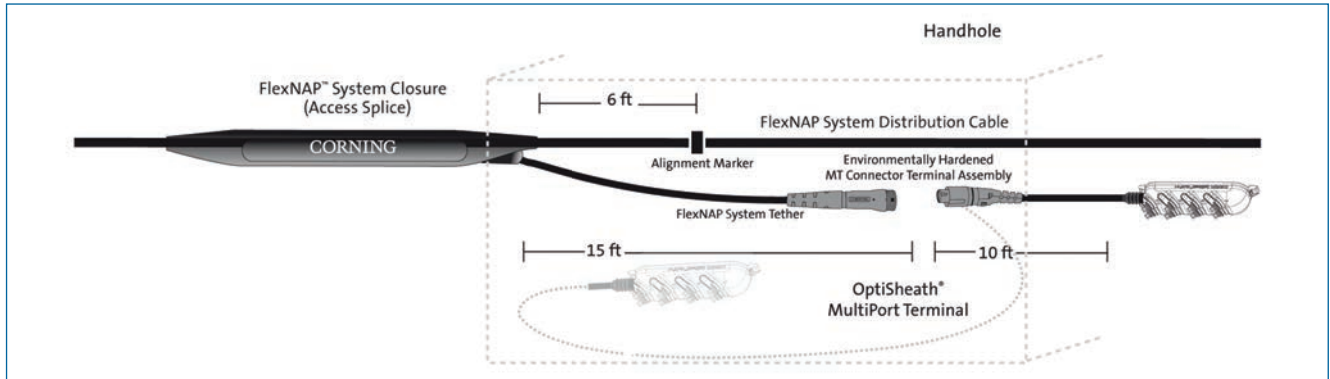**FlexNAP System Sample Design — Aerial**
| Drawing ZA-4223

- 12 to 216 fibers
- 2-, 4-, 6-, 8- and 12-fiber MT-based tether attachment points (TAPs)
- Loose tube, figure-8 and RPX cable
- TAP tether length — 5 ft
- Terminal assembly length — 10 ft minimum

FlexNAP™ Outside Plant System

Buried/Duct FlexNAP System Portfolio

FlexNAP System Sample Design - Below Grade | Drawing ZA-4222

- Buried application
  — Direct buried/Duct: 12 to 216 fibers
  — 1.25-in duct: 12 to 72 fibers
- 2-, 4-, 6-, 8- and 12-fiber MT-based tether attachment points (TAPs)
- Loose tube cable — ALTOS® Loose Tube Gel-Free Cable, ALTOS Lite™ Gel-Free Armored Cable
- TAP tether length — 15 ft
- Terminal assembly length — 10 ft minimum

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-30 °C to 70 °C (-22 °F to 158 °F RPX cable -18° to 70°C)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

FlexNAP™ Outside Plant System

Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Overmold Outer Diameter mm (in)	Minimum Bend Radius Loaded cm (in)	Minimum Bend Radius Installed cm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – Dielectric									
Low-Profile	≤ 72	1.25	24	2	28 (1.1)	15.8 (6.2)	10.5 (4.1)	2700 (600)	890 (200)
Note: Dual-tether locations will have two individual single-tether access points.									
Standard	≤ 72	2	24	2	36 (1.4)	15.8 (6.2)	10.5 (4.1)	2700 (600)	890 (200)
High-Fiber-Count	96	2	24	2	44 (1.7)	18.3 (7.2)	12.2 (4.8)	2700 (600)	890 (200)
	144	2	24	2	44 (1.7)	23.7 (9.3)	15.8 (6.2)	2700 (600)	890 (200)
	216	2	24	2	44 (1.7)	24.0 (9.4)	16.0 (6.3)	2700 (600)	890 (200)

Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Overmold Outer Diameter mm (in)	Minimum Bend Radius Loaded mm (in)	Minimum Bend Radius Installed mm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – Armored									
Standard	≤ 72	2	24	2	44 (1.7)	182 (7.2)	121 (4.8)	2700 (600)	890 (200)
High-Fiber-Count	96	3	24	2	50 (2.0)	207 (8.1)	138 (5.4)	2700 (600)	890 (200)
	144	3	24	2	50 (2.0)	263 (10.4)	175 (6.9)	2700 (600)	890 (200)
	216	3	24	2	50 (2.0)	266 (10.5)	177 (7.0)	2700 (600)	890 (200)

Type	Maximum Distribution Cable Fiber Count	Minimum Duct Size (in)	Maximum Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Closure Outer Diameter mm (in)	Minimum Bend Radius Loaded mm (in)	Minimum Bend Radius Installed mm (in)	Maximum Tensile Load Short-Term N (lbf)	Maximum Tensile Load Long-Term N (lbf)
FlexNAP System – RPX®									
	24, 48, 72, 96, 144	N/A	24	2	25.4 (1.0)	229 (9.0)	229 (9.0)	2700 (600)	890 (200)

Notes:
1) RPX FlexNAP tether fiber counts are 4, 8, 12 and aerial only.
2) 24-fiber locations are capable with two single-tether access points ~ 3 ft apart.

FlexNAP™ Outside Plant System

CORNING

Tether Application	Tether Length (ft)	Connector Style	Cable Type	Available Fiber Counts	Insertion Loss (dB) Typical	Reflectance (dB) Typical	Polish	Alignment Mechanism
OptiTip® MT Cable Assembly Tether								
Aerial	5	OptiTip MT Pinned	SST flat drop	2, 4, 6, 8, 12	0.35	≤ -65	8º angle	Stainless steel guide pins
Below Ground/Duct	15	OptiTip MT Pinned	SST flat drop	2, 4, 6, 8, 12	0.35	≤ -65	8º angle	Stainless steel guide pins

Ordering Process

Ordering the FlexNAP system is a three-step process:

1. *Design and Measure* – Design the distribution cable build-plan and measure distances between poles, handholes, or pedestals to fit your specific application.

2. *Create and Submit Build-Plan Online* – Contact Corning at 800-743-2675 for access to the online configurator.

3. *Place Order* – Place order by submitting the single, unique part number generated by the online configurator.

Note: Initial FlexNAP system quote will be generated using this specification sheet to create a component bill of material (BOM).

Component Specifications

The FlexNAP system configurator is an online tool used to format a build-plan that will be used to process the FlexNAP system design specifications at Corning. The following information is provided to illustrate the available FlexNAP system configurations and to allow for creating a bill of materials (BOM) for planning purposes once a design is uploaded. The BOM created is only for reference and is not a component breakdown for ordering. A single part number used for ordering will be generated by the FlexNAP system configurator that will encompass the components of the BOM.

FlexNAP™ Outside Plant System

FlexNAP System Components |

Distribution Trunk Cables

Ordering Information

F N A P - C B L - ☐☐☐ E ☐☐
　　　　　　　　　1　　 2　 3
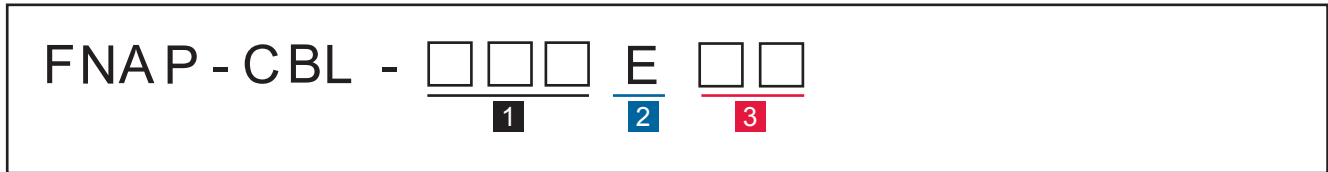
1 Select fiber count.

012	=	12 fibers
024	=	24 fibers
036	=	36 fibers
048	=	48 fibers
060	=	60 fibers
072	=	72 fibers
096	=	96 fibers
144	=	144 fibers
216	=	216 fibers

See Notes 1 and 2.

2 Defines fiber type.
E = Single-mode (OS2)

3 Select cable type.
U4 = ALTOS Loose Tube Gel-Free Cable
WA = Figure-8 Loose Tube Cable
V4 = RPX Gel-Free Flat Ribbon Cable
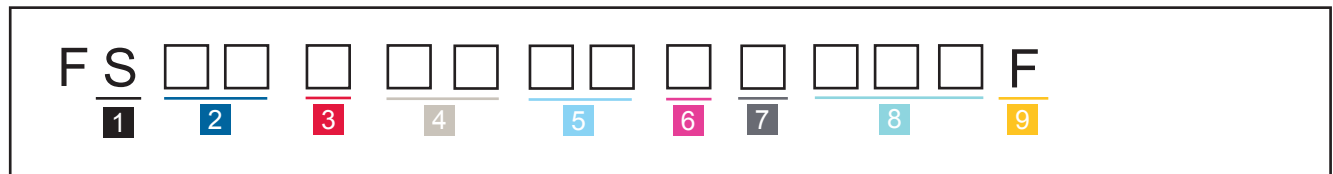UC = ALTOS Lite Gel-Free Armored Cable

Note:
1) RPX Cables available in 24, 48, 72, 96 and 144 fiber counts only.
2) 216 fiber only in ALTOS All-Dielectric Cable, ALTOS Lite Gel-Free Armored Cable and figure-8 cable.

CORNING

FlexNAP™ Outside Plant System

CORNING

FlexNAP System Components | (continued)

Tether Attachment Points

Ordering Information

F S ☐☐ ☐ ☐☐ ☐☐ ☐ ☐ ☐☐☐ F
1   2   3   4   5   6 7   8   9

1 Defines fiber type.

S = Single-mode (OS2)

2 Select cable type.

U4 = ALTOS Loose Tube
     Gel-Free Cable
WA = Figure-8 Loose Tube Cable
V4 = RPX Gel-Free Flat Ribbon
     Cable
UC = ALTOS Lite Gel-Free
     Armored Cable
See Note 1.

3 Select TAP type.

A = RPX cable or standard
    overmold for loose tube
C = 1.25-in overmold
    (≤ 72 fiber; U4 cable only)

4 Select fiber count.

02 = 2 fibers
04 = 4 fibers
06 = 6 fibers
08 = 8 fibers
12 = 12 fibers

5 Select tether type.

M2 = OptiTip MT connector
     (pinned)

6 Select installation environment.

T = Aerial
R = Duct
S = Direct buried

7 Select end cap type.

N = No loop back
L = Loop back dust cap

8 Select tether length in ft.

005 = Aerial
015 = Below grade and/
      or duct

9 Defines unit of measure
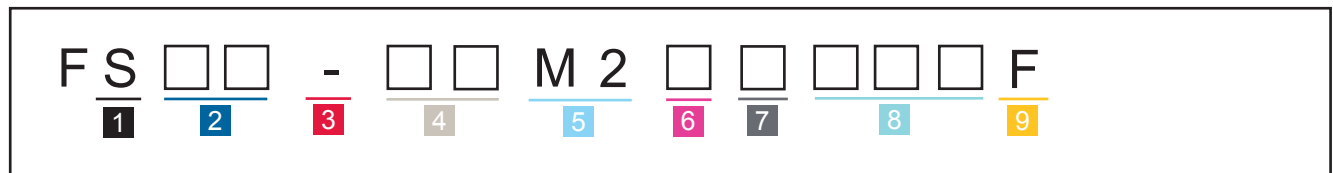for tether length.

F = Feet

Note:
1) RPX Cable FlexNAP tether fiber counts are 4, 8, 12 and aerial only.

CORNING

FlexNAP™ Outside Plant System

CORNING

FlexNAP™ System Components | (continued)

Second Tether Component Breakdown
Second Tether Attachment Points

Ordering Information

```
F S ☐☐ - ☐☐ M 2 ☐ ☐ ☐☐☐ F
  1  2     3  4    5  6 7   8   9
```

1 Defines fiber type.

S = Single-mode (OS2)

2 Select cable type.

U2 = ALTOS Loose Tube Gel-Free Cable
W2 = Figure-8 Loose Tube Cable
UC = ALTOS Lite Gel-Free Armored Cable
See Note 1.

3 Defines TAP type.

- = Second tether attachment point

4 Select fiber count.

02 = 2 fibers
04 = 4 fibers
06 = 6 fibers
08 = 8 fibers
12 = 12 fibers

5 Defines tether type.

M2 = OptiTip MT connector (pinned)

6 Select installation environment.

T = Aerial
R = Duct
S = Direct buried

7 Select end cap type.

N = No loop back
L = Loop back dust cap

8 Select tether length in ft.

005 = Aerial
015 = Below grade and/or duct

9 Defines unit of measure for tether length.

F = Feet

Note:
1) RPX Cable FlexNAP tether fiber counts are 4, 8, 12 and aerial only.
2) Second tether part numbers for RPX Cable and 1.25-in duct loose tube tethers are identical to the primary tether part numbers.

CORNING

FlexNAP™ Outside Plant System

FlexNAP™ System Components | (continued)

Pre-term Lateral Installation Details

A pre-term lateral is a factory-terminated solution for quick and easy connection to a parent FlexNAP cable, with the purpose of eliminating a field splice point. This allows passing smaller side streets in a neighborhood of 24 homes or less. The connectivity is achieved by adding one or two non-pinned connectors to the HE/CO/Cabinet side of the cable. These mate directly to the parent FlexNAP cable providing connectivity without a need for tools. Pre-term laterals are available with the fiber counts of 12 or 24 fiber maximum and at least one field side tap.
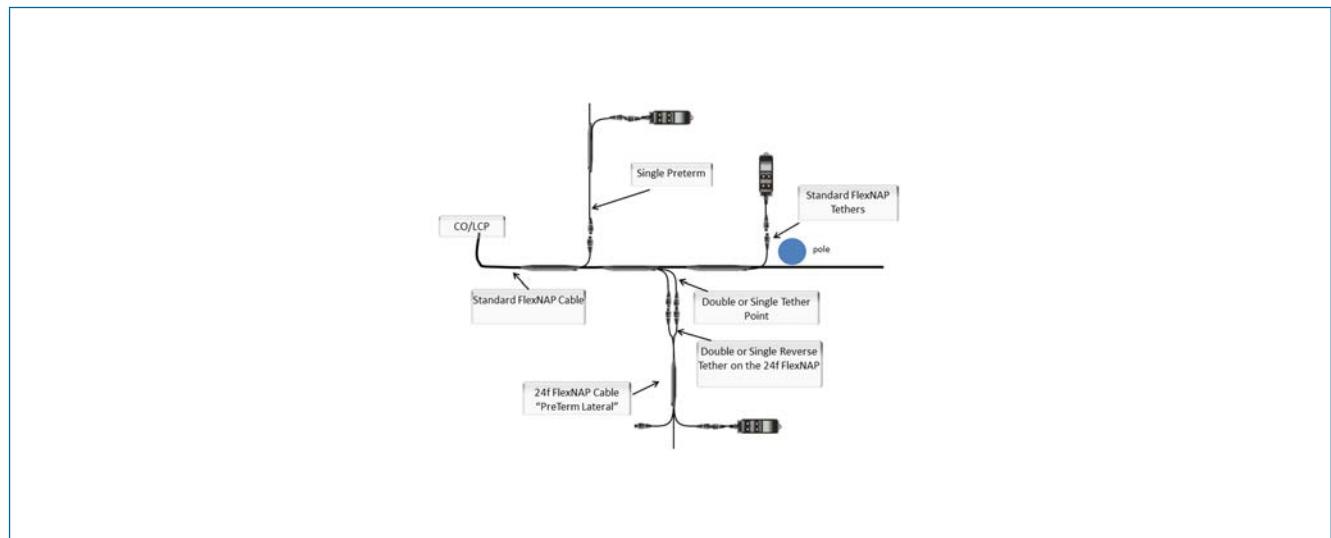
Ordering Information

R T X - ☐☐☐ ☐☐☐ M 1

1   **2**

1 Select fiber count.
012 = 12 fiber (1 Tether)
024 = 24 fiber (2 Tethers)

2 Select cable type.
EV4 = RPX cable
EUC = Armored loose tube

Typical FlexNAP with Pre-term Lateral (Reverse Tether)

FlexNAP™ Outside Plant System

CORNING

FlexNAP™ System Components | (continued)

Cable with Max Lengths

Cable Type with Maximum Lengths in Feet and Meters			
Cable	Fiber Count	Maximum Length (m)	Maximum Length (ft)
ALTOS Loose Tube, Gel-Free, Dielectric	12 to 72 fibers	7000	23000
	96 fibers	5500	18000
	144 fibers	3300	10000
	216 fibers	4000	13000
ALTOS Figure-8 Loose Tube	12 to 72 fiber	1500	4900
	96 fibers	1500	4900
	144 fibers	1200	4000
	216 fibers	1200	4000
RPX Ribbon	24 fibers	7000	23000
	48 fibers	7000	23000
	72 fibers	6500	21000
	96 fibers	6500	21000
	144 fibers	5500	21000
ALTOS Loose Tube, Armored, Gel-Free	12 to 72 fibers	4000	13000
	96 fibers	3000	9600
	144 fibers	2000	6500
	216 fibers	2000	6500

CORNING

FlexNAP™ Outside Plant System

FlexNAP™ System Components | (continued)

Terminal Component Breakdown

Order the appropriate OptiSheath® MultiPort Terminal with OptiTip® MT Cable Assembly separately.

Standard length is 10 ft. For customized lengths up to 500 ft, refer to the ordering information on the following page. For lengths greater than 500 ft, please call a Corning Customer Care Representative at 800-743-2675.

Terminal Type	OptiTap® Adapter Port Counts	Connector Style	Insertion Loss (dB) Typical	Reflectance (dB) Typical*
FlexNAP System Compatible OptiSheath® MultiPort Terminal Specifications				
Sealed with OSP cable stub	4, 6, 8, 12	OptiTap Port Assembly to SC APC	0.19	≤ -65

Typical performance when mated with a Corning Cable Systems OptiTap Drop Cable assembly.

Connector Style	Cable Type	Fiber Counts	Insertion Loss (dB) Typical	Reflectance (dB) Typical†	Polish
FlexNAP System Compatible OptiSheath MultiPort Terminal Specifications					
OptiTip MT Non-pinned	SST flat drop	4, 6, 8, 12	0.35	≤ -65	8° angle

†*Typical performance when mated with a Corning Cable Systems OptiTip MT Pinned Connector*

Description	Dimensions (L x H x W) mm (in)
FlexNAP System Compatible OptiSheath MultiPort Terminal Specifications	
OptiSheath 4-Port MultiPort Terminal	27.4 x 6.6 x 7.3 (10.8 x 2.6 x 2.9)
OptiSheath MultiPort Terminal (6-, 8-Ports)	31.2 x 7.6 x 8.6 (12.3 x 3.0 x 3.4)
OptiSheath 12-Port MultiPort Terminal	10.2 x 14.7 x 38.1 (15.0 x 4.0 x 5.8)

FlexNAP™ Outside Plant System

Ordering Information

M T B - ☐☐ 4 4 ☐☐ ☐☐☐ F W - ☐
　　　　①　②　③　④　⑤　⑥

1 Select number of OptiTap Cable Assembly ports.

04 = 4 OptiTap Connector adapters
06 = 6 OptiTap Connector adapters
08 = 8 OptiTap Connector adapters
12 = 12 OptiTap Connector adapters

2 Defines OptiTap Connector Adapter type.

44 = APC

3 Select cable type.

FD = SST flat dielectric drop cable
TD = SST flat toneable drop cable

4 Select cable length (See Table A for additional lengths).

010 = 10 ft
025 = 25 ft
050 = 50 ft
075 = 75 ft
100 = 100 ft
500 = 500 ft

5 Defines unit of measure.

F = Feet

6 Select packaging.

P = Individual packaging
Blank = Bulk packaging

Table A: Alpha Codes for lengths ≥ 1000 ft	
A00	= 1000
B00	= 1100
C00	= 1200
D00	= 1300
E00	= 1400
F00	= 1500
G00	= 1600
H00	= 1700
J00	= 1800
K00	= 1900
L00	= 2000

FlexNAP™ Outside Plant System

CORNING

FlexNAP™ System Components | (continued)

Terminal Component Breakdown

Tether Fiber Count		
Part Number	Number of Ports	Cable Length
MTB-0444FD010FW-P	4	3 m (10 ft)
MTB-0644FD010FW-P	6	3 m (10 ft)
MTB-0844FD010FW-P	8	3 m (10 ft)
MTB-1244FD010FW-P	12	3 m (10 ft)

CORNING

FlexNAP™ Outside Plant System

FlexNAP™ System Components | (continued)

OptiTip® Assemblies

Ordering Information

☐☐	☐☐	☐☐	E	☐☐☐☐☐	☐☐☐	F - P
1	2	3	4	5	6	
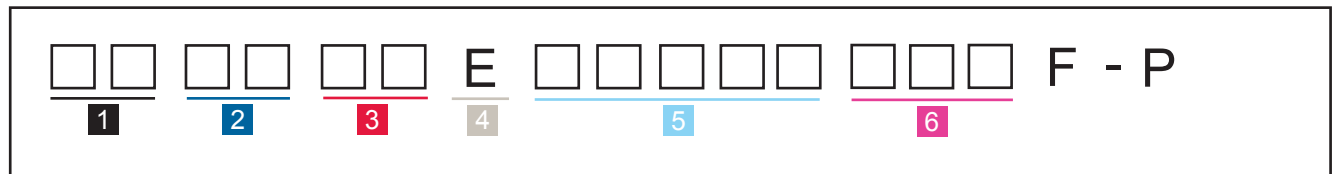
1 Select connector type one.

- 00 = No connector (pigtail)
- M1 = OptiTip MT Connector (non-pinned), single-mode (OS2)
- M2 = OptiTip MT Connector (pinned), single-mode (OS2)

2 Select connector type two.

- M1 = OptiTip MT Connector (non-pinned), single-mode (OS2)
- M2 = OptiTip MT Connector (pinned), single-mode (OS2)
- 02 = LC UPC, single-mode (OS2)
- 44 = SC APC
- 58 = SC UPC, single-mode (OS2)
- 61 = ST Compatible Connector, UPC, single-mode (OS2)
- 90 = MTP Connector (non-pinned), single-mode (OS2)

See Notes 1 and 2.

3 Select fiber count.

- 02 = 2 fibers
- 04 = 4 fibers
- 06 = 6 fibers
- 08 = 8 fibers
- 12 = 12 fibers

4 Defines fiber type.

- E = Single-mode (OS2)

5 Select cable type.

- B4D1E = SST-Drop Outdoor Cable
- B1D1E = SST-Drop Toneable Outdoor Cable

6 Select length.

- 025 = 25 ft
- 050 = 50 ft
- 075 = 75 ft
- 100 = 100 ft
- 150 = 150 ft
- 200 = 200 ft
- 250 = 250 ft
- 500 = 500 ft

Notes:
1) Codes M1 and M2 are point-to-point trunks when selected as connector type two.
2) Our assemblies are not available with M2 (pinned) connectors on both ends.

FlexNAP™ Outside Plant System

Accessories

Part Number	Product Description	Units per Delivery	
MOB-KT-AHD	4-, 6-, and 8-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-AHD-12	12-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-UNIV-BKT	Universal Mounting Bracket Pack for 4- and 12-port housing	10/1	
2104478-01	Fiber Optic Cleaning Tool, OptiTip® connector	1/1	
CLEANER-PORT-OTAP	Single-fiber Port Cleaner for OptiTap® connector end faces	1/1	

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

Features and Benefits

Factory-installed, sealed splice points (1 fiber per tether)
Drastically reduce field splicing with a predetermined loss at each waterproof tether attachment point (TAP)

Flexible preterminated access points
Utilize traditional field-installation techniques for aerial, below-grade, and duct applications

Maximum of two tethers per attachment point
Up to 2 fibers at each designated TAP

Available with ALTOS® loose tube gel-free, ALTOS figure-8, ALTOS Lite™ gel-free armored, and RPX® ribbon distribution cable types (buried N/A)
Field familiarity with traditional network cable types

OptiSheath® stubless splitter multiport terminals may be configured with four or eight OptiTap® connector adapters
Allow multiple configuration variations that are suitable for aerial, below-ground, and duct applications

Corning FlexNAP™ outside plant system provides the most cost-effective method of deploying optical fiber in outside plant distribution networks at speeds significantly faster than traditional field installations. The FlexNAP system utilizes optical fiber cables upon which network access points are pre-installed at customer-specified locations along the length of the cable. The cable and network access points are tested and shipped as a complete distribution cable/terminal system.

Compatible with both aerial (overlash, dedicated, messenger and self-support) and below-ground (direct-buried and duct) outside plant distribution applications, Corning FlexNAP system significantly reduces installation time by as much as 50 percent per network access point.
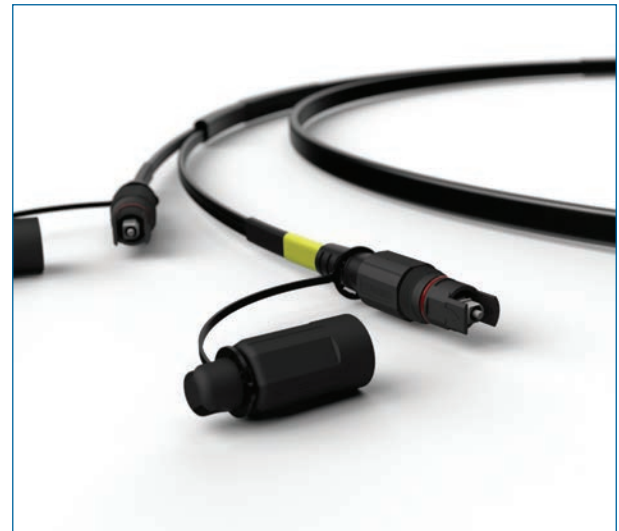
The increased speed of network deployment, along with the reliability of factory testing, offers significant value to the end user in the following key areas: deployment velocity, risk avoidance, workforce efficiency, capital avoidance, and deferment.

Standards

Design and Test Criteria	GR-3122, GR-771, GR-3120

FlexNAP Single-Fiber Tether System
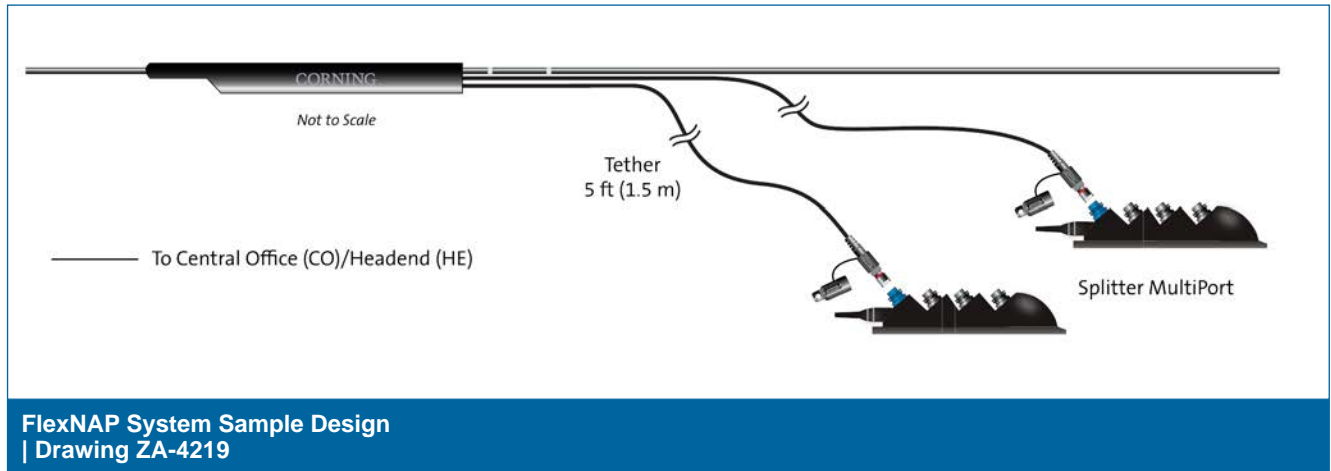| Photo LAN8667

FlexNAP OptiTap Connector
| Photo LAN8665

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

Designing A FlexNAP™ System
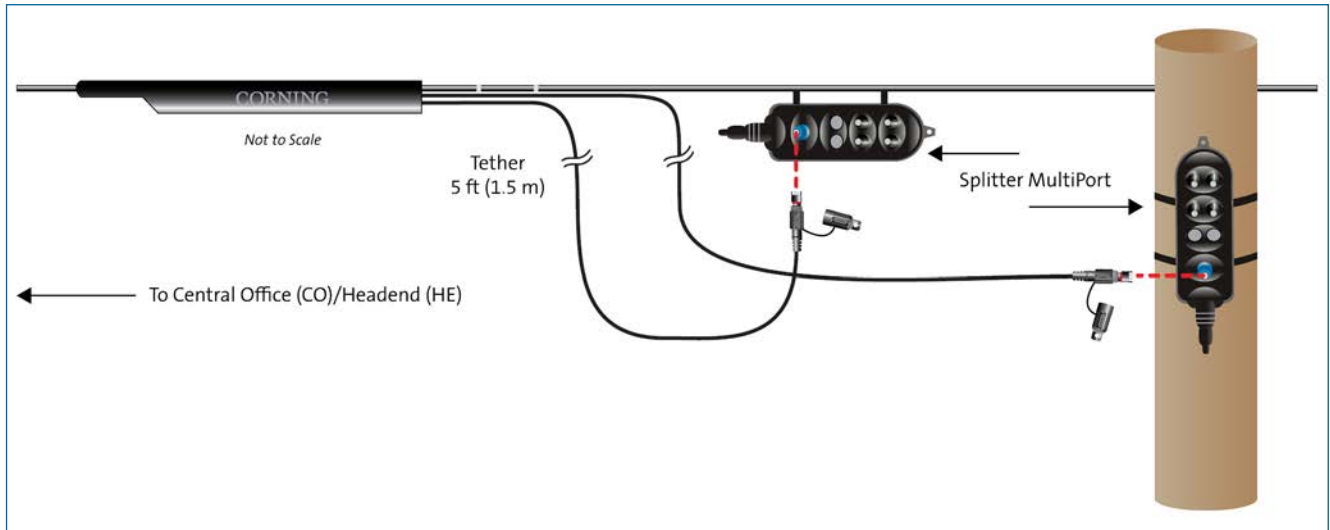

**FlexNAP System Sample Design
| Drawing ZA-4219**

A FlexNAP system cable consists of four components:
1. FlexNAP system distribution cable
2. FlexNAP system network access points (with OptiTap cable assembly)
3. FlexNAP system terminal (with OptiSheath® stubless splitter multiPort terminal)
4. OptiTap extender cable assembly

FlexNAP™ Single-Fiber Tether Distribution System

Sample Design Layouts
Aerial FlexNAP™ System Portfolio

FlexNAP System Sample Design – Aerial
| Drawing ZA-4218

- 12 to 24 fibers
- 1- and 2-fiber OptiTap connector-based tether attachment points (TAPs)
- ALTOS dielectric loose tube gel-free, ALTOS Lite™ loose tube gel-free armored, ALTOS figure-8 loose tube
- TAP tether length – 5 ft
- Stubless terminal
- OptiTap extender assembly length – 10 ft minimum

Note: Recommended 300-ft span distance between location markers.

Buried/Duct FlexNAP System Portfolio

- Buried application
  – Direct buried/Duct: 12 to 24 fibers
  – 2-in duct: 12 to 24 fibers
- 1- and 2-fiber OptiTap connector-based tether attachment points (TAPs)
- Loose tube cable – ALTOS Lite loose tube gel-free armored cable
- TAP tether length – 15 ft
- Stubless terminal
- OptiTap extender assembly length – 10 ft minimum

FlexNAP™ Single-Fiber Tether Distribution System

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-30 °C to 70 °C (-22 °F to 158 °F RPX cable -18° to 70°C)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Distribution Cable Fiber Count	Minimum Duct Size (in)	Fibers per Access Point	Maximum Tether Assemblies per Access Point	Nominal Closure Outer Diameter mm (in)	Minimum Bend Radius, Loaded mm (in)	Minimum Bend Radius, Installed mm (in)	Maximum Tensile Load, Short-Term N (lbf)	Maximum Tensile Load, Long-Term N (lbf)
FlexNAP System – ALTOS Dielectric Cable								
≤ 24	2	2	2	36 (1.4)	158 (6.2)	105 (4.1)	2700 (600)	890 (200)
FlexNAP System – ALTOS Armored Cable								
≤ 24	2	2	2	44 (1.7)	182 (7.2)	121 (4.8)	2700 (600)	890 (200)
FlexNAP System – RPX Cable								
24	N/A	2	2	25.4 (1.0)	229 (9.0)	229 (9.0)	2700 (600)	890 (200)

Ordering Process

Ordering the FlexNAP system is a three-step process:

1. *Design and Measure* – Design the distribution cable build-plan and measure distances between poles, handholes, or pedestals to fit your specific application.

2. *Create and Submit Build-Plan Online* – Contact Corning at 800-743-2675 for access to the online configurator.

3. *Place Order* – Place order by submitting the single, unique part number generated by the online configurator.

Note: Initial FlexNAP system quote will be generated using this specification sheet to create a component bill of material (BOM).

Component Specifications

The FlexNAP system configurator is an online tool used to format a build-plan that will be used to process the FlexNAP system design specifications at Corning. The following information is provided to illustrate the available FlexNAP system configurations and to allow for creating a bill of materials (BOM) for planning purposes once a design is uploaded. The BOM created is only for reference and is not a component breakdown for ordering. A single part number used for ordering will be generated by the FlexNAP system configurator that will encompass the components of the BOM.

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

FlexNAP System Components |

Distribution Trunk Cables

Part Number	Description
FlexNAP System Components — Distribution Trunk Cables	
FNAP-CBL-012EU4	ALTOS Loose Tube Gel-Free Cable, 12 fiber
FNAP-CBL-024EU4	ALTOS Loose Tube Gel-Free Cable, 24 fiber
FNAP-CBL-012EWA	ALTOS Figure-8 Loose Tube Gel-Free Cable, 12 fiber
FNAP-CBL-024EWA	ALTOS Figure-8 Loose Tube Gel-Free Cable, 24 fiber
FNAP-CBL-024EV4	RPX Gel-Free Flat Ribbon Cable, 24 fiber
FNAP-CBL-012EUC	ALTOS Lite Loose Tube Gel-Free Armored Cable, 12 fiber
FNAP-CBL-024EUC	ALTOS Lite Loose Tube Gel-Free Armored Cable, 24 fiber

CORNING

FlexNAP™ Single-Fiber Tether Distribution System

FlexNAP System Components | (continued)

Tether Attachment Points

Ordering Information

```
F S □□  A □□  4 3  □  N  □□□  F
  1   2    3    4     5   6  7    8    9
```
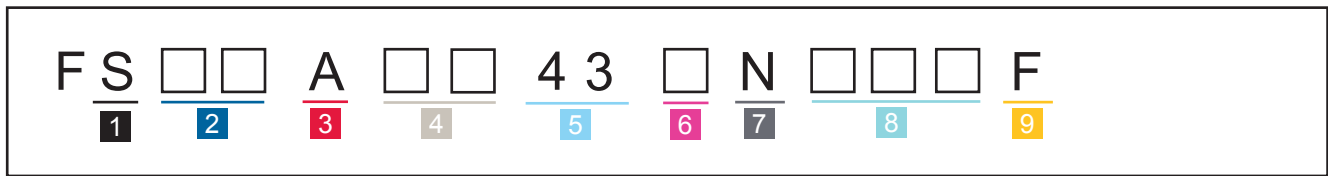
1 Defines fiber type.

S = Single-mode (OS2)

2 Select cable type.

D4 = ALTOS loose tube gel-free cable
D8 = Figure-8 loose tube cable
DC = ALTOS Lite gel-free armored cable
DT = RPX gel-free flat ribbon cable

3 Defines TAP type.

A = Standard cable type closure

4 Select fiber count (single or dual tether).

01 = 1 x 1 fiber tether
02 = 2 x 1 fiber tether

5 Defines connector type.

43 = OptiTap connector (male)

6 Select installation environment.

T = Aerial (no tether release)
S = Direct buried (no tether release)
R = Duct (tether release)

7 Defines end cap type.

N = No loop back

8 Select tether length.

005 = Aerial
First tether 2 m
Second tether 3 m
012 = Buried
First tether 4 m
Second tether 5 m

9 Defines unit of measure for tether length.

F = Feet

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

FlexNAP System Components | (continued)

Stubless Splitter Multiport Terminals

8-Port (1x8 splitter) | Photo CRR1140

4-Port (1x4 splitter) | Photo CRR1139

Mechanical Characteristics

	Dimensions (L x W x H)	Weight
MultiPort 1x4 Splitter Terminal	312 mm x 86 mm x 76 mm (12.3 in x 3.4 in x 3.0 in)	0.7 kg (1.5 lb)
MultiPort 1x8 Splitter Terminal	381 mm x 147 mm x 101 mm (15.0 in x 5.8 in x 4.0 in)	1.1 kg (2.4 lb)

Optical Characteristics

	Insertion Loss, Max.	Reflectance
MultiPort 1x4 Splitter Terminal	8.0 dB	> 55 dB
MultiPort 1x8 Splitter Terminal	11.4 dB	> 55 dB

Ordering Information

M T S - ☐☐ 4 4 N S 0 0 0 M W - ☐
　　　　　1　　　　　　　　　　　　**2**

1 Select splitter type.
H4 = 1x4
F8 = 1x8

2 Select packaging.
Blank = Bulk packaging
(minimum order quantities apply)
P = Individual packaging

CORNING

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

FlexNAP System Components | (continued)

OptiTap Inline — SST-Drop™ Cable Assembly

Ordering Information

4 3 4 8 ☐ ☐ E B ☐ ☐ ☐ ☐ ☐ ☐ ☐

    1   **2**   **3**   **4**   **5**
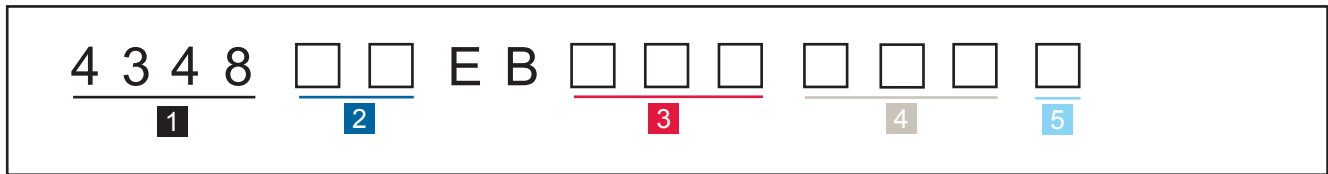
1 Defines connector type.

4348 = SC APC OptiTap to non-pinned OptiTap connector

2 Select fiber count.

01 = 1 fiber
02 = 2 fibers

3 Select cable assembly length.

Lengths:
Minimum 10 ft/3 m, then 25 ft/7 m with increments up to 800 ft/243 m

4 Select cable type.

4FD = SST-Drop dielectric cable
1TD = SST-Drop toneable cable
PFS = SST-Drop dielectric cable with pulling grip
PTS = SST-Drop toneable cable with pulling grip

5 Select unit of length.

F = Feet
M = Meters

FlexNAP™ Single-Fiber Tether Distribution System

CORNING

Accessories

Part Number	Product Description	Units per Delivery	
MOB-KT-AHD	4-, 6-, and 8-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-AHD-12	12-port Mounting Bracket for aerial strand applications	1/1	
MOB-KT-UNIV-BKT	Universal Mounting Bracket Pack for 4- and 12-port housing	10/1	
CLEANER-PORT-OTAP	Single-fiber Port Cleaner for OptiTap® connector end faces	1/1	

CORNING

OptiTip® Assembly

Features and Benefits

OptiTip® MT preterminated cabling solution
Up to 50 percent faster per system deployment

Factory-tested
Quick, reliable installation

Flexibility for various network designs
Indoor and outdoor application

OptiTip MT Connector
Compatible with FlexNAP™ System, MDU terminals, FDT stubbed terminals

Robust design keeps connector intact during installation
Integral pulling eye/connector cap designed for 100 lb maximum pulling tension

Standards

Design and Test Criteria   Telcordia GR-3152 RUS

The OptiTip® assembly is designed for use in outside plant fiber access networks with FlexNAP and OptiSheath® MDU and Fiber Distribution terminals. This innovative cable assembly solution provides enhanced design flexibility, increased deployment speed and reduced installation cost.

The OptiTip® connector is the key enabler for quick connect of up to 12 fibers at a time. The connector is based on the field proven MTP® connector technology encapsulated in a hardened package suitable for use in any environment. A male (pinned) version and a female (non pinned) version are easily joined to make a watertight terminal or in-line connection. Factory installation and testing ensures reliable, low optical loss on all fibers.

OptiTip assemblies are available with SST-Drop™ Outdoor Cable or FREEDM® Flat Drop Indoor/Outdoor LSZH cable which allows for easy migration of indoor and outdoor applications. The OptiTip Asembly is available with either pinned or non-pinned OptiTip MT Connectors to match your network needs.

OptiTip Interconnect Harness Assembly
| Photo CCA225

OptiTip MT Connector
| Photo LAN1000

OptiTip® Assembly

CORNING

Specifications

OptiTip® MT Connectors	
Operation	-40 °C to 70 °C (-40° to +158°F)
Length	3.47-in female, tip to end of boot (4.07-in with dust cap installed) 3.29-in male, tip to end of boot (4.23-in with dust cap installed) 3.29-in male, tip to end of boot (4.23-in with dust cap installed)
Maximum Outer Diameter	0.7 in minimum recommended duct size is 1.25-in
Mateability	Pinned alignment, male-to-female connector or female connector to male adapter
Qualification	EIA/TIA 568-B.3,GR-3152, IP 69K and IP 68
Reflectance	Single-mode OS2: ≤ -65 dB
Tensile Strength	100 lb when factory installed on SST-Drop™ or FREEDM® Flat-Drop Cable
Durability	< 0.3 dB change, 200 rematings, FOTP-21
Insertion Loss, Maximum	0.65 dB maximum per fiber
Insertion Loss	0.35 dB typical

* Full specifications for environmental hardiness are available upon request: Gen. Spec doc. PGS115(108)

LC, SC and ST® Compatible Connectors	
Operation	-40 °C to 70 °C (-40° to +158°F)
Intermateability	TIA/EIA-568-B.3, FOCIS - TIA/EIA-604-10 (LC), TIA/EIA-604-3 (SC), TIA/EIA-604-2 (ST Compatible)
Qualification	EIA/TIA 568-B.3
Reflectance	Single-mode OS2: ≤ -55 dB
Durability	< 0.2 dB change, 500 rematings, FOTP-21
Tensile Strength	≤ 0.2 dB dB change, 15 lb FOTP-6
Insertion Loss, Maximum	0.5 dB maximum per fiber, 0.2 dB typical

SST-Drop™ Outdoor Cable	
Installation	-22 °F to 158 °F
Operation	-40 °F to 158 °F (-40° to +70°C)
Qualification	GR-20, EIA/TIA 568-B.3, RDUP listed
Weight	20 lb,1,000 ft (30 kg/km)
Outside Diameter	0.32 in
Tensile Strength	300 lb (1350 N)
Durability	< 0.3 dB change, 200 rematings, FOTP-21
Compressive Loading	125 lb/in (220 N/cm)

* Full specifications for environmental hardiness are available upon request: Gen. Spec doc. PGS115(108)

CORNING

OptiTip® Assembly

SST-Drop™ Outdoor Cable

Insertion Loss, Maximum	0.65 dB maximum per fiber
Insertion Loss	0.35 dB typical

* Full specifications for environmental hardiness are available upon request: Gen. Spec doc. PGS115(108)

FREEDM® LSZH™ Flat-Drop Indoor/Outdoor Cable

Installation	-22 °F to 158 °F
Operation	-40 °F to 158 °F (-40° to +70°C)
Qualification	GR-20, EIA/TIA 568-B.3, RDUP listed
Weight	20 lb,1,000 ft (30 kg/km)
Outside Diameter	0.32 in
Tensile Strength	300 lb (1350 N)
Durability	< 0.3 dB change, 200 rematings, FOTP-21
Compressive Loading	125 lb/in (220 N/cm)
Insertion Loss, Maximum	0.65 dB maximum per fiber
Insertion Loss	0.35 dB typical

* Full specifications for environmental hardiness are available upon request: Gen. Spec doc. PGS115(108)

OptiTip® Direct Trunks

The OptiTip® Direct Trunk is an outdoor or indoor/outdoor cable factory terminated with a female OptiTip MT Connector. Each connector is protected with a sealed dust cap that has an integral pulling eye.
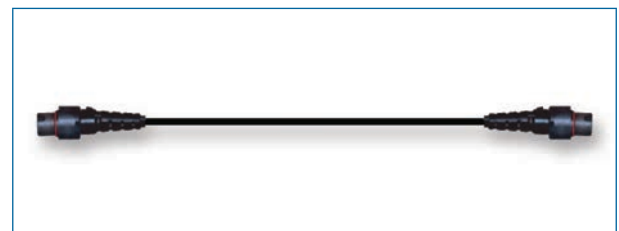
OptiTip Direct Trunk

OptiTip® Extender Trunks

The OptiTip® Extender Trunk is an outdoor or indoor/outdoor cable factory terminated with a female OptiTip MT Connector on one end and a male OptiTip Connector on the other end. Each connector is protected with a sealed dust cap. The female dust cap has an integral pulling eye.
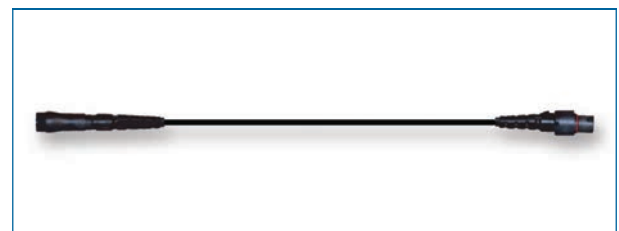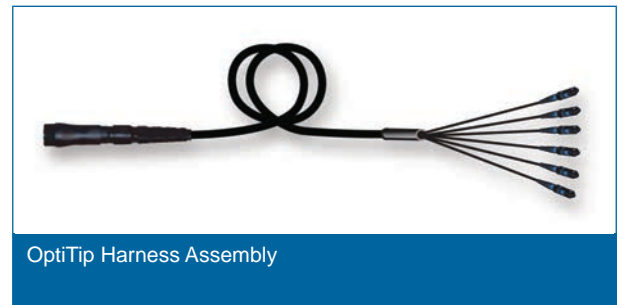
OptiTip Extender Trunk

OptiTip® Assembly

OptiTip® Harness Assembly

The OptiTip® Harness Assembly is an outdoor or indoor/outdoor cable factory terminated with a male OptiTip MT Connector on one end and a furcation and breakout to LC, SC or ST® Compatible single-fiber connectors, or an MTP® Multifiber Connector, on the other end. Single-fiber connectors are terminated on 24 in long, 2.0 mm jacketed furcation legs. The MTP Connector is terminated on a 24 in long, 2.9 mm round furcation leg.

OptiTip Harness Assembly

Ordering Information

☐☐ ☐☐ ☐☐ ☐ ☐☐☐☐☐ ☐☐☐ ☐ - P

1   **2**   **3**   **4**   **5**   **6**   **7**   **8**

1 Select connector type 1.

- 00 = Stub end
- M1 = OptiTip®, non-pinned, single-mode
- M2 = OptiTip, pinned, single-mode

2 Select connector type 2.

- M1 = OptiTip, non-pinned, single-mode
- M2 = OptiTip, pinned, single-mode
- 02 = LC UPC single-mode
- 44 = SC APC single-mode
- 58 = SC UPC single-mode
- 90 = MTP single-mode

3 Select fiber count.

- 02 = 2 fibers
- 04 = 4 fibers
- 06 = 6 fibers
- 08 = 8 fibers
- 12 = 12 fibers

4 Select fiber type.

- E = Single-mode

5 Select cable type.

- B4D1E = SST-Drop Dielectric Cable
- B1D1E = SST-Drop Toneable Cable (Single-mode only)
- BZD1X = FREEDM LSZH Flat Drop Cable

6 Select length.

- 050 = 50 ft
- 100 = 100 ft
- A00 = 1000 ft

See Notes 1 and 2.

7 Select unit of measure.

- F = Feet
- M = Meters

8 Defines packaging.

- P = Individual packaging

1) Minimum length is 10 ft (3 m). All other lengths must be ordered in 10 or 25 ft increments or 5 m.
2) For lengths greater than 1000 ft/m, contact Customer Care.
3) M2M2 is not a valid configuration.