SUMITOMO PRODUCT SPECIFICATION

FutureFLEX®

TC01TPX (NFPA 262) PLENUM RATED TUBE

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SEL is a Member of the Sumitomo Electric Industries, Ltd. Group

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1.0 GENERAL

This specification covers the design requirements and performance standards for FutureFLEX® Air-Blown Fiber® (ABF) plenum rated, unjacketed tube cable. These tube cables are designed for indoor tube cable infrastructures. The features described in this document are intended to provide information on the performance of Sumitomo Electric's FutureFLEX® tubes and aid in handling and use.

1.1 Tube Description

Sumitomo's FutureFLEX® TC01TPX tubes are designed for use as an optical fiber cabling infrastructure in ABF applications that require an Optical Fiber Nonconductive Plenum (OFNP) fire rating. TC01TPX tube is UL/cUL NFPA 262 and CSA OFN FT6 listed. They are made from a black fluoropolymer that meets specific flame and smoke requirements. Plenum rated tubes may also be used in indoor applications where: 1) lesser fire ratings such as Optical Fiber Nonconductive – General Purpose (OFN) or Optical Fiber Nonconductive – Riser (OFNR) apply or 2) no fire ratings apply. These individual tubes have a 6mm inside diameter and an 8mm outside diameter. This tube is pulled or placed in indoor routes for the purpose of individual tube interconnection to establish pathways for FutureFLEX® fiber bundle installation.

1.2 Quality

Sumitomo ensures a continuing high level of quality through ISO / TL9000 registered Quality Management Systems and our commitment to continuous improvement. Guaranteed, high quality products have been manufactured at Sumitomo's facility in Research Triangle Park, North Carolina since 1984.

1.3 Reliability

Sumitomo ensures product reliability through rigorous qualification testing of each product family to meet or exceed industry standards. Both initial and periodic qualification testing are performed to assure the tube cables' performance and durability in a field environment.

Sumitomo supports industry standards organizations such as Bell Communications Research (Bellcore), Telecommunications Industry Association (TIA), International Telecommunications Union (ITU), International Electrotechnical Commission (IEC), American Society for Testing and Materials (ASTM), Rural Utilities Service (RUS), The Institute of Electrical and Electronics Engineers (IEEE), and Insulated Cable Engineers Association (ICEA).

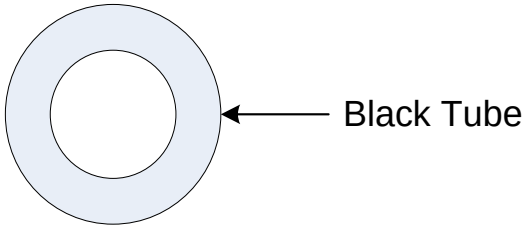
2.0 TUBE DESIGN

2.1 General

Sumitomo's FutureFLEX® TC01TPX tubes provide a small diameter, indoor pathway for FutureFLEX® fiber bundle installations. FutureFLEX® ABF fiber bundles are available in Single-mode OS1, 62.5 micron Multimode OM1, 1-Gigabit 50 micron Multimode OM2, Laser Optimized 10-Gigabit 50 micron Multimode OM3, and Laser Optimized 10-Gigabit 50 micron Multimode OM4 versions with 2, 4, 6, 12, 18, or 24 fiber strand counts. One fiber bundle can be field-installed in each tube.

2.2 Construction

SEL Part Number	Product Description	Outside Diameter (in.)	Inside Diameter (in.)	Max. Weight (lbs./kft.)	Max. Tensile Load (lbs.)
TC01TPX	Single, black, unjacketed, fire and smoke-retardant plenum rated tube	0.315 (8mm)	0.236 (6mm)	27	60



Single Tube
Plenum Rated
TC01TPX

Drawing not To Scale

3.0 TUBE CHARACTERISTICS

3.1 Performance

Property	Specification
Operation Temperature Range	+32° F to +158° F
Minimum Bend Radius (During / After Installation)	9 in.

3.2 Tube Markings

In accordance with UL requirements, the outside surface of each tube is marked every two (2) feet with the following product identification information:

SEL FutureFLEX® TC01TPX Type OFNP (UL) c (UL) E146200 Field Assembled Optical Fiber Cable CSA 238147 OFN FT6 (Manufacturing Lot #) (Sequential Footage) 1-877-356-FLEX WWW.FUTUREFLEX.COM ←

3.3 Reel Markings

The outside of each reel flange is marked with the Sumitomo Electric Lightwave Corp. product part number, the tube cable manufactured length in feet, and the text “Do Not Lay Flat.” A UL Cable Tag is attached to each cable reel flange. One UL Label per thousand tube feet of cable is required and attached to each reel (i.e.: 1000 ft. length of 7-tube cable requires seven (7) UL Labels).

3.4 Tube Ends

Both ends of the tube are accessible on the reel. Each tube is sealed with a plastic ca or plug. Tube ends are sealed with a heat shrink end cap

3.5 Tube Reel Data

Sumitomo Part No.	Reel Length (ft)	Reel F x W (in)	Minimum Drum Diameter (in)	Reel Weight (lbs) Empty	Reel Weight (lbs) Full
TC01TPX	1000	41 x 6	36	26	53

Notes:

- TC01TPX Plenum Tube Design is only available in Standard 1,000-feet Reel Lengths.
- All Reel Length tolerances are ±5%.
- Cut Lengths are available. Contact FutureFLEX® Distributor for additional information.
- If tube is re-spooled, the minimum Drum Diameter of the new reel SHALL be no less than that specified herein to avoid damaging tube product.
- All Reel Widths shown are approximate values only and measured from outside-of-flange to outside-of-flange plus an allowance for fastener hardware protrusions.
- All Empty and Full Reel Weights shown are approximate values only.

4.0 TESTING

Each finished tube cable is required to pass a 4.5mm diameter steel ball from end to end using 70 psi (+/- 10 psi) gas pressure.

5.0 INSTALLATION / HANDLING PRACTICES

Sumitomo has incorporated a wide range of technical support and training services for our tube cable products into our Technical Support Services (TSS) program. TSS offers training in the areas of cable installation, sheath entry, splicing, testing, and system troubleshooting. The services are available in a variety of media formats and can be customized to better accommodate individual training needs. The TSS program consists of an extensive series of recommended procedure documents, training courses with classroom and hands-on instruction. Please contact Sumitomo's Customer Service department for more information.

6.0 ORDERING INFORMATION

To learn more about Sumitomo's cables or to place an order, call, fax, e-mail, or write us at:

SUMITOMO ELECTRIC LIGHTWAVE CORPORATION
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