

Furcation Tubing Manufacturer Selection



1. General

1.1. Document security

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1.2. Referenced Documents

Wherever a standard or other specification is referred to in this Specification, the latest open issue of that standard or specification shall be followed unless a specific issue is quoted on the Order in which case that specific issue shall be used.

2. Purpose

This document presents general guidance for engineering for selecting furcation tubing that best accepts fibers to be pushed. Different sizes, constructions as well as multiple manufacturers are represented in this document.

3. Scope

Indoor furcation tube measuring between 1.6mm to 3.8mm from various manufacturers for AFL products is presented in this document.

4. Furcation Tubing

- 4.1. Furcation Tubing provides excellent additional protection for optical fiber when being used in fanout and breakout assemblies. Bare fibers are inserted into tubing so connectors can be installed, or breakouts can be constructed.
- 4.2. Ease of fiber insertion into furcation tubing from various manufacturers and the distance the fiber can be pushed was measured resulting in a list of the best performing furcation tubing.
- 4.3. The following table shows the various manufacturers, part numbers, nominal cable OD (mm), nominal cable solution (mm), nominal innertube ID (um) (unless noted otherwise), rated fiber count (250um), and specification datasheet for the furcation tubing.
- 4.4. Furcation must be heat treated according to the applicable reference procedures below.

HS-D-9999-0014	PVC
HS-D-9999-0015	Hytrel
HS-D-9999-0016	96hr HT
C-00-HS-0281	12hr 85C HT



Table 1a. List of Best Performing Furcation Tubing

SST Part Number Format → SSTNNXWWWAA-ZZZ-YYY-XXX

Manufacturer	Part Number ^③	Furc Type **	Nominal Cable OD (mm)	Nominal Cable Solution (mm)	Nominal Innertube ID (um)	Furc ID **	Color Code **	Rated Fibers (250um)	Specification Datasheet for Furcation Tubing
AFL	PF000@22U900 PP00496-00	SX	3.1	3.0	1.6mm	12L	YEL	16 loose	C-62-HS-0268
	PZ04424-00	DX	1.8	1.8	350	DX	YEL	1 per tube	C-62-HS-0268
TLC	F00FDX2NRA PX02561-PC ^④ F00FDX2NRB F00FDX2NRBL F00FDX2NRO F00FDX2NRR F00FDX2NRY PX02563-PC ^④ F00FDX2NRBR F00FDX2NRG F00FDX2NRP PX02562-PC ^④ F00FDX2NRPK F00FDX2NRS F00FDX2NRW	DX	1.95	2.0	400	DX	AQU BLU BLK ORN RED YEL - - - - -	1 per tube	C-70-HS-0265 New TLC '23 C-62-HS-0428
	F00FR16NRY900 PX02549-PC ^④	SX	1.6	1.6	400	1X	YEL	1 per tube ^①	C-70-HS-0265 New TLC '23 C-62-HS-0428
	F00FR2NRA PX02550-PC ^④ F00FR2NRB PX02551-PC ^④ F00FR2NRBL F00FR2NRMA PX02552-PC ^④ F00FR2NRO PX02553-PC ^④ F00FR2NRB PX02554-PC ^④ F00FR2NRY PX02555-PC ^④ F00FR2NRBR F00FR2NRG F00FR2NRP F00FR2NRPK F00FR2NRS F00FR2NRW	SX	1.95	2.0	1.0mm	8L	AQU BLU BLK ERI ORN RED YEL - - - - -	8 loose	C-70-HS-0265 New TLC '23 C-62-HS-0428
	F00FR2NUA	SX	1.95	2.0	1.0mm	8L	AQU	8 loose	C-70-HS-0265
	F00FR2NRA900 F00FR2NRB900 F00FR2NRBL900 F00FR2NRO900 F00FR2NRMA900 PX02556-PC ^④ F00FR2NRY900 F00FR2NRBR900 F00FR2NRG900 F00FR2NRP900 F00FR2NRPK900 F00FR2NRS900 F00FR2NRW900	SX	1.95	2.0	400	1X	AQU BLU BLK ORN RED YEL - - - - -	1 per tube	C-70-HS-0265 New TLC '23 C-62-HS-0428
	F00FR38NRA27 PX02557-PC ^④ F00FR38NRM27 F00FR38NRY27 PX02558-PC ^④	SX	3.8	3.8	2.1mm	24L 24S	AQU ERI ^② YEL	24 loose 24 SWR	C-70-HS-0265 New TLC '23 C-62-HS-0428
	F00FR3NRA-PS PX02559-PC ^④ F00FR3NRB-PS F00FR3NR-PS PX02560-PC ^④ F00FR3NRY-PS PX02545-PC ^④	SX	2.95	3.0	1.1mm	12L	AQU BLU RED YEL	12 loose	C-70-HS-0265 New TLC '23 C-62-HS-0428

① TLC tubing spec – tubing is typically much larger than published size.

② Part Number indicates color as Magenta in the description.



③ Part Numbers with color character(s) indicated in “RED” or have entries in the Color Code column are approved for SST use. Furcation part numbers without an entry in the Color Code column are listed for informational purposes.

④ Furcation requires pre-conditioning (heat treatment) before use in assemblies.

** See Table 2.

Table 1b. List of Best Performing Furcation Tubing

SST Part Number Format → SSTNNNX WWWAA-ZZZ-YYY-XXX

Manufacturer	Part Number	Furc Type **	Nominal Cable OD (mm)	Nominal Cable Solution (mm)	Nominal Innertube ID (um)	Furc ID **	Color Code **	Rated Fibers (250um)	Specification Datasheet for Furcation Tubing
Youngsun	21100300029	SX	3.2	NA	2.0mm	24L	YEL	24 loose	C-62-HS-0105
	FT02MMDX-L-HT-AQU 21100500006.1202.173 FT02MMDX-L-HT-YEL	DX	2	2.0	600	DX	AQU AQU YEL	1 per tube	C-62-FF-0013 C-00-HS-0301 C-62-FF-0013
	FT02MMSX-L-HT-AQU FT02MMSX-L-HT-BLU FT02MMSX-L-HT-YEL	SX	2	2.0	600	1X	AQU BLU YEL	1 per tube	C-62-FF-0013
	TUBING2MMY YELLOW -96HT-C TUBING2MM YELLOW -HT-C	SX	2.05	2.0	720-900	SX	YEL YEL	2 per tube	C-62-FF-0003
	FT03MMSX-L-YEL	SX	3	3.0	1.7mm	12S	YEL	12 SWR	C-62-HS-0267
	21100500003.0901.374 21100500003.1201.374	DX	2	2.0	720-900	D2	YEL AQU	2 per tube	C-62-FF-0008
East Point	141-101-278-HT	SX	1.6	1.6	750	SX	YEL	2 per tube	C-70-HS-0338
	FT02MMSX-L-HT-AQU FT02MMSX-L-HT-BLU FT02MMSX-L-HT-YEL	SX	2	2.0	600	1X	AQU BLU YEL	1 per tube	C-62-FF-0013
	FT02MMDX-L-HT-AQU FT02MMDX-L-HT-YEL	DX	2	2.0	600	DX	AQU YEL	1 per tube	C-62-FF-0013

① TLC tubing spec – tubing is typically much larger than published size.

② Part Number indicates color as Magenta in the description.

③ Part Numbers with color character(s) indicated in “RED” or have entries in the Color Code column are approved for SST use. Furcation part numbers without an entry in the Color Code column are listed for informational purposes.

** See Table 2.

Table 2. Furcation Attributes

Furcation Type	Furcation ID Rating	SST Color Code
SX = Simplex DX = Duplex (ZIP)	SX-Simplex (2fpt Uniboot) 1X-Simplex (1fpt) DX-Duplex (1fpt zip) D2-2fpt zip 1A-1fpt Armored 2A-2fpt Armored 8L-8fpt loose or combed fiber 12S-12fpt SWR uncombed 12L-12fpt loose or combed fiber 16S-16fpt SWR uncombed 16L-16fpt loose or combed fiber 24S-24fpt SWR uncombed 24L-24fpt loose or combed fiber	Y - YEL – Yellow A - AQU – Aqua O - ORN – Orange B - BLU – Blue 3 - BLK- Black 0 - Y9H - Yellow, 96hr HT* R - RED – Red E - ERI - Erika Violet 2 - PA1 - Pantone 631C Aqua 1 - PY1 - Pantone 7408C Yellow * See section 4.4



Revision History

Rev	Date	Description of Change	Originated By
1	09-30-2021		Darryl Duncan
2	10-13-2021	Updated Spec Data Sheet Table	Darryl Duncan
3	12-15-21	Changed furcation tubing spec sheet number to reflect new document	Darryl Duncan
4	04-28-22	F00FR2NU* 2mm (1.0mm inner tube) 8ft option added to table.	Darryl Duncan
5	05-10-22	Correct specs and add Youngsun PN. Remove Heat Treated column in table. Add heat treat references.	Darryl Duncan
6	05-23-22	Added furcation types. Added furcation IDs. Removed non-Heat Treated Part Numbers. Added color codes.	Darryl Duncan
7	03-20-23	Added TLC furcation F00FR2NRR. 2ft option removed for F00FR16NRY900. 21100500006.1202.173 changed from D2 to DX Furc ID. Youngsun Furcation 21100500003.0901.374 and 21100500003.1201.374 added with cable spec C-62-FF-0008.	Darryl Duncan
8	10-06-2023	Add TUBING2MMYELLOW-HT-C to the list. Changed PF000@22U900 fiber capacity from 12 to 16.	Darryl Duncan
9	07-12-2024	Added (MTY) part numbers for new TLC Furcation which requires pre-conditioning. Old TLC part numbers will be obsoleted. PF00022U900 changed to PP00496-00 (MTY PN).	Darryl Duncan

