

## **Navy Recommended Fiber Optic Components Parts List**

### **COVER LETTER**

[Click here to view the Navy Recommended Components Parts List cover letter.](#)

### **PURPOSE**

The purpose of the Navy Recommended Fiber Optic Components Parts List is to provide updated information on the Navy recommended fiber optic components program. This program provides assistance to those involved in the immediate procurement or use of reliable and survivable fiber optic components for shipboard applications and encourages standardization leading to increased and effective logistical support.

The Navy Recommended Fiber Optic Components Parts List includes recommended qualified components (from those listed on the Qualified Products List - QPL), those presently being tested with sufficient results available to be recommended, recommended First Article components/materials, those approved to Commercial Item Descriptions, and recommended COTS fiber optic components.

### **QUICK REFERENCE BY COMPONENT**

[QPL And First Article Fiber Optic Components](#)

[Commercial Fiber Optic Components](#)

[Commercial Blown Optical Fiber Components](#)

[Equipment And Kits For Fiber Optic Components](#)

### **QUICK REFERENCE BY VENDOR**

[Previous Navy Recommended Components Parts List Archive  
1 April 1998 \(59 pgs, 169k\)](#)

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**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 December 2016

**QPL AND FIRST ARTICLE FIBER OPTIC COMPONENTS [TOP](#)**

Click on vendor name to go to detailed information for each component

COMPONENT	VENDOR
Conventional Cable – Thermoset (QPL)	<a href="#">Draka</a>
	<a href="#">General</a>
Conventional Cable –Thermoplastic (QPL)	<a href="#">General</a>
Blown Optical Fiber Cable – Thermoset (QPL)	<a href="#">General</a>
Single Tube Cable, Blown Optical Fiber	<a href="#">General</a>
ST Connector (QPL)	<a href="#">AFSI</a>
	<a href="#">Delphi</a>
	<a href="#">Optical Cable Corporation</a>
ST-to-ST Adapter (QPL)	<a href="#">AFSI</a>
	<a href="#">Optical Cable Corporation</a>
Multiterminus (MT) Heavy Duty Connector (QPL)	<a href="#">Delphi</a>
	<a href="#">AFSI</a>
	<a href="#">Glenair</a>
Termini (QPL)	<a href="#">AOS</a>
	<a href="#">Delphi</a>
	<a href="#">AFSI</a>
	<a href="#">Glenair</a>
Epoxy, Heat Cured (1 <sup>st</sup> Article)	<a href="#">CommScope</a>
	<a href="#">OFS</a>
	<a href="#">Tra-Con</a>
	<a href="#">FOCI</a>
Interconnection Box (QPL)	<a href="#">US Pioneer</a> <sup>1</sup>
Optical Fiber – Multimode (QPL)	<a href="#">Corning</a>
	<a href="#">Draka USA</a>
	<a href="#">General Cable</a>
	<a href="#">J-Fiber</a>
Optical Fiber – Single mode (QPL)	<a href="#">Corning</a>
	<a href="#">Draka USA</a>
	<a href="#">General Cable</a>
	<a href="#">J-Fiber</a>
UV Curable Adhesive (1 <sup>st</sup> Article)	<a href="#">Loctite</a>
Index Matching Material (1 <sup>st</sup> Article)	<a href="#">Nye Lubricants</a>
Transmitter and Receiver (1 <sup>st</sup> Article)	<a href="#">Laser Diode</a>

<sup>1</sup> Formerly NMP.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 3 September 2015

**COMMERCIAL FIBER OPTIC COMPONENTS** [TOP](#)

Click on vendor name to go to detailed information for each component

<b>COMPONENT</b>	<b>VENDOR</b>
ST Connector, MM	<a href="#">CommScope</a>
	<a href="#">AFSI</a>
	<a href="#">STRAN</a>
	<a href="#">OFS</a>
	<a href="#">TE Connectivity</a>
ST-to-ST Adapter, MM	<a href="#">CommScope</a>
	<a href="#">AFSI</a>
	<a href="#">STRAN</a>
	<a href="#">OFS</a>
ST Connector, SM	<a href="#">CommScope</a>
	<a href="#">AFSI</a>
	<a href="#">STRAN</a>
	<a href="#">OFS</a>
ST-to-ST Adapter, SM	<a href="#">CommScope</a>
	<a href="#">AFSI</a>
	<a href="#">STRAN</a>
	<a href="#">OFS</a>
SC Connector, MM	<a href="#">TE Connectivity</a>
SC-to-SC Adapter, MM	<a href="#">TE Connectivity</a>
SC Connector, SM	<a href="#">TE Connectivity</a>
SC-to-SC Adapter, SM	<a href="#">TE Connectivity</a>
LC Connector, MM	<a href="#">AFL</a>
	<a href="#">OFS</a>
	<a href="#">TE Connectivity</a>
LC-to-LC Adapter, MM	<a href="#">OFS</a>
LC Connector, SM	<a href="#">AFL</a>
	<a href="#">OFS</a>
	<a href="#">TE Connectivity</a>
LC-to-LC Adapter, SM	<a href="#">OFS</a>
Fast Cure Adhesive, Commercial	<a href="#">CommScope</a>
	<a href="#">FOCI</a>
	<a href="#">OFS</a>
Cable, Commercial	<a href="#">CommScope</a>
	<a href="#">Draka</a>
	<a href="#">General Cable</a>
	<a href="#">Optical Cable Corporation</a>
Optical Bypass Switch (2 X 2)	<a href="#">Litton Network Access Systems</a>
Splice, Mechanical	<a href="#">TE Connectivity</a>
Splice, Fusion Shelf/Tray	<a href="#">Hubbell</a>

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 26 February 2013

**COMMERCIAL BLOWN OPTICAL FIBER COMPONENTS [TOP](#)**

Click on vendor name to go to detailed information for each component

COMPONENT	VENDOR
Tube Fitting, Blown Optical Fiber (straight tube coupler)	<a href="#">Sumitomo</a>
	<a href="#">SMC</a>
	<a href="#">General Cable</a>
Tube Fitting, Blown Optical Fiber (tube tee coupler)	<a href="#">Sumitomo</a>
	<a href="#">SMC</a>
	<a href="#">General Cable</a>
Tube Fitting, Blown Optical Fiber (tube end cap)	<a href="#">Sumitomo</a>
	<a href="#">SMC</a>
	<a href="#">General Cable</a>
Tube Fitting, Blown Optical Fiber (straight tube coupler reducer)	<a href="#">General Cable</a>
Plug, Tube Fitting, Blown Optical Fiber	<a href="#">SMC</a>
	<a href="#">General Cable</a>
Plug, Tapered Tube, Blown Optical Fiber	<a href="#">Sumitomo</a>
	<a href="#">Connective Solutions</a>
Furcation Unit, Tube, Blown Optical Fiber	<a href="#">Connective Solutions</a>
	<a href="#">Kitco Fiber Optics</a>
Tube, Single, Blown Optical Fiber	<a href="#">General Cable</a>
	<a href="#">Sumitomo</a>

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 09 June 2016

**EQUIPMENT AND KITS FOR FIBER OPTIC COMPONENTS [TOP](#)**

Click on vendor name to go to detailed information for each component

COMPONENT	VENDOR
ST/SC Connector Termination Kit	<a href="#">KitCo</a>
	<a href="#">AFSI</a>
Rotary Mechanical Splice Termination Kit	<a href="#">KitCo</a>
Multiterminus (MT) Heavy Duty Connector Termination Kit	<a href="#">KitCo</a>
	<a href="#">AFSI</a>
FDDI Connector Tools (Supplement to ST Termination Kit)	<a href="#">KitCo</a>
SC Connector Tools (Supplement to older ST Termination Kit)	<a href="#">KitCo</a>
Submarine Combination ST, SC and MT Termination Kit	<a href="#">KitCo</a>
	<a href="#">AFSI</a>
Fusion Splice Kit	<a href="#">AFL Telecommunications</a>
	<a href="#">Sumitomo</a>
Damage Control Kit	<a href="#">KitCo</a>

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 December 2016

**COMPONENTS BY VENDOR** [TOP](#)

Click on vendor name to go to detailed information for each component

<b>Vendor</b>	<b>Component</b>	<b>Specification/Drawing</b>
<a href="#">AFL Telecommunications</a>	Fusion Splice Kit	A-A-59799
	LC Connector, Commercial	A-A-59940/1
<a href="#">Applied Optical Systems, Inc.</a>	Termini	MIL-PRF-29504
<a href="#">CommScope</a>	ST Connector, Commercial	A-A-59940/3
	ST Connector Adapter, Commercial, Ruggedized	N/A
	Epoxy	MIL-PRF-24792
	Fast Cure Adhesive, Commercial	N/A
	Cable, Conventional, Commercial	N/A
<a href="#">Connective Solutions</a>	Furcation Units, Tube, BOF	A-A-59729
	Plug, Tapered Tube, BOF	A-A-59730
<a href="#">Corning</a>	Fiber, Multimode	MIL-PRF-49291/6
	Fiber, Single Mode	MIL-PRF-49291/7
<a href="#">Delphi Connection Systems</a>	Multiterminus (MT) Heavy Duty Connector & Dust Cover	MIL-PRF-28876
	Termini	MIL-PRF-29504
	ST Connector	MIL-C-83522/16
<a href="#">Draka</a>	Cable, Conventional – Thermoset	MIL-PRF-85045
	Cable, Conventional, Commercial	N/A
	Fiber, Multimode	MIL-PRF-49291/6
	Fiber, Single Mode	MIL-PRF-49291/7
	Cable	MIL-PRF-85045/16
<a href="#">Draka Comteq USA, Inc.</a>	Fast Cure Adhesive, Commercial	N/A
<a href="#">FOCI</a>	Epoxy	MIL-PRF-24792
<a href="#">AFSI</a>	ST Connector Adapter	MIL-C-83522/17
	ST Connector, Commercial, Ruggedized	A-A-59940/3
	ST Connector Adapter, Commercial, Ruggedized	N/A
	Multiterminus (MT) Heavy Duty Connector	MIL-PRF-28876
	ST/SC Connector Termination Kit	6872811
	Multiterminus (MT) Heavy Duty Connector Termination Kit	6872813
	Submarine Combination ST, SC, and MT Termination Kit	7085185
	Termini	MIL-PRF-29504

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

<b>Vendor</b>	<b>Component</b>	<b>Specification/Drawing</b>
<a href="#">General Cable</a>	Cable, Conventional –Thermoset	MIL-PRF-85045
	Cable, Conventional –Thermoplastic	MIL-PRF-85045
	Cable, Blown Optical Fiber – Thermoset	MIL-PRF-85045
	Cable, Conventional, Commercial	N/A
	Tube fitting (straight coupler), BOF	A-A-59731
	Tube fitting (Tee coupler), BOF	A-A-59731
	Tube Fitting (end cap coupler), BOF	A-A-59731
	Tube Fitting (straight coupler reducer), BOF	A-A-59731
	Plug, tube fitting, BOF	A-A-59728
	Fiber, Multimode	MIL-PRF-49291/6
	Fiber, Single Mode	MIL-PRF-49291/7
<a href="#">Glenair</a>	Termini	MIL-PRF-29504
	Multiterminus (MT) Heavy Duty Connector	MIL-PRF-28876
<a href="#">Hubbell</a>	Splice, Fusion Shelf/Tray	N/A
<a href="#">J-Fiber GmbH</a>	Fiber, Multimode	MIL-PRF-49291/6
	Fiber, Single Mode	MIL-PRF-49291/7
<a href="#">KitCo</a>	ST/SC Connector Termination Kit	6872811
	Rotary Mechanical Splice Termination Kit	6872812
	Multiterminus (MT) Heavy Duty Connector Termination Kit	6872813
	Submarine Combination ST, SC, and MT Termination Kit	7085185
	Damage Control Kit	7344573
	FDDI Connector Tools	N/A
	SC Connector Tools	N/A
	Furcation Units, Tube, BOF	A-A-59729
	Fusion Splice Protector	MIL-PRF-24623/6
	Fusion Splice Tray	MIL-I-24728/8
	<a href="#">Laser Diode, Inc.</a>	Transmitter
Receiver		MIL-M-24791
<a href="#">Litton Network Access Systems</a>	2X2 Bypass Switch	N/A
<a href="#">Loctite</a>	UV Curable Adhesive	MIL-PRF-24793
<a href="#">Nye Lubricants, Inc.</a>	Index Matching Gel	MIL-PRF-24794
<a href="#">OFS Optics</a>	ST Connector, Commercial	A-A-59940/3
	ST Connector Adapter, Commercial	N/A
	LC Connector, Commercial	A-A-59940/1
	LC Connector Adapter, Commercial	N/A
	Epoxy	MIL-PRF-24792
	Fast Cure Adhesive, Commercial	N/A
<a href="#">Optical Cable Corporation</a>	Cable, Conventional, Commercial	N/A
	ST Connector	MIL-C-83522/16
	ST Connector Adapter	MIL-C-83522/17
<a href="#">SMC</a>	Plug, Tube Fittings, BOF	A-A-59728
	Tube fitting (Tee coupler), BOF	A-A-59731
	Tube fitting (straight coupler), BOF	A-A-59731
	Tube fitting (end cap coupler), BOF	A-A-59731
<a href="#">STRAN Technologies</a>	ST Connector, Commercial, Ruggedized	A-A-59940/3
	ST Connector Adapter, Commercial, Ruggedized	N/A

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

<b>Vendor</b>	<b>Component</b>	<b>Specification/Drawing</b>
<a href="#">Sumitomo</a>	Tube fitting (Tee coupler), BOF	A-A-59731
	Tube fitting (straight coupler), BOF	A-A-59731
	Plug, Tapered Tube, BOF	A-A-59730
	Tube Fitting (end cap coupler), BOF	A-A-59731
	Fusion Splice Kit	A-A-59799
	Type-Q101-CA Splicing Kit	A-A-59799-A
<a href="#">Tra-Con, Inc.</a>	Epoxy	MIL-PRF-24792
<a href="#">TE Connectivity</a>	SC Connector, Commercial	A-A-59940/2
	SC Connector Adapter, Commercial	N/A
	LC Connector, Commercial	A-A-59940/1
	ST Connector, Quick Connect, Commercial	A-A-59940/3
	Splice, Mechanical	A-A-59917
<a href="#">US Pioneer</a> (formerly NMP)	IC Box	MIL-I-24728

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 December 2016

**ITEM: Fusion Splice Protector, Fusion Splice Kit [TOP](#)**

MIL-SPEC: MIL-PRF-24623; CID: A-A-59799-A, A-A-59940

VENDOR: AFL Telecommunications (<http://www.afitele.com/index.asp>)

VENDOR GOV'T. SALES POC: Michael Hetrick (410) 937-8048, FAX: (410) 420-6877

Vendor Address: AFL Telecommunications  
170 Ridgeview Center  
Duncan, SC 29334

DESCRIPTION	CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
FSM-70S w/S70A Sheath Clamp Optical Fiber Fusion Splicer <u>1/</u> , <u>3/</u> Contents:	A-A-59799-A	S015590
1 ea-FSM-70S Fusion Splicer		S015580
1 ea-CT30A Cleaver		S014080
1 ea-ADC-18 AC Adapter		S015585
1 ea-ACC-14 AC Cord		S014536
1 ea-ELCT2-20A Spare Electrodes (pair)		S013532
1 ea-S70C Sheath Clamp		S015586
1 ea-USB Cable		S014777
1 ea-Alcohol Dispenser		
1 ea-Screw Driver		
1 ea-Splicer Carrying Strap		
1 ea-Quick Reference Guide		
1 ea-Instruction Manual		
1 ea-CC30 Transit Case with Carrying Strap		
FSM-60S Kit w/S60B Sheath Clamp <u>1/</u> , <u>3/</u> Contents:	A-A-59799-A	S014578
1 ea - 60S Splicer		S014531
1 ea - CT30A Cleaver		S014080
1 ea - ADC-13 AC Adapter		S014535
1 ea - ACC-14 AC Power Cord		S014536
1 ea - JP-05 J-Plate		S014537
1 pr - Spare Electrodes		S013532
1 ea - Clamp-S60B		S014551
1 ea - USB cable		
1 ea - Splicer Carrying Strap		
1 ea - Quick Reference Guide		
1 ea - Instruction Manual		
1 ea - Transit Case w/ Carrying Strap		
FSM-50S Kit w/Set Plate B Installed <u>1/</u> , <u>2/</u> , <u>3/</u> Contents:	A-A-59799-A	S014490
1 ea - 50S Splicer		S013510
1 ea - CT30A Cleaver		S014080
1 ea - Set Plate B (50S)		S013564
1 ea - AC Adapter/Battery Charger		ADC-11
1 ea - AC Cord		
1 pr - Spare Electrodes		

Continued on next page

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Commercial Item Descriptions:	CID P/N	VENDOR P/N
1 ea - Carrying Strap		
1 ea - Operation Manual		
1 ea - Transit Case		
Simplex LC connector, quick connect fusion, commercial, Multimode 4/ 5/ 7/	A-A-59940/1-211SN	FUSE-LC2M62-6 <u>6/</u>
Simplex LC connector, quick connect fusion, commercial, Single mode 4/ 5/ 7/	A-A-59940/1-221SN	FUSE-LC2SMU-6 <u>6/</u>

1/ This Fusion Splice Kit is not approved for Organizational Level Shipboard Maintenance & Repair.

2/ This Fusion Splice Kit has been tech refreshed and is no longer available for purchase.

3/ COTS splicing unit contains a coin size lithium battery.

4/ For use only with AFL70S IAW CID A-A-59799 with heater settings of 185 deg 75 sec.

5/ For use only with MIL-85045/16-01 or MIL-85045/16-02 cable.

6/ P/N is for one pack of 6 pieces.

7/ SC/LC connectors are not for use with patch panels except as noted below. Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

Non-Tactical Application:

- Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 11 May 2016

**ITEM: Termini [TOP](#)**

MIL-SPEC: MIL-PRF-29504

VENDOR: Applied Optical Systems, Inc. (AOS a Division of OCC) (<http://www.appliedopticalsystems.com/>)

VENDOR GOV'T. SALES POC: Ernie Gonzalez (410) 561-7077/ (972)-578-2127

FAX: 972 409-9009, email: [ernie.gonzalez@occfiber.com](mailto:ernie.gonzalez@occfiber.com)

Vendor Address: Applied Optical Systems, Inc.  
1700 Capital Avenue, Suite 50  
Plano, TX 75074

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Termini, pin, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4131C	TC1440CA
Termini, pin, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4141C	TC1440CA
Termini, socket, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4171C	TC1541CA
Termini, socket, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4181C	TC1541CA
Termini, dummy, for MIL-PRF-28876 connectors	M29504/3-4038	TC0339AA

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 13 August 2015

**ITEM: ST Connectors, Epoxy, Fast Cure Adhesive, Commercial Cable [TOP](#)**

MIL-SPEC: MIL-C-83522, MIL-A-24792

VENDOR: CommScope (formerly Avaya) (<http://www.commscope.com/>)

VENDOR GOV'T. SALES POC: Jeff Nielson (972) 792-3174

Vendor Address: CommScope Solutions Inc.  
1300 East Lookout Dr., Suite 350  
Richardson TX 75082

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Material:</b>		
Epoxy, two part, fiber optic, room/heat cured, 15 bipacks <u>1/</u>	M24792-A	700 006 109
<b>Commercial Item Description</b>		
<b>CID P/N</b>		
ST connector, 125 micron, MM <u>4/</u>	A-A-59940/3-111SN	700 004 328
ST connector, 125 micron, SM <u>4/</u>	A-A-59940/3-121SN	700 011 067
<b>Approved Commercial Components:</b>		
Fast Cure Adhesive, Fiber Optic <u>2/ 3/</u>	N/A	Adhesive: 700 002 181 Primer: 700 004 146
ST to ST, adapter, MM <u>4/</u>	N/A	700 004 864
ST to ST, adapter, SM <u>4/</u>	N/A	700 011 133
ST to ST, adapter, MM (ruggedized) <u>4/ 5/</u>	N/A	105 777 288
Conventional cable, 2-fiber, commercial LSZH <u>6/</u> (Systemax Div)	N/A	700 009 889
Conventional cable, 2-fiber, commercial LSZH <u>6/</u> (Uniprise Div)	N/A	Z-002-DU-6F-F25BK

- 1/ Each bipack contains a pre-measured quantity of resin and hardener separated by a divider. There is 8 gm of resin and hardener per bipack. Expiration date upon ship date: 9 months minimum.
- 2/ Fast Cure Adhesive Approved for shipboard usage as follows: **Fast cure adhesive is authorized only for administrative applications and is not authorized for use in tactical or mission critical applications.**
- 3/ Adhesive: Quantity of one 10 ml bottle. Primer: Quantity of one 1 oz bottle. Expiration date upon ship date, both adhesive and primer: 6 months minimum.
- 4/ Commercial Connectors Approved for shipboard usage as follows:  
Tactical Application:
  - Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
  - Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.Non-Tactical Application:
  - Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
  - Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).
- 5/ Ruggedized components constructed using stainless steel material.
- 6/ Commercial Cable Approved for shipboard usage as follows:  
Non-Tactical Application:
  - Cable connections within a compartment.
  - Cable connections within an equipment or rack.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 July 2009

**ITEM: BOF Tube Furcation Unit [TOP](#)**

VENDOR: Connective Solutions (<http://www.connectivesol.com/>)

VENDOR GOV'T. SALES POC: John Haney (1 800) 241-2792

Vendor Address: Connective Solutions  
P.O. Box 333  
Quaker Hill, CT 06375

DESCRIPTION	MIL-SPEC or CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
Furcation Units, Tube, blown optical fiber (BOF) 2-18 fibers	A-A-59729	TFUxx-y.ySR*
Plug, Tapered Tube, BOF, 6-fiber bundle or up to 8 fibers, 8mm	A-A-59730-TTP-2	TTP06-2.0R
Plug, Tapered Tube, BOF, 12- or 18- fiber bundles or 9 to 12 fibers BOF, 8mm	A-A-59730-TTP-3	TTP06-3.0R
<b>Approved Commercial Components:</b>		
Plug, Tapered Tube, BOF, up to 12 fibers, 5mm	N/A	TTP03-2.0R

\* xx = strand count (2 to 18)  
y.y = fanout length in meters (1 to 40)

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 25 September 2008

**ITEM: Optical Fiber [TOP](#)**

MIL-SPEC: MIL-PRF-49291

VENDOR: Corning Incorporated (<http://www.corningfiber.com/>)

VENDOR GOV'T SALES POC: Sharon Bois (607) 974-7758, FAX: (607) 974-4829

Vendor Address: Corning Incorporated  
One Riverfront Plaza  
MP HQ 02-W29  
Corning, NY 14831

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Optical fiber, multimode	M49291/6-03	LNF™ 62.5/125umCPC6; 3.0/0.7; 160/500; 100kpsi
Optical fiber, single mode	M49291/7-01	SMF28™ CPC6; 0.4/0.3; 100kpsi

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 09 June 2016

**ITEM: Multiterminus (MT) Heavy Duty Connector, Termini, ST Connectors** [TOP](#)

MIL-SPEC: MIL-PRF-28876, MIL-PRF-29504, MIL-C-83522

VENDOR: Delphi Connection Systems (formerly Packard-Hughes Interconnect)  
(<http://www.delphi.com/products/connect/da/>)

VENDOR GOV'T SALES POC: Scott Christian (949) 458 3157

Vendor Address: Delphi Connection Systems  
1 Vanderbilt  
Irvine, CA 92618

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Termini, pin, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4131C	M29504/14-4131C
Termini, pin, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4141C	M29504/14-4141C
Termini, socket, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4171C	M29504/15-4171C
Termini, socket, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4181C	M29504/15-4181C
Termini, dummy, for MIL-PRF-28876 connectors	M29504/3-4038	M29504/3-4038
Connector, four termini, receptacle, wall mount, with insert retention nut	M28876/1B1S1	M28876/1B1S1
Connector, eight termini, receptacle, wall mount, with insert retention nut	M28876/1C1S1	M28876/1C1S1
Connector, four termini, plug, no strain relief, with insert retention nut	M28876/6B1P1	M28876/6B1P1
Connector, eight termini, plug, no strain relief, with insert retention nut	M28876/6C1P1	M28876/6C1P1
Connector, four termini, plug, no strain relief, no insert retention nut	M28876/6B1P1N	M28876/6B1P1N
Connector, eight termini, plug, no strain relief, no insert retention nut	M28876/6C1P1N	M28876/6C1P1N
Connector, four termini, plug, straight backshell with strain relief for four fiber cable	M28876/7B12P1	M28876/7B12P1
Connector, eight termini, plug, straight backshell with strain relief for eight fiber cable	M28876/7C11P1	M28876/7C11P1
Connector, four termini, plug, 45° backshell with strain relief for four fiber cable	M28876/8B12P1	M28876/8B12P1
Connector, eight termini, plug, 45° backshell with strain relief for eight fiber cable	M28876/8C11P1	M28876/8C11P1
Connector, four termini, plug, 90° backshell with strain relief for four fiber cable	M28876/9B12P1	M28876/9B12P1
Connector, eight termini, plug, 90° backshell with strain relief for eight fiber cable	M28876/9C11P1	M28876/9C11P1
Connector, four termini, receptacle, jamnut mount, with insert retention nut	M28876/11B1S1	M28876/11B1S1
Connector, eight termini, receptacle, jamnut mount, with insert retention nut	M28876/11C1S1	M28876/11C1S1
Connector, eighteen termini, receptacle, wall mount, with insert retention nut	M28876/1F2XSZ <sup>1/2</sup>	M28876/1F2XSZ
Connector, eighteen termini, plug, no strain relief, with insert retention nut	M28876/6F2XPZ <sup>1/2</sup>	M28876/6F2XPZ
Connector, eighteen termini, plug, no strain relief, no insert retention nut	M28876/6F2XPZN <sup>1/2</sup>	M28876/6F2XPZN
Connector, eighteen termini, plug, straight backshell with strain relief for eighteen fiber cable	M28876/7F2XPZ <sup>1/2</sup>	M28876/7F2XPZ
Connector, eighteen, plug, 45° backshell with strain relief for eighteen fiber cable	M28876/8F2XPZ <sup>1/2</sup>	M28876/8F2XPZ
Connector, eighteen, plug, 90° backshell with strain relief for eighteen fiber cable	M28876/9F2XPZ <sup>1/2</sup>	M28876/9F2XPZ
Connector, eighteen, receptacle, jamnut mount, with insert retention nut	M28876/11F2XSZ <sup>1/2</sup>	M28876/11F2XSZ
Connector, eighteen, receptacle, jamnut mount, no insert retention nut	M28876/11F2XSZN <sup>1/2</sup>	M28876/11F2XSZN
Connector, thirty-one termini, receptacle, wall mount, with insert retention nut	M28876/1F1XSZ <sup>1/2</sup>	M28876/1F1XSZ
Connector, thirty-one termini, plug, no strain relief, with insert retention nut	M28876/6F1XPZ <sup>1/2</sup>	M28876/6F1XPZ

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Connector, thirty-one termini, plug, no strain relief, no insert retention nut	M28876/6F1XPZN <sup>1/</sup>	M28876/6F1XPZN
Connector, thirty-one termini, plug, straight backshell with strain relief for thirty-six fiber cable	M28876/7F1XPZ <sup>1/</sup>	M28876/7F1XPZ
Connector, thirty-one, plug, 45° backshell with strain relief for thirty-six fiber cable	M28876/8F1XPZ <sup>1/</sup>	M28876/8F1XPZ
Connector, thirty-one, plug, 90° backshell with strain relief for thirty-six fiber cable	M28876/9F1XPZ <sup>1/</sup>	M28876/9F1XPZ
Connector, thirty-one, receptacle, jamnut mount, with insert retention nut	M28876/11F1XSZ <sup>1/</sup>	M28876/11F1XSZ
Connector, thirty-one, receptacle, jamnut mount, with insert retention nut	M28876/11F1XSZN <sup>1/</sup>	M28876/11F1XSZN
Backshell, straight, split, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for four fiber cable	M28876/27B2	M28876/27B2
Backshell, 45°, split, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for four fiber cable	M28876/28B2	M28876/28B2
Backshell, 90°, split, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for four fiber cable	M28876/29B2	M28876/29B2
ST connector, nonlocking boot, 125 micron, MM	M83522/16-DNX	1021690-3C
ST connector, nonlocking boot, 125 micron, SM/MM	M83522/16-DNY	1021341
<b>Special Application Components:</b>		
ST connector, QPL, locking boot, 125 micron, MM	M83522/16-ANX	1021689-3C
ST connector, QPL, locking boot, 125 micron, SM/MM	M83522/16-ANY	1021689

<sup>1/</sup> X = Backshell Designator (1 through 3), Z = Keying Arrangement Designator (1 through 6)

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 June 2015

**ITEM: Cable, Optical Fiber [TOP](#)**

MIL-SPEC: MIL-PRF-85045, MIL-PRF-49291

VENDOR: Draka (<http://www.drakausa.com/>)

VENDOR GOV'T SALES POC: Kevin Hamilton (508) 513-2347, FAX: (774) 235-2031

Vendor Address: Draka  
22 Joseph E. Warner Blvd.  
North Dighton, MA 02764

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Four fiber, thermoset (cross linked), MM, 500 MHz BW, high pressure	M85045/18-01P	S454T-04-62G
Eight fiber, thermoset (cross linked), MM, 500 MHz BW, high pressure	M85045/17-01P	S454T-08-62G
Four fiber, thermoset (cross linked), SM, 500 MHz BW, high pressure	M85045/18-02P	S454T-04-010N
Eight fiber, thermoset (cross linked), SM, 500 MHz BW, high pressure	M85045/17-02P	S454T-08-010N
Optical fiber, multimode	M49291/6-03	459
Optical fiber, multimode	M49291/6-05	452
Optical fiber, single mode	M49291/7-01	269
One fiber, OFCC, MM, 500 MHz BW	M85045/16-01	S458T-01-62G
One fiber, OFCC, SM	M85045/16-02	S458T-01-010N
<b>Approved Commercial Components:</b>		
Conventional cable, 2-fiber, commercial LSZH <u>1/</u>	N/A	LSZH30-02F-62X LSZH25-02R-62X

1/ Commercial Cable Approved for shipboard usage as follows:

Non-Tactical Application:

- Cable connections within a compartment.
- Cable connections within an equipment or rack.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 17 December 2002

**ITEM: Adhesive and Fast Cure Adhesive [TOP](#)**

MIL-SPEC: MIL-PRF-24792

VENDOR: Fiber Optics Center, Inc. (FOCI) (<http://www.focenter.com/>)

VENDOR GOV'T. SALES POC: Barry Siroka (617) 916-1550, FAX: (603) 452-7960

Vendor Address: Fiber Optics Center, Inc.  
23 Centre Street  
New Bedford, MA 02740-6322

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Material:</b>		
Epoxy, two part, fiber optic, heat cured, 6 bipacks <u>1/</u>	M24792-A	AB-9112
<b>Approved Commercial Components:</b>		
Fast Cure Adhesive, Fiber Optic <u>2/ 3/</u>	N/A	AB-202

- 1/ Each bipack contains a pre-measured quantity of resin and hardener separated by a divider.  
Expiration date upon ship date: 9 months minimum.
- 2/ Adhesive: Expiration date upon ship date, both adhesive and primer: 6 months minimum.
- 3/ Fast Cure Adhesive Approved for shipboard usage as follows: **Fast cure adhesive is authorized only for administrative applications and is not authorized for use in tactical or mission critical applications.**

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 09 June 2016

**ITEM: ST Connectors, ST Connector Adapters, Multiterminus (MT) Heavy Duty Connector [TOP](#)**

MIL-SPEC: MIL-PRF-83522, MIL-PRF-29504, MIL-PRF-28876

CID: A-A-59940

VENDOR: Fiber Systems International, Inc. (Amphenol) (<http://www.fibersystems.com/>)

VENDOR GOV'T. SALES POC: Mike Dabrowski (214) 547-2409

Email: [mdabrowski@fibersystems.com](mailto:mdabrowski@fibersystems.com)

Vendor Address: Amphenol Fiber Systems International  
1300 Central Expressway North  
Allen, TX 75013

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
ST connector, nonlocking boot, 125 micron, MM	M83522/16-DNX	MSTC1000
ST connector, nonlocking boot, 125 micron, SM	M83522/16-DNY	MSTC2000
ST to ST adapter, SM	M83522/17-NY	MSTA2000
Termini, pin, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4131C	M29504/14-4131C
Termini, pin, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4141C	M29504/14-4141C
Termini, socket, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4171C	M29504/15-4171C
Termini, socket, long length, ceramic guide bushing, SM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4181C	M29504/15-4181C
Termini, dummy, for MIL-PRF-28876 connectors	M29504/3-4038	M29504/3-4038
Connector, four termini, receptacle, wall mount, with insert retention nut	M28876/1B1S1	M28876/1-B1S1
Connector, eight termini, receptacle, wall mount, with insert retention nut	M28876/1C1S1	M28876/1C1S1
Connector, four termini, plug, no strain relief, with insert retention nut	M28876/6B1P1	M28876/6B1P1
Connector, eight termini, plug, no strain relief, with insert retention nut	M28876/6C1P1	M28876/6C1P1
Connector, four termini, plug, no strain relief, no insert retention nut	M28876/6B1P1N	M28876/6B1P1N
Connector, eight termini, plug, no strain relief, no insert retention nut	M28876/6C1P1N	M28876/6C1P1N
Connector, four termini, plug, straight backshell with strain relief for four fiber cable	M28876/7B12P1	M28876/7B12P1
Connector, eight termini, plug, straight backshell with strain relief for eight fiber cable	M28876/7C11P1	M28876/7C11P1
Connector, four termini, plug, 45° backshell with strain relief for four fiber cable	M28876/8B12P1	M28876/8B12P1
Connector, eight termini, plug, 45° backshell with strain relief for eight fiber cable	M28876/8C11P1	M28876/8C11P1
Connector, four termini, plug, 90° backshell with strain relief for four fiber cable	M28876/9B12P1	M28876/9B12P1
Connector, eight termini, plug, 90° backshell with strain relief for eight fiber cable	M28876/9C11P1	M28876/9C11P1
Connector, four termini, receptacle, jamnut mount, with insert retention nut	M28876/11B1S1	M28876/11B1S1
Connector, eight termini, receptacle, jamnut mount, with insert retention nut	M28876/11C1S1	M28876/11C1S1

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Connector, eighteen, plug, 45° backshell with strain relief for eighteen fiber cable	M28876/8F2XPZ <sup>2/</sup>	M28876/8F2XPZ
Connector, eighteen, plug, 90° backshell with strain relief for eighteen fiber cable	M28876/9F2XPZ <sup>2/</sup>	M28876/9F2XPZ
Backshell, straight, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for four fiber cable	M28876/27B2	M28876/27B2
Backshell, straight, long length, with strain relief for MIL-PRF-28876/1, /6 and /11 eight termini connectors for eight fiber cable (O.D. range: 0.424 to 0.465 in.)	M28876/27C3	M28876/27C3
Backshell, 45°, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for Four fiber cable	M28876/28B2	M28876/28B2
Backshell, 45°, long length, with strain relief for MIL-PRF-28876/1, /6 and /11 eight termini connectors for eight fiber cable (O.D. range: 0.424 to 0.465 in.)	M28876/28C3	M28876/28C3
Backshell, 90°, regular length, with strain relief for MIL-PRF-28876/1, /6 and /11 four termini connectors for four fiber cable	M28876/29B2	M28876/29B2
Backshell, 90°, long length, with strain relief for MIL-PRF-28876/1, /6 and /11 eight termini connectors for eight fiber cable (O.D. range: 0.424 to 0.465 in.)	M28876/29C3	M28876/29C3
<b>Commercial Item Description:</b>		
	<b>CID P/N</b>	
ST connector, ruggedized, 125 micron, MM <u>1/</u>	A-A-59940/3-111SN	MSTC1100 MSTC1110 MSTB1400
ST connector, ruggedized, 125 micron, SM <u>1/</u>	A-A-59940/3-121SN	MSTC2100 MSTB2400
<b>Approved Commercial Components:</b>		
ST to ST adapter, MM <u>1/</u>	N/A	MSTA1300 MSTA1250
ST to ST adapter, SM <u>1/</u>	N/A	MSTA2300 MSTA2200
<b>Approved Termination Kits:</b>		
ST/SC termination kit	6872811	FKIT002
Multiterminus (MT) heavy duty connector termination kit	6872813	FKIT001
Submarine Combination ST, SC, and MT Termination Kit	7085185	FKIT007

1/ Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

Non-Tactical Application:

- Connections in outlet boxes (drop boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

2/ X = Backshell Designator (1 through 3), Z = Keying Arrangement Designator (1 through 6)

\* Contact Vendor for ordering information

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 11 February 2016

**ITEM: Cable, Optical Fiber TOP**

MIL-SPEC: MIL-PRF-85045, MIL-PRF-49291

CID: A-A-59728, A-A-59731

VENDOR: General Cable (Formerly BICC Brand-Rex Company) (<http://www.generalcable.com/>)

VENDOR GOV'T SALES POC: Cedric Lindsay (859) 572-8737, FAX: (859) 572-8470

Vendor Address: General Cable  
4 Tesseneer Drive  
Highland Heights, KY 41076

DESCRIPTION	MIL-SPEC or CID P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
One fiber, OFCC, MM, 500 MHz BW	M85045/16-01	OC-1468
Four fiber, thermoset (cross linked), MM, 500 MHz BW	M85045/18-01P	OC-1417P
Eight fiber, thermoset (cross linked), MM, 500 MHz BW	M85045/17-01P	OC-1434P
36 fiber, thermoset (cross linked), MM	M85045/20-01M	OC-1540
18 fiber, thermoplastic, MM 500 MHz BW	M85045/22-01	OC-1680
90 fiber, thermoset, MM 500 MHz BW	M85045/24-01	OC-1682
8 fiber, outboard, MM	M85045/21-01	OC-1651
18 fiber, outboard, MM	M85045/23-01	OC-1681
One fiber, OFCC, SM	M85045/16-02	OC-1571
Four fiber, thermoset , SM	M85045/18-02P	OC-1578P
Eight fiber, thermoset, SM	M85045/17-02P	OC-1462P
18 fiber, thermoplastic, SM	M85045/22-02	OC-1652
36 fiber, thermoset, SM	M85045/20-02M	OC-1673
90 fiber, thermoset, SM	M85045/24-02	OC-1654
8 fiber, outboard, SM	M85045/21-02	OC-1679
18 fiber, outboard, SM	M85045/23-02	OC-1653
7 tube cable, blown optical fiber (BOF) (Black) Enhanced	M85045/25-01E	OC-1598
7 tube cable, blown optical fiber (BOF) (Light Blue) Enhanced	M85045/25-01E	OC-1715
Single tube cable, blown optical fiber (BOF) (Black) Enhanced	M85045/26-01E	OC-1597
Single tube cable, blown optical fiber (BOF) (Light Blue) Enhanced	M85045/26-01E	OC-1717
7 tube cable, blown optical fiber (BOF) (Black) Standard	M85045/25-01S	OC-1701
7 tube cable, blown optical fiber (BOF) (Light Blue) Standard	M85045/25-01S	OC-1716
Single tube cable, blown optical fiber (BOF) (Black) Standard	M85045/26-01S	OC-1704
Single tube cable, blown optical fiber (BOF) (Light Blue) Standard	M85045/26-01S	OC-1718
Optical fiber, multimode <u>1/</u>	M49291/6-05	OC-062H-BF-XXXX(QPL)
Optical fiber, single mode <u>1/</u>	M49291/7-02	OC-009S-BF-XXXX(QPL)
<b>Commercial Item Description:</b>		
Plug, Tube Fitting, blown optical fiber (BOF) Duct 8mm Connector Plug	A-A-59728-TFP-8	77-7231
Tube Fitting, blown optical fiber (BOF) Duct 8mm Straight Connector	A-A-59731-U-8E	77-7225
Tube Fitting, blown optical fiber (BOF) Duct 8mm Tee Connector	A-A-59731-T-8E	77-7229
Tube Fitting, blown optical fiber (BOF) End Cap Coupler	A-A-59731-EC-8E	705620
Tube Fitting, blown optical fiber (BOF) Duct 5mm Straight Coupler	A-A-59731-U-5E	77-7224
Tube Fitting, blown optical fiber (BOF) Duct 8mm-5mm Reducer, Straight Coupler	A-A-59731-R-E	77-7227

Continued on next page

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

<b>Approved Commercial Components:</b>		
Conventional cable, 2-fiber, commercial <u>2/</u>	N/A	OC-1613
Conventional Loose structure cable, 2 fiber 62.5/125 zipcord with 600 micron buffered fiber LSZH (2.0mm) <u>3/</u>	N/A	OC-1731
Conventional Loose structure cable, simplex 62.5/125 with 600 micron buffered fiber LSZH (2.0mm) <u>3/</u>	N/A	OC-1732
Conventional Loose structure cable, 2 fiber 9/125 zipcord with 600 micron buffered fiber LSZH (2.0mm) <u>3/</u>	N/A	OC-1737
Conventional Loose structure cable, simplex 9/125 with 600 micron buffered fiber LSZH (2.0mm) <u>3/</u>	N/A	OC-1736
Single Tube, blown optical fiber (BOF), used for interconnection inside of the tube routing boxes (TRB) (8mm) <u>4/</u>	N/A	705610 (423380)
Single Tube, blown optical fiber (BOF), used for interconnection inside of the tube routing boxes (TRB) (5mm) <u>4/</u>	N/A	705600 (423400)

1/ For Blown Optical Fiber (BOF) applications. XXXX indicates blowable coating color

2/ Commercial Cable Approved for shipboard usage as follows:

Non-Tactical Application:

- Cable connections within a compartment.
- Cable connections within an equipment or rack.

3/ Approved for use with the currently approved pull proof style SC and LC connectors.

4/ Subcomponent of Qualified part 85045/25 & /26.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 24 March 2011

**ITEM: Multiterminus (MT) Heavy Duty Connector and Termini [TOP](#)**

MIL-SPEC: MIL-PRF-28876, MIL-PRF-29504

VENDOR: Glenair, Inc (<http://www.glenair.com/>)

VENDOR GOV'T. SALES POC: Bea Martin (818) 247-6000

Email: [bmartin@glenair.com](mailto:bmartin@glenair.com)

Vendor Address:       Glenair, Inc.  
                              1211 Air Way  
                              Glendale, CA 91201-2497

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Termini, pin, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/14-4131C	181-039-1260C
Termini, socket, long length, ceramic guide bushing, MM, w/ crimp sleeve, for MIL-PRF-28876 connectors	M29504/15-4171C	181-040-1260C
Termini, dummy, for MIL-PRF-28876 connectors	M29504/3-4038	181-051
Connector, four termini, receptacle, wall mount, with insert retention nut	M28876/1B1S1	M28876/1B1S1
Connector, eight termini, receptacle, wall mount, with insert retention nut	M28876/1C1S1	M28876/1C1S1
Connector, four termini, plug, no strain relief, with insert retention nut	M28876/6B1P1	M28876/6B1P1
Connector, eight termini, plug, no strain relief, with insert retention nut	M28876/6C1P1	M28876/6C1P1
Connector, four termini, plug, no strain relief, no insert retention nut	M28876/6B1P1N	M28876/6B1P1N
Connector, eight termini, plug, no strain relief, no insert retention nut	M28876/6C1P1N	M28876/6C1P1N
Connector, four termini, plug, straight backshell with strain relief for four fiber cable	M28876/7B12P1	M28876/7B12P1
Connector, eight termini, plug, straight backshell with strain relief for eight fiber cable	M28876/7C11P1	M28876/7C11P1
Connector, four termini, plug, 45° backshell with strain relief for four fiber cable	M28876/8B12P1	M28876/8B12P1
Connector, eight termini, plug, 45° backshell with strain relief for eight fiber cable	M28876/8C11P1	M28876/8C11P1
Connector, four termini, plug, 90° backshell with strain relief for four fiber cable	M28876/9B12P1	M28876/9B12P1
Connector, eight termini, plug, 90° backshell with strain relief for eight fiber cable	M28876/9C11P1	M28876/9C11P1
Connector, four termini, receptacle, jamnut mount, with insert retention nut	M28876/11B1S1	M28876/11B1S1
Connector, eight termini, receptacle, jamnut mount, with insert retention nut	M28876/11C1S1	M28876/11C1S1

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 26 February 2016

**ITEM: Splice, Fusion Shelf and Tray** [TOP](#)

VENDOR: Hubbell (<http://ecatalog.hubbell-premise.com/>)

VENDOR GOV'T SALES POC: E.J. McCue (860)608-3984, FAX: (203)783-9230

Vendor Address:       Hubbel Premise Wiring  
                              26B Spithead Road  
                              Waterford, CT 06385

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Approved Commercial Components:</b>		
Splice, Fusion Shelf <u>1/ 3/</u>		FSS01A
Splice, Fusion Tray, 10" <u>2/ 3/</u>		STRAY24MIL
Splice, Tray Cover, 10"		FSS01A10TC
Splice, Tray Cover, 7"		FSS01A7TC

1/ A tray cover is required and the cover shall be compatible with splice tray in use.

2/ A 7" splice tray (MIL-24728/8-51) is also available.

3/ Commercial Fusion Splice Shelf and Tray approved for usage as follows: Storage of MIL-24623 Fusion Splices within a "shock isolated" equipment or rack".

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 08 July 2008

**ITEM: Optical Fiber [TOP](#)**

MIL-SPEC: MIL-PRF-49291

VENDOR: J-Fiber GmbH (<http://www.j-fiber.com/>)

VENDOR GOV'T SALES POC: Lothar Brehm +49-3641-352 100, FAX: +49-3641-352-101

Email: [lothar.brehm@j-fiber.com](mailto:lothar.brehm@j-fiber.com)

Vendor Address: J-Fiber GmbH  
Im Semmicht 1  
07751 Jena, Germany

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Optical fiber, multimode	M49291/6-03	FKQ200-35301060
Optical fiber, multimode	M49291/6-05	FKR200-35301060
Optical fiber, single mode	M49291/7-01	FTQ400-04000300
Optical fiber, single mode	M49291/7-02	FTR400-04000300

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 09 June 2016

**ITEM: Interconnection Box, Fusion Splice Protector, BOF Tube Furcation Unit, Termination Kits**

**TOP**

MIL-SPEC: MIL-I-24728, MIL-PRF-24623; CID: A-A-59729

VENDOR: KitCo (<http://www.kitcofo.com/>)

VENDOR GOV'T. SALES POC: Dan Morris (757) 216-2220, FAX: (757) 518-9700

Vendor Address: KitCo  
5269 Cleveland St.  
Virginia Beach, VA 23462

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Fusion splice tray – for use in 24728/8-50	M24728/8-051	0732-1106
Fusion splice protector	M24623/6-1	0703-3775
<b>Commercial Item Descriptions:</b>		
	<b>NAVSEA DWG Or CID P/N</b>	
Furcation Units, Tube, blown optical fiber (BOF) 12 fibers	A-A-59729	0705-8040
Furcation Units, Tube, blown optical fiber (BOF) 4 fibers	A-A-59729	0705-8120
Furcation Units, Tube, blown optical fiber (BOF) 8 fibers	A-A-59729	0705-8130
<b>Approved Termination Kits:</b>		
ST/SC termination kit	6872811	0800-8010
Multiterminus (MT) heavy duty connector termination kit	6872813	0801-8000
MIL-S-24623/4 rotary mechanical splice termination kit	6872812	0801-8020
Submarine combination ST, SC & MT kit	7085185	0801-8030
FDDI connector tool supplement <u>1/</u>	N/A	0801-8040
SC upgrade kit <u>1/ 2/</u>	N/A	0801-8080
Polishing puck, ST & SC connector compatible <u>2/</u>	N/A	0700-1750
Damage Control Kit, Optical Fiber, Naval Shipboard	7344573	0701-8000

1/ Must be used with ST connector termination kit.

2/ Only necessary for ST termination kits procured before September 1997.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 27 July 2001

**ITEM: Transmitter and Receiver [TOP](#)**

MIL-SPEC: MIL-M-24791

VENDOR: Laser Diode, Inc. (<http://www.laserdiode.com/>)

VENDOR GOV'T. SALES POC: Ken Miller (908) 549-9001, FAX (908) 906-1559

Vendor Address: Laser Diode, Inc.  
4 Olden Avenue  
Edison, NJ 08820

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Components:</b>		
Transmitter, 1300 nm, LED, 16 pin DIP, MM pigtail, 125 Megabits, high power	M24791/1-HP	TS 2143C
Receiver, long wavelength digital, 16 pin DIP, MM pigtail, 125 Megabits, high sensitivity	M24791/2-HS	RT 2714C
Receiver, long wavelength digital, 16 pin DIP, MM pigtail, 125 Megabits, low sensitivity	M24791/2-LS	RT 2714C

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 27 July 2001

**ITEM: Switch [TOP](#)**

MIL-SPEC: MIL-S-24725

VENDOR: Litton Network Access Systems (<http://www.litton-ps.com/>)

VENDOR GOV'T SALES POC: Jay Muscatello (540) 552-3011 X230

Vendor Address: Litton Network Access Systems  
1213 North Main Street  
Blacksburg, VA 24060

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Following Components Are Not Qualified To Date:</b>		
Switch, hard mounted, electrical, nonlatching, MM cable, 2x2 bypass, optical pigtails entering on opposing sides.	M24725/1-01T	FO4663R-B300-100C-N
Switch, hard mounted, electrical, nonlatching, MM cable, 2 x 2 bypass, optical pigtails entering on one side.	M24725/1-01S	N/A*
Switch, non-hard mounted, electrical, nonlatching, MM cable, 2 x 2 bypass, optical pigtails entering on opposing sides.	M24725/2-01T	FO4663R-B300-100C-N
Switch, non-hard mounted, electrical, nonlatching, MM cable, 2 x 2 bypass, optical pigtails entering on one side.	M24725/2-01S	N/A*

\* Not applicable

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 31 August 2001

**ITEM: UV Curable Adhesive** [TOP](#)

MIL-SPEC: MIL-PRF-24793

VENDOR: Loctite (<http://www.loctite.com/>)

VENDOR GOV'T SALES POC: (800) 562-8483, FAX: (860) 571-5430

Vendor Address:       Loctite Corporation  
                              1001 Trout Brook Crossing  
                              Rocky Hill, CT 06067

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Material:</b>		
Adhesive, UV curable, one part <u>1/</u>	M24793-1	Impruv™ 363
<b>Approved Commercial Components:</b>		
Fast Cure Adhesive, Fiber Optic <u>2/</u> <u>3/</u>	N/A	

1/ Expiration date upon ship date: 6 months minimum.

2/ Fast Cure Adhesive Approved for shipboard usage as follows: **Fast cure adhesive is authorized only for administrative applications and is not authorized for use in tactical or mission critical applications.**

3/ Adhesive: Expiration date upon ship date, both adhesive and primer: 6 months minimum.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 27 July 2001

**ITEM: Index Matching Material [TOP](#)**

MIL-SPEC: MIL-PRF-24794

VENDOR: Nye Lubricants, Inc. (<http://www.nyeoptical.com/>)

VENDOR GOV'T SALES POC: Paul Bessette (508) 996-6721, FAX: (508) 997-5285

Vendor Address: Nye Lubricants, Inc.  
12 Howland Rd.  
Fairhaven, MA 02719

ALTERNATE SOURCE: Jay Weikel (704) 587-9447, FAX: (704) 587-9566

Source Address: Nye Lubricants, Inc. - Southeast Engineering Office  
10660 York Road, Suite 9  
Charlotte, NC 28273

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Material:</b>		
Index matching material, fiber optic, one part, 1 cc syringe*	M24794-1	OC-432/1 cc syringe
Index matching material, fiber optic, one part, 10 cc syringe*	M24794-1	OC-432/10 cc syringe
Index matching material, fiber optic, one part, 2 ounce glass jar*	M24794-1	OC-432/2 ounce glass jar
Index matching material, fiber optic, one part, 6 ounce Semco cartridge*	M24794-1	OC-432/6 Semco cartridges

\*Two-year shelf life specified from date of shipment. Shelf life is indefinite if stored properly. There is no active ingredient in the index matching material to cause deterioration. Material can be returned to Nye Lubricants, Inc. to be re-qualified if shelf life is exceeded.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 13 August 2015

**ITEM: ST, SC and LC Connectors; Epoxy; Fast Cure Adhesive [TOP](#)**

MIL-SPEC: MIL-PRF-24792

CID: A-A-59940

VENDOR: OFS Optics (<http://www.ofsoptics.com/>)

VENDOR GOV'T. SALES POC: Jim Ford (770) 838-5215, FAX: (770) 838-5442

Email: [jford@ofsoptics.com](mailto:jford@ofsoptics.com)

Vendor Address: OFS Optics  
1 Brightwave Blvd  
Carrollton, GA 30117

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>First Article Approved Material:</b>		
Epoxy, two part, fiber optic, heat cured, 15 bipacks <u>1/</u>	M24792-A	105 489 355
<b>Commercial Item Description:</b>		
ST connector, 125 micron, MM <u>5/</u>	A-A-59940/3-111SN	106 812 274
ST connector, 125 micron, SM <u>5/</u>	A-A-59940/3-121SN	106 812 258
LC connector, 125 micron, MM, simplex jumper connector, pull proof <u>5/ 6/ 7/ 8/ 9/ 10/</u>	A-A-59940/1-111SP	108 064 445
LC connector, 125 micron, SM, simplex jumper connector, pull proof <u>5/ 6/ 7/ 8/ 9/ 10/</u>	A-A-59940/1-121SP	109 154 559
LC connector, 125 micron, MM, duplex jumper connector, pull proof <u>5/ 6/ 7/ 8/ 9/ 10/</u>	A-A-59940/1-111DP	108 138 678
LC connector, 125 micron, SM, duplex jumper connector, pull proof <u>5/ 6/ 7/ 8/ 9/ 10/</u>	A-A-59940/1-121DP	108 137 605
<b>Approved Commercial Components:</b>		
Fast cure adhesive, fiber optic <u>3/ 4/</u>	N/A	Adhesive: 106 730 856 Primer: 106 730 849
ST to ST, adapter, MM <u>5/</u>	N/A	104 148 028
ST to ST, adapter, SM <u>5/</u>	N/A	105 271 142
LC-to-LC adapter, MM, duplex adapter, plastic alignment sleeve <u>5/</u>		108 072 497
LC-to-LC adapter, SM, duplex adapter, ceramic alignment sleeve <u>5/</u>		108 072 489

1/ Each bipack contains a pre-measured quantity of resin and hardener separated by a divider. There is 8 gm of resin and hardener per bipack. Expiration date upon ship date: 9 months minimum.

3/ Fast Cure Adhesive Approved for shipboard usage as follows: **Fast cure adhesive is authorized only for administrative applications and is not authorized for use in tactical or mission critical applications.**

4/ Adhesive: Quantity of one 10 ml bottle. Primer: Quantity of one 1 oz bottle. Expiration date upon ship date, both adhesive and primer: 6 months minimum.

5/ Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

## FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS RECOMMENDED COMPONENTS PARTS LIST

### Non-Tactical Application:

- Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

6/ zirconia ferrule, 1.5 & 2 mm cables

7/ LC connectors are pull proof connectors designed for loose structured cables. However, with proper care and workmanship these connectors can be installed on tight structured cables.

8/ Two configurations for LC connector. LC connector is provided in both pull proof and non pull proof configurations (but OFS only provides the pull proof configuration). The standard commercial configuration is the pull proof one. A pull proof connector is designed to be used with a loose tube cable. In a pull proof configuration, there is no optical discontinuity at the mating connector end faces when the cabling affixed to one of the connectors is pulled. The non pull proof LC connector is constructed similar to an ST connector and designed to be used with either loose tube or tight buffer cabling. The spring compresses as the cabling exiting the connector is pulled. This compression removes the ferrule from the mating connector end face. The result is a discontinuous optical path (optical discontinuity) for the duration of the pulled cable.

### CAUTION

For pull proof connectors, do not completely backfill an LC connector when terminating to tight buffer cabling. A complete backfill of epoxy can result a locked spring (inability of plunger feature to function) and/or bonded fiber (inability of fiber to push back in the tube/jacket).

9/ Termination precautions, pull proof connector with tight buffer cabling. A pull proof connector can be placed (terminated) onto tight buffer cabling following a slightly modified (really more careful or precise fill during the) epoxy injection process. The key is not to completely backfill the connector barrel cavity. The syringe tip used aids to control this fill. Instead of a dispensing (syringe) tip, twist on, 20 gage, 1 inch long, blunt end, for epoxy injection into all connector types except SC and LC; a dispensing tip, twist on, 18 gage, 0.5 inch long, chamfered end, for epoxy injection into SC and LC connectors is used. The syringe tip is inserted completely (as in standard process). Care must be taken to completely fill the "cone" (front) portion of the cavity, but do not complete the backfill. The SC and LC connectors have a lip internal to the barrel cavity. An 18 gage syringe tip can be inserted only to this lip. When using proper syringe tip, this restricted insertion allows an epoxy fill up to the lip (filling the front cone or chamfered area) and into/through the ferrule hole. Pressure on the syringe plunger is applied until an epoxy bead appears on the ferrule end face. The correct volume of epoxy is injected once the epoxy bead appears. Withdraw the syringe tip without further injection of epoxy (i.e., without further pressure applied to the syringe plunger).

10/ Application affect pull proof connector failure rates. Backfilling of epoxy in a pull proof connector further restricts the degree of fiber flexing. When two connectors are mated through an adapter (such as a LC-to-LC adapter), the plunging movement in each connector is halved. This results in the fiber needing to flex to a lesser degree in the back end of each connector. At a fixed interface (such as at a network interface card or NIC), the connector plunges back further. This results in the fiber needing to flex more. When the termination is not done properly (see note 9/), fiber breakage at the back of the connector can occur. A higher failure rate is more likely at a fixed interface. Also, improperly terminated connectors may fail after surviving the first few times mated.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 18 December 2012

**ITEM: ST Connectors, Commercial Cable [TOP](#)**

MIL-SPEC: MIL-C-83522

VENDOR: Optical Cable Corporation (OCC) (<http://www.occfiber.com/>)

VENDOR GOV'T. SALES POC: (800) 622-7711, FAX: (540) 265-0724

Vendor Address:       Optical Cable Corporation  
                              5290 Concourse Drive  
                              PO Box 11967  
                              Roanoke, VA 24022-1967

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
ST to ST adapter, 125 micron, SM/MM <u>1/</u>	M83522/17-NY	M83522/17-NY-S M83522/17-NY-B
ST connector, nonlocking boot, 125 micron, MM <u>1/</u>	M83522/16-DNX	M83522/16-DNX-S M83522/16-DNX-B
ST connector, nonlocking boot, 125 micron, SM/MM <u>1/</u>	M83522/16-DNY	M83522/16-DNY-S M83522/16/DNY-B
<b>Special Application Components:</b>		
ST connector, QPL, locking boot, 125 micron, MM	M83522/16-ANX	M83522/16-ANX-B
ST connector, QPL, locking boot, 125 micron, SM/MM	M83522/16-ANY	M83622/16-ANY-B
<b>Approved Commercial Components:</b>		
Conventional cable, commercial LSZH <u>2/</u>	N/A	AC002ZWLS90Z

1/    Components constructed using stainless steel (-S) or nickel plated brass (-B) material.

2/    Commercial Cable Approved for shipboard usage as follows:

Non-Tactical Application:

- Cable connections within a compartment.
- Cable connections within an equipment or rack.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 17 March 2005

**ITEM: Tube Fittings, Plug, Tube Fitting BOF [TOP](#)**

CID: A-A-59731, A-A-59728

VENDOR: SMC (<http://www.smcusa.com/>)

VENDOR GOV'T. SALES POC: David Smith (804) 527-0500, FAX: (804) 527-2100

Vendor Address: SMC Corporation of America  
4701 Cox Road, Suite 105  
Glen Allen, VA 23060

DESCRIPTION	CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
Tube Fitting, BOF – straight coupler	A-A-59731-U-8E	KRH08-00
		KQH08-00
		KQ2H08-00
Tube Fitting, BOF - Tee coupler	A-A-59731-T-8E	KRT08-00
		KQT08-00
		KQ2T08-00
End cap coupler	A-A-59731-EC-8E	KQ2C08-00
Plug, Tube Fitting, BOF	A-A-59728-TFP-8	KRP-08

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 27 September 2016

**ITEM: ST Connector** [TOP](#)

CID: A-A-59940

VENDOR: STRAN Technologies (<http://www.strantech.com/>)

VENDOR GOV'T. SALES POC: Bob Rubino (203) 729-2572, FAX: (203) 729-2689

Email: [brubino@strantech.com](mailto:brubino@strantech.com)

Vendor Address: STRAN Technologies  
39 Great Hill Road  
Naugatuck, CT 06770-0222

DESCRIPTION	CID P/N	VENDOR P/N
<b>Commercial Item Description:</b>		
ST connector, commercial-ruggedized, nonlocking boot, 125 um, MM <u>1/</u>	A-A-59940/3-111SN	900-0328-02
ST connector, commercial-ruggedized, nonlocking boot, 125 um, SM <u>1/</u>	A-A-59940/3-121SN	900-0328-01
<b>Approved Commercial Components:</b>		
ST-to-ST adapter, commercial, Multimode <u>1/</u>	N/A	900-0329
ST-to-ST adapter, commercial, Single mode <u>1/</u>	N/A	900-0329

1/ Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

Non-Tactical Application:

- Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 15 December 2016

**ITEM: Interconnection Box, Tube Fittings, Tapered Tube Plug BOF, BOF Bundle Cable TOP**

MIL-SPEC: MIL-I-24728, MIL-PRF-85045

VENDOR: Sumitomo (<http://www.sumitomoelectric.com/>)

VENDOR GOV'T. SALES POC: Keith Quistorff (919) 541-8186, FAX: (919) 541-8267

Vendor Address: Sumitomo  
78 Alexander Dr.  
P.O. Box 13445  
Research Triangle Park, NC 27709

DESCRIPTION	CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
Plug, Tapered Tube, BOF, 6-fiber bundle or up to 8 fibers, 8mm	A-A-59730-TTP-2	FT2MFB
Tapered Tube Plug, BOF, 12- or 18- fiber bundles or 9 to 12 fibers BOF, 8mm	A-A-59730-TTP-3	FT3MFB
Tube fitting, BOF: Straight coupler	A-A-59731- U-8E	DE08MC2
Tube fitting, BOF, Tee coupler	A-A-59731-T-8E	DE08MT
Tube fitting, BOF, End cap coupler	A-A-59731-EC-8E	DE08MA
Type-Q101-CA Splicing Kit Contents:	A-A-59799-A	Type Q101-KIT-G
1 ea – Type Q101-CA Quantum Splicer		
1 ea – Fiber Cleaver w/Scrap Catcher		FC-6RM
1 ea – AC Cord/Adapter PC-Q101/TQ101		ADC1240
1 pr – Spare Electrode		ER-10
1 ea – Operation Manual		
1 ea – Transit Case		
Type-39 Splicing Kit Contents:	A-A-59799-A	Type-39-KIT-G
1 ea - Type-39 Fusion Splicer		
1 ea - Fiber Cleaver w/Scrap Catcher		FC-6M-C
1 ea - AC Cord		PC-AC2
1 pr - Spare Electrodes		ER-10
1 ea - Operation Manual		
1 ea - Transit Case		
1 ea - Adapter/Battery Charger		
<b>Approved Commercial Components:</b>		
Single Tube, blown optical fiber (BOF), used for inter-connection inside of the tube routing boxes (TRB) (8mm) <u>1/</u>	N/A	TC01NAL

1/ Subcomponent of Qualified part 85045/25 & /26.

**NOTE: This Fusion Splice Kit is not approved for Organizational Level Shipboard Maintenance & Repair.**

**NOTE: COTS splicing unit contains a coin size lithium battery.**

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 27 July 2001

**ITEM: Epoxy, Heat Cured [TOP](#)**

MIL-SPEC: MIL-A-24792

VENDOR: Tra-Con, Inc. (<http://www.tra-con.com/>)

VENDOR GOV'T. SALES POC: Amy Nelson (781) 275-6363 X1111

Vendor Address: Tra-Con, Inc.  
Resin Systems Division  
55 North Street  
Medford, MA 02155

<b>DESCRIPTION</b>	<b>MIL-SPEC P/N</b>	<b>VENDOR P/N</b>
<b>First Article Approved Material:</b>		
Epoxy, two part, fiber optic, room/heat cured, quantity: 1 packet, 2 gm bipax *	M24792-A	BA-F112
Epoxy, two part, fiber optic, room/heat cured, quantity: 1 packet, 7 gm bipax *	M24792-A	BB- F112
Epoxy, two part, fiber optic, room/heat cured, quantity: 1 packet, 28 gm bipax *	M24792-A	BC- F112
Epoxy, two part, fiber optic, room/heat cured, quantity: six -1 gm packets (minipaxs) on a strip *	M24792-A	BY- F112

\* Each bipax contains a pre-measured quantity of resin and hardener separated by a divider.  
F112 has a 9-month shelf life from date of shipment.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 29 September 2015

**ITEM: Commercial SC and LC Connectors** [TOP](#)

**CID:** A-A-55917, A-A-59940

**VENDOR:** TE Connectivity (Tyco Electronics) (<http://www.amp.com/>)

**VENDOR GOV'T. SALES POC:** Contact the local Tyco commercial products representative or distributor

**Vendor Address:** TE Connectivity  
PO Box 3608  
Harrisburg, PA 17105-3608

DESCRIPTION	MIL SPEC OR CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
Simplex SC connector, commercial, 125 um, Multimode, for 3 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111SP	503948-1
Simplex SC connector, commercial, 125 um, Multimode, for 2.5 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111SP	504930-1
Simplex SC connector, commercial, 125 um, Multimode, for 2 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111SP	504931-1
Simplex SC connector, commercial, 126 um, Single Mode, for 3 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121SP	504646-2
Simplex SC connector, commercial, 126 um, Single Mode, for 2.5 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121SP	504933-2
Simplex SC connector, commercial, 126 um, Single Mode, for 2 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121SP	504934-2
Duplex SC connector, commercial, 125 um, Multimode, for 3 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111DP	504657-1
Duplex SC connector, commercial, 125 um, Multimode, for 2.5 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111DP	504927-1
Duplex SC connector, commercial, 125 um, Multimode, for 2 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-111DP	504928-1
Duplex SC connector, commercial, 126 um, Single Mode, for 3 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121DP	504655-1
Duplex SC connector, commercial, 126 um, Single Mode, for 2.5 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121DP	504935-2
Duplex SC connector, commercial, 126 um, Single Mode, for 2 mm OD cable, pull proof <a href="#">1/</a> <a href="#">2/</a> <a href="#">6/</a> <a href="#">7/</a> <a href="#">8/</a>	A-A-59940/2-121DP	504936-2
Simplex SC connector, commercial, Multimode, for 1.6-2.0 mm, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/2-111SN	6828099-1
Simplex SC connector, commercial, Single Mode, for 1.6-2.0 mm, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/2-121SN	6828100-1
Duplex SC connector, commercial, Multimode, for 1.6-2.0 mm, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/2-111DN	1828574-1
Duplex SC connector, commercial, Single Mode, for 1.6-2.0 mm, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/2-121DN	1828573-1
Simplex SC connector, commercial, Multimode, for 1.6-2.0 mm, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/2-111SN	6828099-1
Simplex LC connector, 125 micron, MM, simplex jumper connector, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/1-111SN	6828094-1
Simplex LC connector, 125 micron, SM, simplex jumper connector, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/1-121SN	6828095-1
Duplex LC, connector, 125 micron, MM, duplex jumper connector, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/1-111DN	6828129-1
Duplex LC, connector, 125 micron, SM, duplex jumper connector, non-pull proof <a href="#">1/</a> <a href="#">3/</a> <a href="#">6/</a>	A-A-59940/1-121DN	6828130-1

Continued on next page

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

DESCRIPTION	MIL SPEC OR CID P/N	VENDOR P/N
<b>Commercial Item Descriptions:</b>		
Simplex ST connector, quick connect, commercial, Multimode <u>4/ 5/</u>	A-A-59940/3- 311SN	2064757-1
Splice, Mechanical, Simplex Fiber Optic Cable for 250 um, 900 um, and 2 mm OD fiber <u>9/</u>	A-A-59917	1985368-1
<b>Approved Commercial Components:</b>		
Duplex SC to SC adapters, commercial, pull proof <u>2/</u>	N/A	1-502776-0
Simplex SC to SC adapters, commercial, pull proof <u>2/</u>	N/A	1-502632-0

1/ SC/LC connectors are not for use with patch panels except as noted below. Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

Non-Tactical Application:

- Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

2/ SC connectors are pull proof connectors designed for loose structured cables. However, with proper care and workmanship these connectors can be installed on tight structured cables.

3/ SC/LC connectors are non pull proof connectors designed for loose and tight structured cables.

4/ Commercial Connectors Approved for shipboard usage as follows:

Tactical Application:

- Mate with plastic adapters on commercial interface cards (including Network Interface Cards (NIC cards)).
- Mate with equipment and patch panels mounted to the interior of "shock isolated" cabinets.

Non-Tactical Application:

- Connections in Outlet Boxes (Drop Boxes) for non-tactical applications.
- Mate with equipment and patch panels mounted to the interior of cabinets (includes plastic adapters on commercial interface cards including Network Interface Cards).

5/ ST LightCrimp PLUS toolkit (2064764-1) is required for Navy termination (includes precision cleaver, cable clamp, and 3 position strip tool).

6/ Two configurations for LC and SC connectors. LC and SC connectors are provided in both pull proof and non pull proof configurations. The standard commercial configuration is the pull proof one. A pull proof connector is designed to be used with a loose tube cable. In a pull proof configuration, there is no optical discontinuity at the mating connector end faces when the cabling affixed to one of the connectors is pulled. The non pull proof LC and SC connectors are constructed similar to an ST connector and designed to be used with either loose tube or tight buffer cabling. The spring compresses as the cabling exiting the connector is pulled. This compression removes the ferrule from the mating connector end face. The result is a discontinuous optical path (optical discontinuity) for the duration of the pulled cable.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

**CAUTION**

For pull proof connectors, do not completely backfill an LC or SC connector when terminating to tight buffer cabling. A complete backfill of epoxy can result a locked spring (inability of plunger feature to function) and/or bonded fiber (inability of fiber to push back in the tube/jacket).

- 7/ Termination precautions, pull proof connector with tight buffer cabling. A pull proof connector can be placed (terminated) onto tight buffer cabling following a slightly modified (really more careful or precise fill during the) epoxy injection process. The key is not to completely backfill the connector barrel cavity. The syringe tip used aids to control this fill. Instead of a dispensing (syringe) tip, twist on, 20 gage, 1 inch long, blunt end, for epoxy injection into all connector types except SC and LC; a dispensing tip, twist on, 18 gage, 0.5 inch long, chamfered end, for epoxy injection into SC and LC connectors is used. The syringe tip is inserted completely (as in standard process). Care must be taken to completely fill the "cone" (front) portion of the cavity, but do not complete the backfill. The SC and LC connectors have a lip internal to the barrel cavity. An 18 gage syringe tip can be inserted only to this lip. When using proper syringe tip, this restricted insertion allows an epoxy fill up to the lip (filling the front cone or chamfered area) and into/through the ferrule hole. Pressure on the syringe plunger is applied until an epoxy bead appears on the ferrule end face. The correct volume of epoxy is injected once the epoxy bead appears. Withdraw the syringe tip without further injection of epoxy (i.e., without further pressure applied to the syringe plunger).
- 8/ Application affects pull proof connector failure rates. Backfilling of epoxy in a pull proof connector further restricts the degree of fiber flexing. When two connectors are mated through an adapter (such as a LC-to-LC adapter), the plunging movement in each connector is halved. This results in the fiber needing to flex to a lesser degree in the back end of each connector. At a fixed interface (such as at a network interface card or NIC), the connector plunges back further. This results in the fiber needing to flex more. When the termination is not done properly (see note 7/), fiber breakage at the back of the connector can occur. A higher failure rate is more likely at a fixed interface. Also, improperly terminated connectors may fail after surviving the first few times mated.
- 9/ Mechanical splice only approved for use as damage control repair replacement for an existing fusion splice. The completed splices are intended to be stored in a qualified MIL-DTL-24728/8 splice tray and splice tray holder mounted inside a qualified MIL-I-24728 fiber optic interconnection box.

**FIBER OPTIC SHIPBOARD CABLE PLANT COMPONENTS  
RECOMMENDED COMPONENTS PARTS LIST**

Last update: 07 February 2013

**ITEM: Interconnection Box [TOP](#)**

MIL-SPEC: MIL-I-24728

VENDOR: US Pioneer (formerly NMP Corp.) (<http://www.uspioneer.net/>)

VENDOR GOV'T SALES POC: Les Lapidus (918) 252-0481, FAX: (918) 252-0486

Vendor Address: US Pioneer Inc.  
P.O. Box 472065  
4450 S. 70<sup>th</sup> E. Avenue  
Tulsa, OK 74147-2965

DESCRIPTION	MIL-SPEC P/N	VENDOR P/N
<b>Qualified QPL Components:</b>		
Box, sized for one 48 adapter patch panel, with cable entrance	M24728/1-005	11401-101
Box, sized for one 48 adapter patch panel, without cable entrance	M24728/1-006	11401-104
Box, sized for two 48 adapter patch panels, with cable entrance	M24728/2-005	10913-101
Box, sized for two 48 adapter patch panels, without cable entrance	M24728/2-006	10913-104
Box, sized for three 48 adapter patch panels, with cable entrances	M24728/3-001	11112-101
Box, sized for three 48 adapter patch panels, without cable entrances	M24728/3-004	11112-104
Box, sized for one 8 adapter patch panel, without cable entrance	M24728/4-001	11166-101
Box, sized for one 16 adapter patch panel, without cable entrance	M24728/5-001	11164-101
48 adapter patch panel (for ST connectors)	M24728/6-001	11254-101
8 adapter patch panel (for ST connectors)	M24728/4-002 (comes /w box)	11406-101
16 adapter patch panel (for ST connectors)	M24728/5-002 (comes w/ box)	11407-101
Splice tray holder – Mechanical for 24623/4	M24728/7-001	10427-101
Aluminum mounting plate for 48 adapter patch panel / splice tray holder	comes with box	11210-101
Wedge pack for cable entrance configuration	comes with box	11228-1
4 Splice tray holder – for four splice trays (24728/8-51)	M24728/8-050	12485-101
Box, sized for cable routing and four 4 or 8 splice tray holders, spray tight, 711.2 x 1371.6 mm	M24728/09-001	12619-101
Box, sized for cable routing and four 4 or 8 splice tray holders, spray tight, 711.2 x 1016.0 mm	M24728/10-001	12631-101
8 Splice tray holder – for eight splice trays (24728/8-51)	M24728/11-001	12630-101