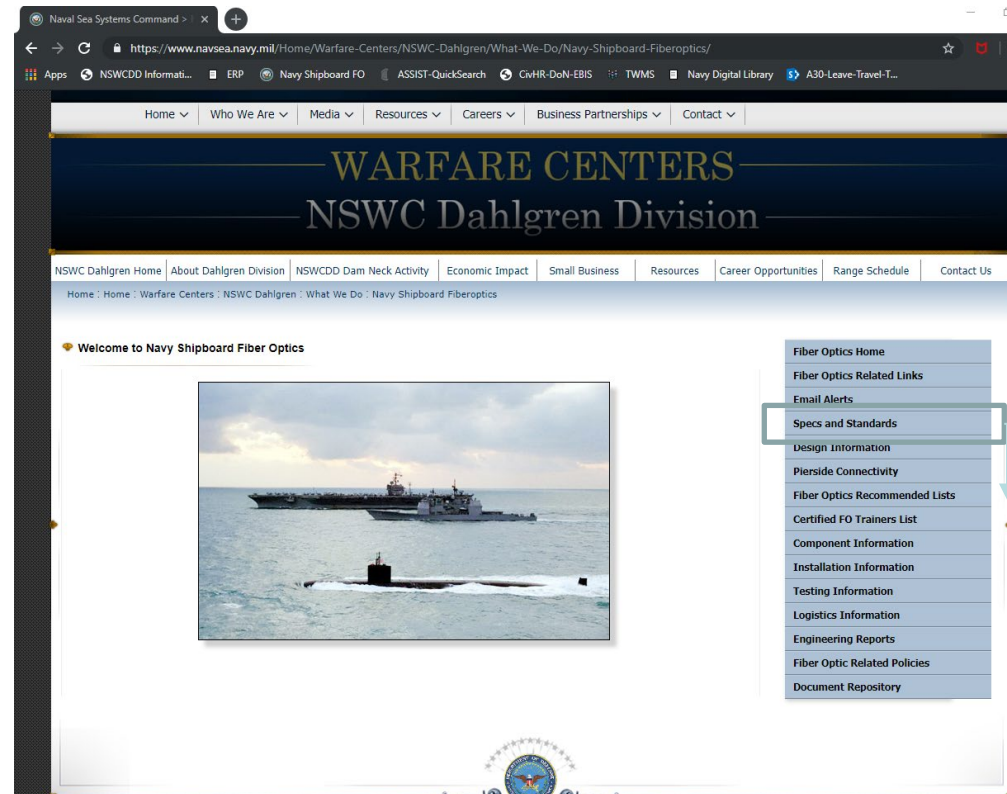




Presented By: Joshua Carter

Source: <https://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Dahlgren/What-We-Do/Navy-Shipboard-Fiberoptics/>

NSWCDD A31

DLGR_NSWC_Fiber Optic Web Site <nswcd_fiber_opt.fct@navy.mil>

August 18, 2026

Unclassified / Distribution Statement A

https://quicksearch.dla.mil/qsSearch.aspx

[i-Assist](#)
[NSWCDD-FO WEB](#)
[iNAVSEA](#)
[NSWCDD](#)
[MUSTER](#)
[IBPES](#)
[PTM](#)
[TWMS](#)
[NSWCDD CHENG C...](#)
[DLA- VQ](#)

Quick Search ASSIST

Data updated: 15 Nov 2021. [Basic Search](#)

Standards to combat COVID-19, please check the Defense Standardization Program website located at <https://www.dsp.dla.mil/Specs-Standards/COVID-19-Related-Standards>.

Enter search criteria in one or more of three text fields: Document ID, Document Number, Find Term(s). Filter search results by selecting Status or FSC/Area from drop-down lists, or by checking the box and specifying a range of document dates. Click a label for a detailed description and sample search results.

Document ID: Document Number: Status: All

Find Term1,Term2,... For: All Terms In: Title or Keywords or Scope

FSC/Area: Select All ☐ Document Date: 16-Nov-2020 Through 16-Nov-2021

[About Quick Search](#) | [Contact Us](#) | [FAQ](#) | [ASSIST](#) | [Privacy and Security](#) | [Section 308 Compliance](#) | [Defense Standardization Program](#)

WARNING: UNAUTHORIZED ACCESS TO THIS UNITED STATES GOVERNMENT COMPUTER SYSTEM AND SOFTWARE IS PROHIBITED BY PUBLIC LAW 99-474 (THE COMPUTER FRAUD AND ABUSE ACT OF 1996) AND CAN RESULT IN ADMINISTRATIVE, DISCIPLINARY OR CRIMINAL PROCEEDINGS.

[NSWC Dahlgren Home](#) | [About Dahlgren Division](#) | [NSWCDD Dam Neck Activity](#) | [Economic Impact](#) | [Small Business](#) | [Resources](#) | [Career Opportunities](#) | [Range Schedule](#) | [Contact Us](#)

Home : Home : Warfare Centers : NSWC Dahlgren : What We Do : Navy Shipboard Fiberoptics : Status: Specifications

Navy Shipboard Fiber Optics:
Military Detail and Performance Specifications

[Cable](#) | [Heavy Duty Connectors](#) | [Next Generation Heavy Duty Connectors](#) | [Light Duty Connectors](#) | [Termini](#)
[Adhesives & Materials](#) | [Interconnection Box](#) | [Splices](#) | [Fiber](#)

Cable

Document Identifier	Pages/Size	Document Title	Status	Base Date	Amendment Date	Supplement Date
MIL-PRF-85045	44 / 784	Cables, Fiber Optic, (Metric), General Specification For	Active	06/17/2014	-	06/17/2014
MIL-PRF-85045 / 13	5 / 42	Cable, Fiber Optic, Eight Fibers, Cable Configuration Type 2 (OFCC), Application B (Shipboard), Cable Class SM and MM, (Metric)	Cancelled	06/17/2014	-	-
MIL-PRF-85045 / 14	4 / 25	Cable, Fiber Optic, One Fiber, Cable Configuration	Active	09/16/1999	-	-

Fiber Optics Home

Fiber Optics Related Links

Email Alerts

Specs and Standards

Status: Specifications

Status: Standards

Status: Handbooks

Status: QPLs

Design Information

Pierside Connectivity

Fiber Optics Recommended Lists

Certified FO Trainers List

MIL Designation	Title	STATUS	ACTIVITY
MIL-STD-2052A	Fiber Optic System Design	-Complete: Validated – Apr 2026 -Under Consideration: High Data Rate Updates Planned:	-Design approach validated -Future: Updates for >=100GigTabular/ref approach vs. calculations. add change from GSO408 for .5dB budget gain allowance.
MIL-STD-2042C, 1-6	Fiber Optic Cable Topology Installation Standard Methods for Naval Ships, Rev C, Published 2016;	-On-Going: Project FY22 / GIR/SRB release. Q3FY24 -Publication Target: FY27	-High Density cable constructions/ Ribbon Splicing/Length Verification/Troubleshooting/Lessons Learned – Significant input from training community / -Status: Tech chain resolving comments: FY25 Q4 - FY26 Q4 (~700 comments)
MIL-STD-1678, 1-6	Fiber Optic Cabling Systems Requirements and Measurements	-Part 4: Published FY25	-Part 4- updated to add additional cable/fiber types for 29504/4 & /5 qual
MIL-PRF-85045H & slants	Cables, Fiber Optic, General Specification for	-Complete: Validation/stabilization '26 -On-Going: Blowable Bundle Update/Amd	-Validation/stabilization: 85045/16, /17, /18, /20, /21, /22, /23, /25, /30, /31, /33, /33, /34, /35, /36, /37 -/27,/38, /39 Amd. in process – bundle mass p/unit length, diameter tolerance
MIL-PRF-28876E & slants	Connectors, Fiber Optic, Circular, Plug and Receptacle Style, Multiple Removable Termini, General Specification For	-Complete: -Validation/stabilization '26 - Slants 4F, 9F, 14F, 28E, 29F(w/AMD 2)	-Validation/stabilization: 28876, /1, /2, /3, /5, /6, /7, /8, /10, /11, /12, /13, /15, /26, /27, /28, /29, /30, /31, /32 -MIL-PRF-28876 slants 4F, 9F, 14F, 28E, and 29F (w/AMD 2). ~Published: FY26 Q2, updated figures for removable back shells
MIL-PRF-29504 & slants	Terminus: /4, /5 Military Aircraft, /14, /15 Naval Ships; /18 & /20 NGCONN/common; /22, /23 splice-on	No New Activity	
MIL-PRF-64266	Connectors, Fiber Optic Circular and Rectangular, Plug and Receptacle Style, Multiple Removable Genderless Termini, Environment Resisting General Specification for	No New Activity	Validation/stabilization of majority of slants '25
MIL-PRF-24728, & slants	Interconnection Box, Fiber Optic, General Specification for	-On-Going: FY26 Project has initiated, Target industry review late FY26.	-Updates to base/slash sheet requirements extend qualification and similarity. -QPL Sources sought, also for M24705/4
MIL-PRF-24623	Splice, Fiber Optic Cable, General Specification for	-Complete: -M24623/7 Validation & M24623/6 & /8 -On-Going: 24623/5 Revision / -24623/4 Cancellation	-24623/6 & /8: Update to dimensional tolerances, publication date July '26 -24623/5 Update discontinuity requirement during shock/vib -24623/4 Cancel rotary mechanical splice
MIL-PRF-49291 /6C & /7C	Fiber, Optical	No New Activity Under Consideration: New Project	-49291 update regarding qualification by similarity scenario
MIL-DTL-83522 /16C, 17C	Connectors, Fiber Optic, Single Ferrule,	No New Activity	
CID A-A-59940/1	Connectors, Fiber Optic, Single Fiber, Small Form Factor, LC	-Complete: Validation: 59940 base, /1, /2, /3	-Validation/stabilization of majority of slants / -Sources sought COTS LC and SC connectors (Pull-Proof, Non Pull-Proof)
CID A-A-XX734	Fanout Assembly	-On-Going: New Project, Circulation FY26 Q4 –	-Fanout assembly for use with HD/bundle constructions
CID A-A-59799	Fusion Splicer and Cleaver, Optical Fiber	-On-Going: New Project, Circulation FY26 Q4 –	Updates include: -optical fiber compatibility, tensile test range, RL, altitidue, storage for battery, low voltage
Other	Naval Ships' Technical Manual (NSTM), Rev 4 GSO Section 408 / FOCT MAINTENANCE PLAN	No New Activity	



Specifications & Standards: Fiber Optic Documents Preparing Activity (PA) and Qualifying Activity (QA) Updates – Started 2025



Manufacturers currently/interested in QPL/QPD for specifications listed:

- DLA no longer function as agent for qualification activity to Naval Sea Systems Command.
- DLA transitioned Preparing Activity on most fiber specs to NAVSEA
- An update to section "6.3 Qualification" in these specifications is planned and will occur as specifications are updated for other reasons.

The following information is provided to facilitate this transition:

-Qualification and Conformance related actions and questions for these specifications are be directed to NAVY-SH @ commandstandards@navy.mil.

-DLA transitioned open/in-process 19P, qualification, conformance related actions for these specifications to NAVSEA.

Specs not transferred to Navy SH: PA/QA by DLA @ (PoC @ links below):

-MIL-49291 all slash sheets (Not PA for /6, /7)

(<https://landandmaritimeapps.dla.mil/programs/qmlqpl/QPLdetail.aspx?QPL=49291>)

-MIL-83522 all slash sheets

(<https://landandmaritimeapps.dla.mil/programs/qmlqpl/QPLdetail.aspx?QPL=83522>)

-MIL-83526 all slash sheets

(<https://landandmaritimeapps.dla.mil/programs/qmlqpl/QPLdetail.aspx?QPL=83526>)

Unclassified / Distribution Statement A

Fiber qualified product list (QPL) task moved from DLA to NAVY SH (NAVSEA05/CommandStandards)

CID A-A-XX734

Fanout Assembly

This CID will cover the general requirements for fan-out assemblies that branch a twelve-fiber single subunit to twelve individual single fiber furcation tubes. These fan-out assemblies are intended to support end user terminations of the recently/soon-to-be published high-density MIL-PRF-85045 cables (/33, /34, /35, /36, and /37).

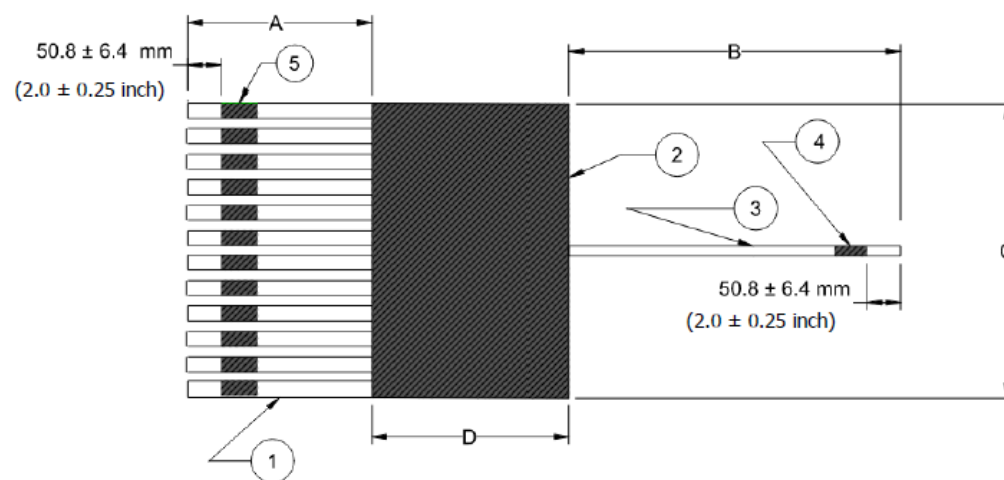
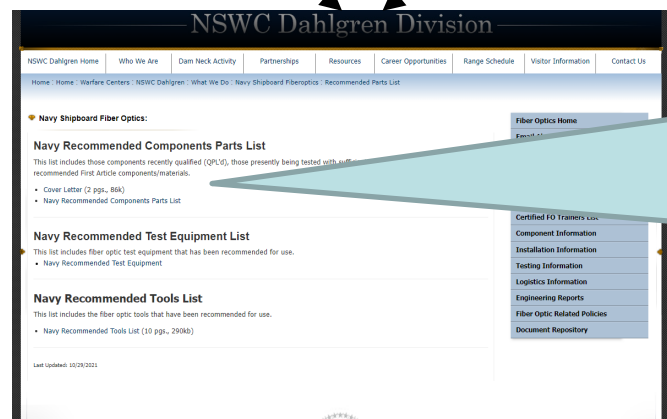
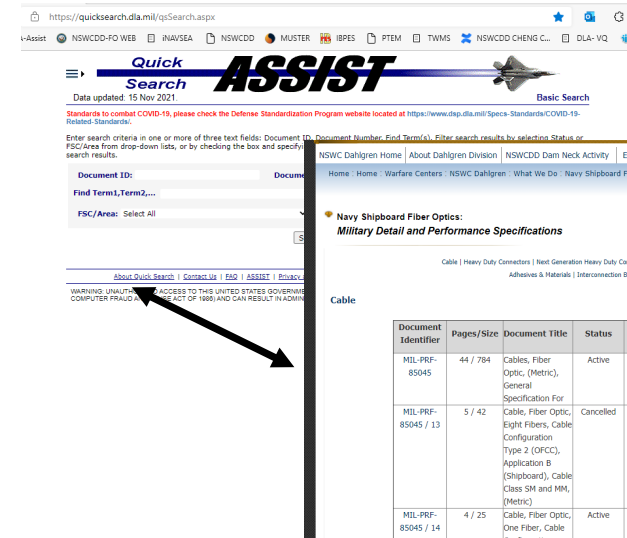


FIGURE 1. Fan-out assembly.

Navy Shipboard Website / Component Specs -> Recommended Lists / Qualification Parts List



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

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

COMPONENT	VENDOR
Conventional Cable - Thermoset (QPL)	Duke
Conventional Cable - Thermoplastic (QPL)	Thermax
Blown Optical Fiber Cable - Thermoset (QPL)	General
Single Tube Cable, Blown Optical Fiber	General
ST Connector (QPL)	AFRI
ST-to-ST Adapter (QPL)	Optical Cable Corporation
Multiterminus (MT) Heavy Duty Connector (QPL)	Optical Cable Corporation
Termini (QPL)	AFRI
Epoxy, Heat Cured (1st Article)	General
Interconnection Box (QPL)	AFRI
Optical Fiber - Multimode (QPL)	General
Optical Fiber - Single mode (QPL)	General
Index Matching Material (1st Article)	General
Transmitter and Receiver (1st Article)	HSA Logistics
Formerly NMP	Laser Shale

Last update: 28 March 2022

BACKUP

High Density Documents



SPEC SHEET	COMPONENT TYPE	TITLE: COMPONENT CONFIGURATION	LATEST DOC DATE OR PREPARATION & SUBMISSION STATUS
MIL-PRF-85045/27D, /38, and /39, Cable, Fiber Optic	Cable	CABLE, FIBER OPTIC, TWELVE-FIBER BUNDLE, BLOWN OPTICAL FIBER, FORTY-EIGHT-FIBER BUNDLE, BLOWN OPTICAL FIBER, AND SEVENTY-TWO-FIBER BUNDLE, BLOWN OPTICAL FIBER, ROLLED FLEXIBLE RIBBON,	Published: 08/06/2024
CID A-A-59799B	Fusion Splicer	FUSION SPLICER AND CLEAVER, OPTICAL FIBER	Published: 08/23/2022
85045/33	Cable	CABLE, FIBER OPTIC, ROLLED FLEXIBLE RIBBON, TWELVE FIBER, SINGLE SUBUNIT	Published: 18 May 2022
85045/34	Cable	CABLE, FIBER OPTIC, FOUR SUBUNITS, TWELVE FIBER ROLLED FLEXIBLE RIBBON SUBUNIT	Published: 18 May 2022
85045/35	Cable	CABLE, FIBER OPTIC, EIGHT SUBUNITS, TWELVE FIBER ROLLED FLEXIBLE RIBBON SUBUNIT	Published: 18 May 2022
85045/36	Cable	CABLE, FIBER OPTIC, THIRTY SIX SUBUNITS, TWELVE FIBER ROLLED FLEXIBLE RIBBON SUBUNIT	Published: 18 May 2022
85045/37	Cable	CABLE, FIBER OPTIC, LOOSE TUBE, TWELVE FIBER, SINGLE SUBUNIT	Published: 7 Jan 2022
24623/8	Fusion Splice	Splice, Fusion, Fiber Optic, Twelve Fiber Ribbon, Protector	Published: 28 Jan 2022
24728/8	Splice Tray	Interconnecting Box, Fiber Optic, Fusion Splice Tray and Tray Holder Module	Published: 11 June 2025

1/ GIR = Government & Industry Review
2/ <https://landandmaritime.dla.mil/Programs/MilSpec/DocSearch.aspx>

85045/33

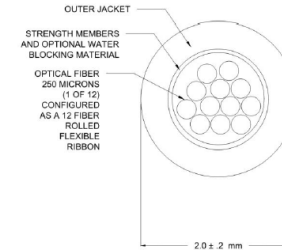


FIGURE 1. 12-fiber rolled flexible ribbon cable (single standalone subunit).

85045/37

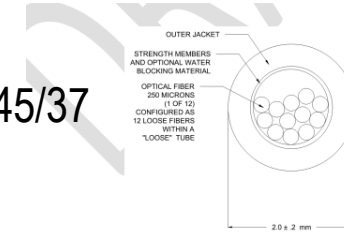


FIGURE 1. Twelve fiber loose tube cable (single standalone subunit).

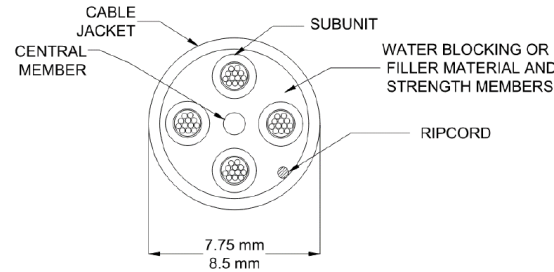


FIGURE 2. Multiple subunit fiber optic cable with four subunits.

85045/34

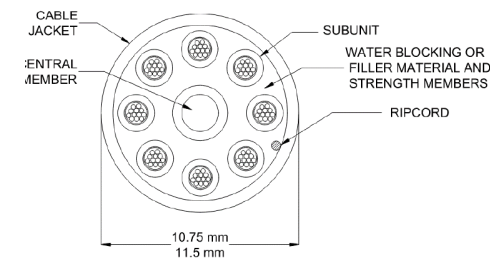


FIGURE 2. Multiple subunit fiber optic cable with eight subunits.

85045/35

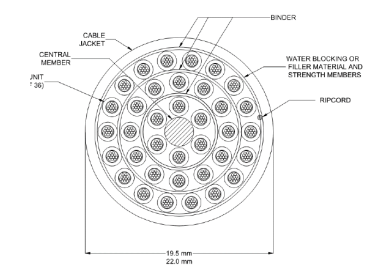
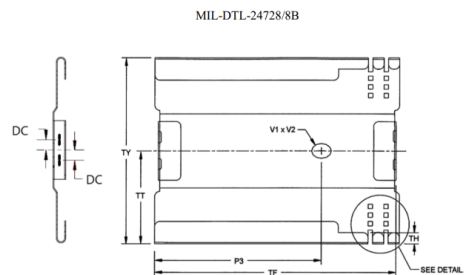
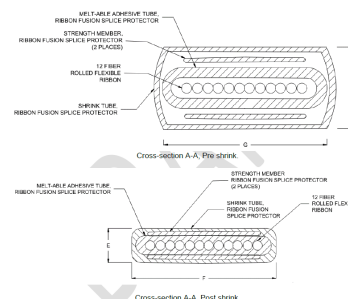


FIGURE 2. Multiple subunit fiber optic cable with 36 subunits.

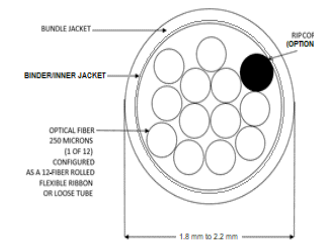
85045/36



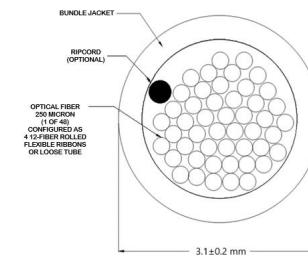
24728/8 (single and ribbon)



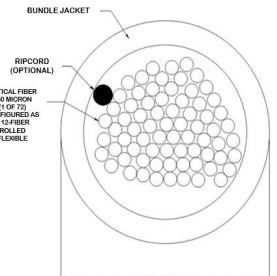
24623/8



85045/27



85045/38



85045/39