

TMETRICT

MIL-C-49292/4A

23 June 1989

SUPERSEDING

MIL-C-49292/4(CR)

31 March 1987

MILITARY SPECIFICATION SHEET

CABLE ASSEMBLIES, NONPRESSURE PROOF, FIBER OPTIC, METRIC

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-C-49292.

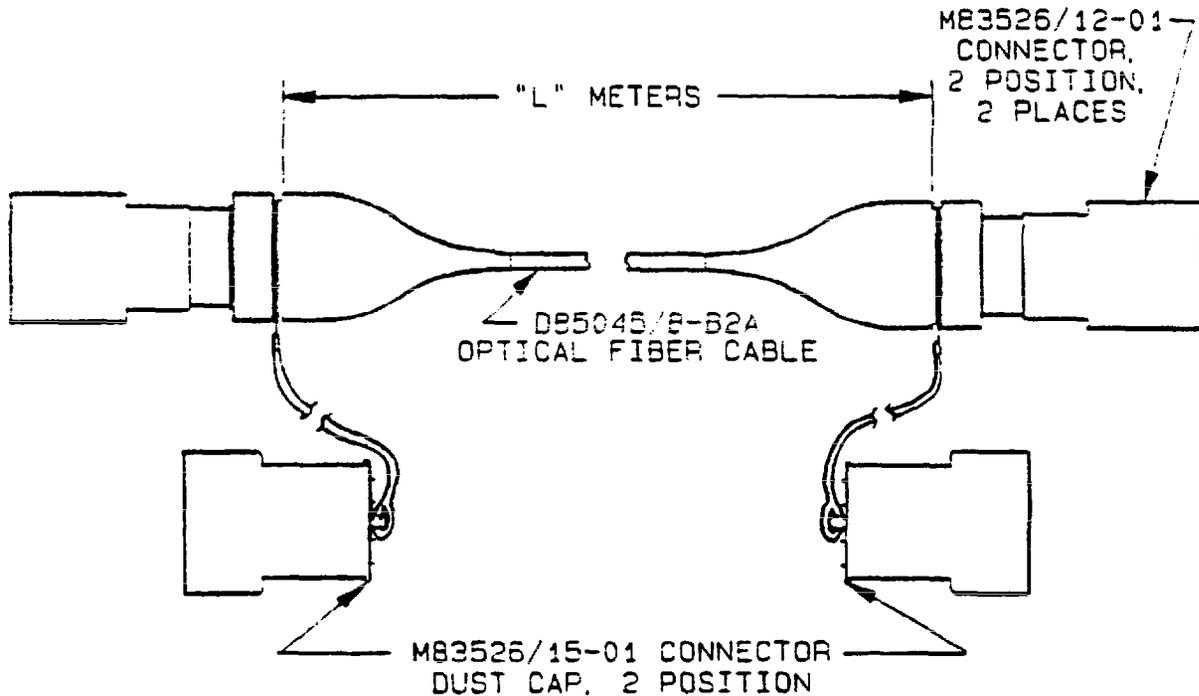


FIGURE 1. Outline drawing, cable assembly (hermaphroditic) fiber optic.

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REQUIREMENTS:

Color: Colors for coding of fibers within the cable assembly shall be blue and orange (see table I).

TABLE I. Color-coded termination configuration.

Termini	Buffer color	Termini
1 2	Blue Orange	2 1

Component parts:

Connectors shall be in accordance with the following:

M83526/12-01, two required.

Dust cover assembly: M83526/15-01, two required.

Cable: D85045/8-B2A.

Assembly: In accordance with figure 1, and tables I and II.

Length: In accordance with table II.

Weight: In accordance with table II.

Performance:

Optical requirements:

Insertion loss (maximum assembly attenuation): Measurements made at 1290 nm  $\pm$ 10 nm. Test method B1.

<u>Part or Identifying number (PIN)</u>	<u>-46°C</u>	<u>+25°C</u>	<u>+71°C</u>
M49292/4-01	3.25 dB	2.75 dB	2.75 dB
M49292/4-02	2.5 dB	2.0 dB	2.0 dB
M49292/4-03	2.0 dB	1.5 dB	1.5 dB

Optical fiber bandwidth:  $\geq$  400 MHz-km at 1290 nm,  $\pm$ 10 nm.

Cable retention: Not applicable.

Cable seal flexing: Not applicable.

Thermal shock: Not applicable.

Fluid immersion: Not applicable.

Temperature range:

Operating: -46°C to +71°C.

Storage: -57°C to +85°C.

Dust: Not applicable.

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Life test: Not applicable.

Salt fog: Not applicable.

Storage temperature: 240 hours at each extreme for a total of 480 hours.

PIN: PINs shall be in accordance with table II.

TABLE II. PINs.

Military PIN M49292/4-	Length "L" (meters)	Weight (kg) maximum	Fiber size μm
01	1,010 ±10	34.0	50/125
02	310 ±10	12.7	50/125
03	1.0 ±0.1	2.3	50/125

Qualification inspection shall consist of performing the inspections and optical tests specified in table III herein, in the sequence shown.

Group A inspection shall consist of performing the inspections and optical tests specified in table IV herein, in the sequence shown.

Group B inspection shall consist of performing the inspections and optical tests specified in table V herein, in the sequence shown.

Group C inspection shall consist of performing the inspections and optical tests specified in table VI herein, in the sequence shown.

TABLE III. Qualification inspection.

Inspection	Sample quantity
<u>Group I</u>	
Visual and mechanical	6 units
Insertion loss	6 units
<u>Group II</u>	
Bandwidth	6 units
Crosstalk	6 units
<u>Group III</u>	
Cable retention	6 units
Temperature cycling	6 units
Storage temperature	3 units
Humidity	2 units
Vibration	2 units
Low pressure (altitude)	2 units

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TABLE IV. Group A inspection.

Inspection
Visual and mechanical Insertion loss

TABLE V. Group B inspection.

Inspection
Bandwidth Crosstalk

TABLE VI. Group C inspection.

Inspection	Sample quantity
<u>Subgroup I (3-month interval)</u>	
Cable retention	4 units
Temperature cycling	4 units
<u>Subgroup II (6-month interval)</u>	
Storage temperature	2 units
Humidity	2 units
Vibration	2 units
<u>Subgroup III (12-month interval)</u>	
Low pressure (altitude)	2 units

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Revision letters are not used to denote changes due to the extensiveness of the changes.

CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - SH  
Air Force - 85  
NASA - NA

Review activities:

Army - AR, MI, SC  
Navy - AS, CG, EC, MC  
Air Force - 99  
DLA - ES

User activities:

Army - AV  
Navy - CG, MC

Preparing activity:

Army - CR

Agent:

DLA - ES

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