

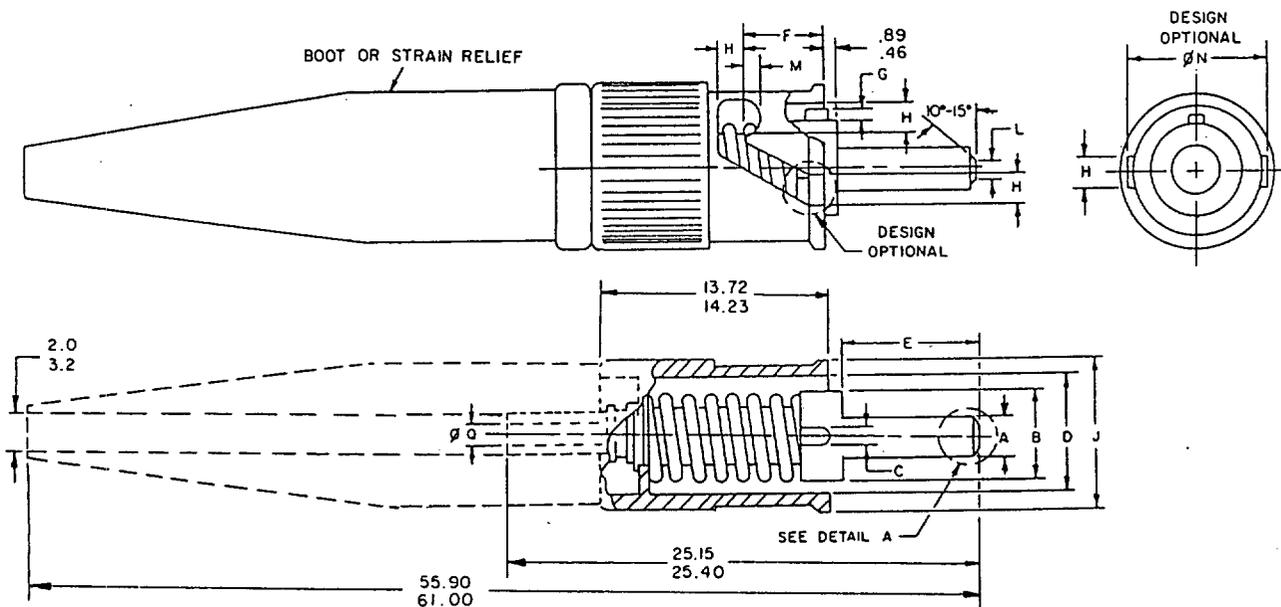
MILITARY SPECIFICATION SHEET

CONNECTOR, FIBER OPTIC, SINGLE TERMINUS, PLUG, ADAPTER STYLE,
2.5 MILLIMETERS BAYONET COUPLING, EPOXY

This specification 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-83522.

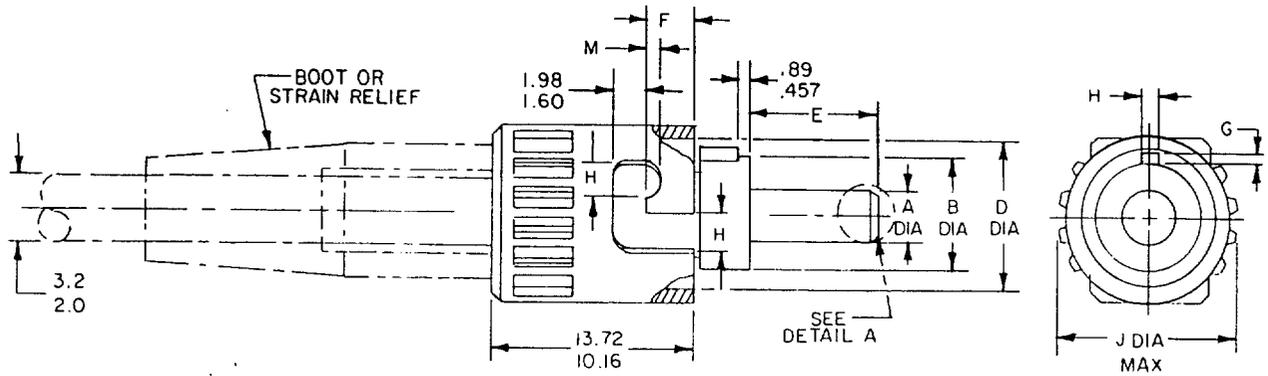
Style A



mm	Inches	mm	Inches
0.46	.018	14.23	.560
0.89	.035	25.15	.990
2.0	.079	25.40	1.000
3.2	.119	25.90	1.020
13.72	.540	61.00	2.363

FIGURE 1. Dimensions and configuration.

Style B

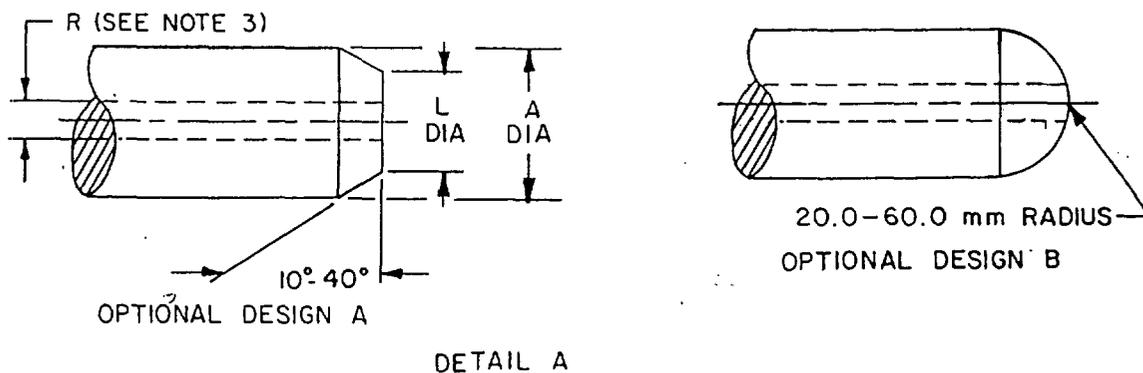


mm	Inches
0.457	.018
0.89	.035
1.60	.063
1.98	.078
2.0	.079
3.2	.119
10.16	.400
13.72	.540

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for general information only.

FIGURE 1. Dimensions and configuration - Continued.



Ltr	Millimeters		Inches	
	Min	Max	Min	Max
4/ A(sm/mm)	2.498	2.500	.0983	.0984
4/ A(mm)	2.498	2.501	.0983	.0985
B	5.25	5.41	.206	.213
C	0.81	1.07	.032	.042
D	7.06	7.37	.278	.290
E	7.80	7.95	.307	.313
F	2.03	4.50	.080	.177

Ltr	Millimeters		Inches	
	Min	Max	Min	Max
G	0.51	0.89	.020	.035
H	1.6	2.13	.063	.084
J	9.40	10.16	.370	.400
L	0.56	2.1	.022	.083
M	0.64	1.12	.025	.044
5/ N	8.56	8.79	3.37	3.46
Q	1.04	1.6	.041	.063

NOTES:

1. Dimensions are in millimeters.
2. Inch equivalents are given for general information only.
3. R dimension is for reference or conceptual design considerations only. This dimension is critical to fiber alignment. Dimensions for fiber optic
4. Use A(sm/mm) for single mode applications. Use A(sm/mm) or A(mm) for multimode application.
5. Design optional.

FIGURE 1. Dimensions and configuration - Continued.

REQUIREMENTS:

Metals: The plug housing and other metal components shall be of corrosion resistant steel in accordance with QQ-S-763, class 303/316L or nickel plated brass in accordance with QQ-B-626.

The dust cover and strain relief boot shall be made of thermoplastic.

Epoxies: Use Trabond 230, Eccobond 144B, Epotec 300, Tera-bond 113, Hysol 0151 or an equivalent epoxy approved by the qualifying activity.

Dimensions and configuration: See figure 1.

Fiber optic cable requirements:

Cable diameter: 2 - 3.2 mm.

Cable configuration: In accordance with DOD-C-85045.

Fiber diameter: 50/125 μm , 62.5/125 μm , and 100/140 μm , with the following tolerances: 125 ± 2 μm (mm), 125 ± 1 μm (sm/mm), 140 ± 2 μm (mm).

Fiber optic contact:

Method optical alignment: Sleeve/ferrule (bayonet).

Lens configuration: Not applicable.

Coating requirements: Not applicable.

Optical requirements:

Number of optical termini: One.

Initial insertion loss ≤ 1.0 dB.

Return loss (type II) ≥ 30 dB.

Loss over life time relative to mating cycles ≤ 1.5 dB.

Weight: 20 grams maximum.

Polarization: Key/slot (bayonet).

Safety wire holes: Not required.

Force to engage and disengage:

Longitudinal force: 4.5 pounds max.

Torque: 4.0 in-pounds max.

Coupling proof torque: Not applicable.

Coupling mechanism retention force: Not applicable.

Tensile loading: The load shall be 230 newtons minimum and shall not result in any physical damage. Optical properties shall be monitored before and after load. The load shall not be applied to the coupling mechanism. Optical transmittance measurements are not required during the test for the nonlocking connectors.

Ozone exposure: Not applicable.

High impact shock: Applicable to single mode and multimode locking and nonlocking connectors.

Part or Identifying Number (PIN) is a new term encompassing previous terms used in specifications such as part number, type designator, or identification number and is as follows:

M83522/16	-	XXX	Style	A (locking boot, long cap)
				B (nonlocking boot, short cap)
Style				C (nonlocking, long cap)
Temperature			Temperature	D (indifferent)
Fiber size				H (high)
				N (normal)
			Fiber size	X (type I) (125 μm, mm)
				Y (type II) (125 μm, sm/mm)
				Z (type I) (140 μm, mm)

Fluid immersion: Not applicable.

Plug accessories: Each plug shall be packaged with a minimum of one crimp ferrule, one dust cover, and one strain relief boot.

The bayonet connector mates with MIL-C-83522/17 adapter bayonet and MIL-C-83522/18 PC mount.

Patent notice: The US Government does not have a royalty free license under the following patents for the benefit of manufacturers of the item, either for the US Government or for use in equipment to be delivered to the Government.

Patent number	Patent expiration date
4812009	March 14, 1996
Section 1 - 61	
Section 62 - 98	

Patent notice: The US Government has a royalty free license under the following patents for the benefit of manufacturers of the item, either for the Government or for use in equipment to be delivered to the Government. That is, adoption of a design for military specifications or the granting of qualifications to a supplier or manufacturer is conditional upon the existence of a royalty free license from the patent holder.

Patent number	Patent expiration date
4812009	March 14, 1996
Section 62	

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Navy - SH
Air Force - 17, 19, 71, 80, 90, 99
DLA - ES

User activities:

Navy - AS, MC, OS
Air Force - 13, 14, 80

Preparing activity:

Air Force - 85

Agent:

DLA - ES

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