INCH-POUND

MIL-T-29504/2A
19 December 1989
SUPERSEDING
MIL-T-29504/2
25 August 1987

MILITARY SPECIFICATION SHEET

TERMINI, FIBER OPTIC, CONNECTOR, REMOVABLE,
(A) ENVIRONMENT RESISTING, CLASS 2, TYPE II, STYLE A,
SOCKET TERMINUS, (FOR MIL-C-28876 and MIL-C-83526 CONNECTORS)

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-T-29504.

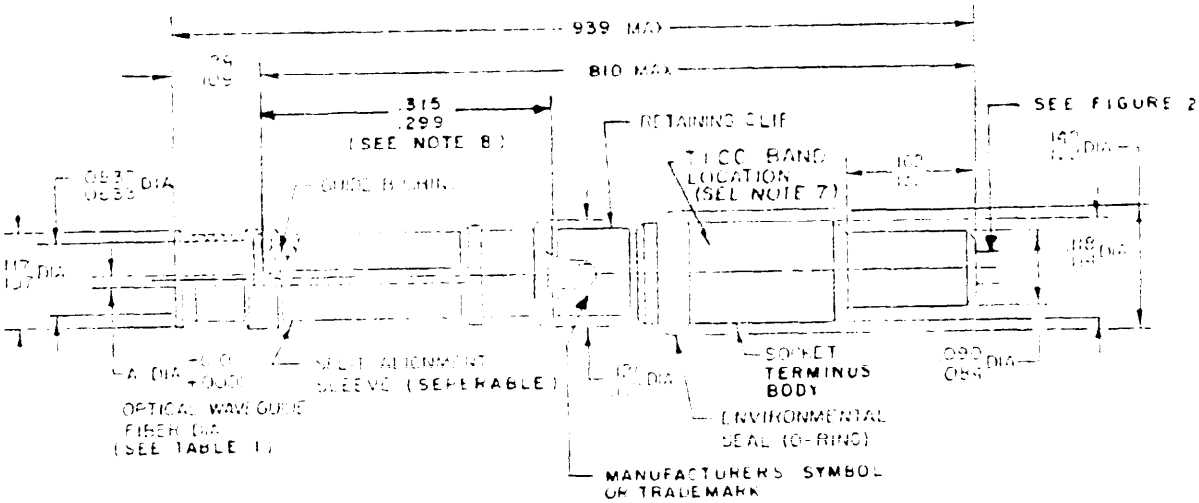

FIGURE 1. Socket terminus.

(A) denotes changes

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Inches	mm		Inches	mm
.0001	0.00	|| .122	3.09
.0833	2.10	|| .129	3.27
.0837	2.13	|| .132	3.35
.090	2.28	|| .142	3.60
.107	2.71	|| .162	4.11
.109	2.76	|| .317	8.05
.114	2.89	|| .328	8.33
.117	2.97	|| .799	20.29
.118	2.99	|| .922	23.41
.121	3.07	||	

NOTES:
1. All dimensions are in inches.
2. Metric equivalents are given for general information only, except for guide bushing "A" diameter which is based upon 1.00 inch = 25400.0 µm or 1.0 µm =.00003937 inch.
3. All diameters to be concentric within .002 inch (0.05 mm).
4. Dimensions apply after plating.
5. (O-ring) is a fluorosilicone material.
6. For internal configuration and dimensions of terminus rear, see figure 2.
7. The TICC bands shall be at the rear of the pin terminus.
8. Dimensions to be measured with terminus installed in connector insert or equivalent gauge fixture.

FIGURE 1. Pin terminus - Continued.

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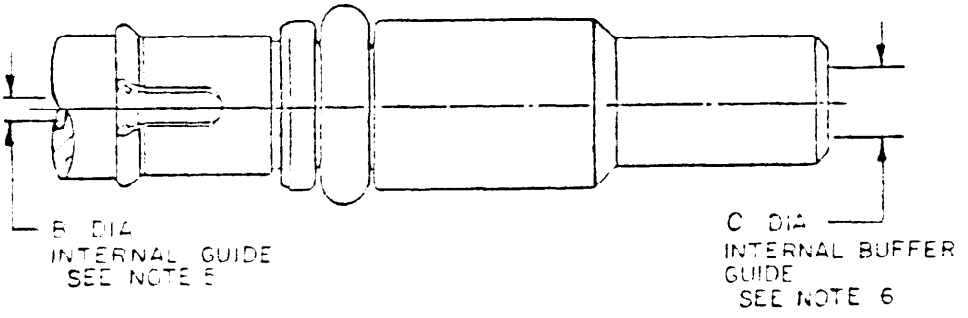

B diameter (internal guide)		C diameter (internal buffer guide)	
Inches	mm	Inches	mm
.017 .014	0.43 0.35	.044 .040	1.12 1.01

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters to be concentric within .002 (0.05 mm).
4. Dimensions shown after plating.
5. The "B" diameter of the internal guide is used to center coated optical waveguide fiber.
6. The "C" diameter of the internal buffer guide is used to center the optical waveguide fiber buffer.

FIGURE 2. Terminus internal guide and buffer.

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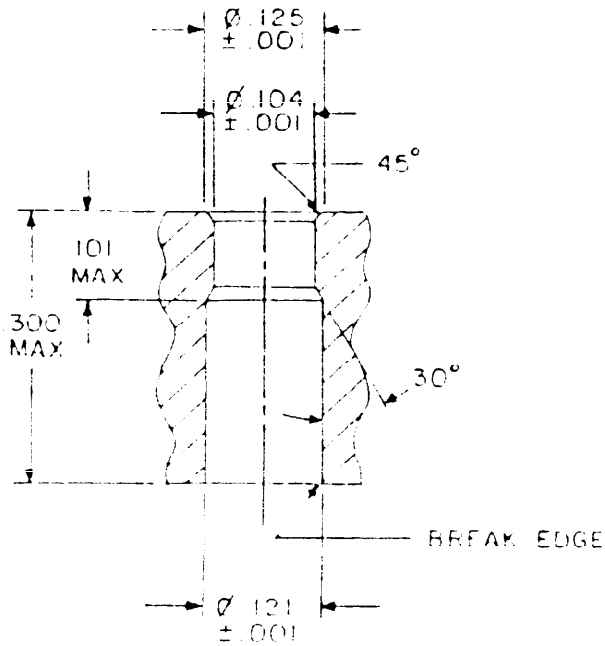

Inches	mm
.0001	0.00
.101	2.56
.104	2.64
.121	3.07
.125	3.17
.300	7.62

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters to be concentric within .002 (0.05 mm).
4. Dimensions shown after plating.

FIGURE 3. Insert equivalent for contact measurement.

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REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figures 1 and 2 and table I.

(A) Weight: 1.0 gram maximum.

Adhesives: Use Hysol 1c (-55°C to +85°C temperature range), Epotek 330/353 series (-55°C to +85°C temperature range) or equivalent as approved by the qualifying activity. Mixing and curing instructions shall be supplied with the assembly instructions provided with each termini or applicable connector.

Tools: See table II.

Mating termini: MIL-T-29504/1.

Insertion force: 12 ounces maximum (.0837 diameter pin).

Withdrawal force: 4 ounces minimum (.0833 diameter pin), see MIL-T-29504A.

TABLE I. TICC numbers to fiber diameter cross reference.

TICC	A diameter (fiber diameter) maximum	
	Inches	µm
4019	.0047	119.5
4020	.0048	122.0
4021	.0049	124.5
4022	.0050	127.0
4023	.0051	129.5
4024	.0052	132.0
4025	.0053	134.5
4026	.0054	137.0
4027	.0055	139.5
4028	.0056	142.0
4029	.0057	145.0
4030	.0076	193.0
4031	.0077	195.5
4032	.0078	198.0
4033	.0079	200.5
4034	.0080	203.0
4035	.0081	205.5
4036	.0082	208.0
4037	.0083	211.0

TABLE II. Tools.

End size	Insertion tool	Removal tool	Alignment sleeve tool	Polishing fixture tool
16	M81969/46-01 or M81969/49-01	M81969/47-01	M81969/48-01	M83523/6-01

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Part or Identifying Number (PIN): See table III.

Supersession data: See table III.

TABLE III. The PIN and supersession data.

TICC	PIN M29504/02-	Superseded PIN M28876/17-	Superseded manufacturer's PIN	CAGE
-4019 1/	4019	048XXX 2/	44970017048 0110	91662
			1093202-048FXXXS 2/	53669
-4020	4020	049XXX	1093202-049FXXXS	53669
-4021	4021	050XXX	1093202-050FXXXS	53669
-4022	4022	051XXX	1093202-051FXXXS	53669
-4023 1/	4023	052XXX	1093202-052FXXXS	53669
-4024 1/	4024	053XXX	1093202-053FXXXS	53669
-4025 1/	4025	054XXX	1093202-054FXXXS	53669
-4026	4026	055XXX	1093202-055FXXXS	53669
-4027	4027	056XXX	1093202-056FXXXS	53669
-4028	4028	057XXX	44970017057 7000	91662
			1093202-057FXXXS	53669
-4029 1/	4029	058XXX	1093202-058FXXXS	53669
-4030 1/	4030	077XXX	1093202-077FXXXS	53669
-4031 1/	4031	078XXX	1093202-078FXXXS	53669
-4032 1/	4032	079XXX	1093202-079FXXXS	53669
-4033 1/	4033	080XXX	1093202-080FXXXS	53669
-4034 1/	4034	081XXX	1093202-081FXXXS	53669
-4035 1/	4035	082XXX	1093202-082FXXXS	53669
-4036 1/	4036	083XXX	1093202-083FXXXS	53669
-4037 1/	4037	084XXX	1093201-084FXXXS	53669

1/ Inactive for new design.

2/ X - Indicates all numerical combinations possible.

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Patent notice: The Government does not have 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:

(A) Patent number	Patent expiration date
US 65,032	11/17/2004
US 260,660	01/08/2002
US 376,866	02/12/2002
US 403,446	01/15/2002

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 85

Review activities:
Army - MI
Navy - AS, MC, SH
Air Force - 11, 17, 19, 70, 80, 90, 99
DLA - ES

User activities:
Army - AV
Navy - CG, MC, OS, YD
Air Force - 13, 14, 84

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 6060-0076-2)

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