

INCH-POUND

MIL-PRF-29504/14B

19 January 2021

SUPERSEDING

MIL-PRF-29504/14A

12 November 2002

PERFORMANCE SPECIFICATION SHEET

TERMINI, FIBER OPTIC, CONNECTOR, REMOVABLE, ENVIRONMENT RESISTING,
PIN TERMINUS, FRONT RELEASE, CERAMIC FERRULE
(FOR USE WITH MIL-PRF-28876 CONNECTORS)

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 MIL-PRF-29504.

Part or identifying number (PIN): See [table I](#) below and 1.2 of MIL-PRF-29504.

<u>M</u>	<u>29504</u>	<u>/14</u>	-	<u>XXXX</u>	<u>X</u>
Prefix for Military Specification	Specification Number	Spec Sheet No.		Termini Identification Color Coding (TICC) Code (see table I)	Crimp Sleeve (optional)

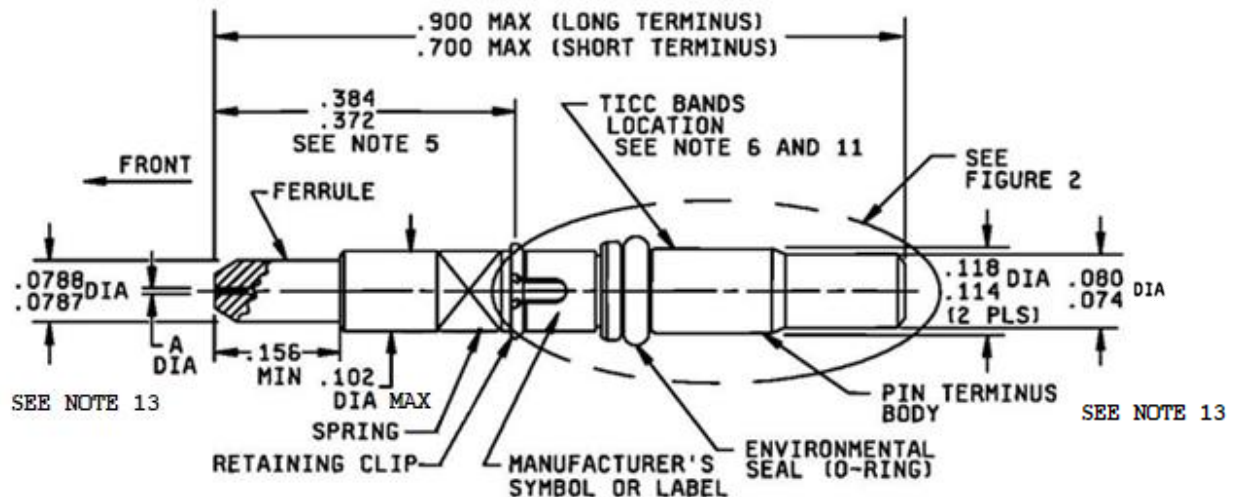


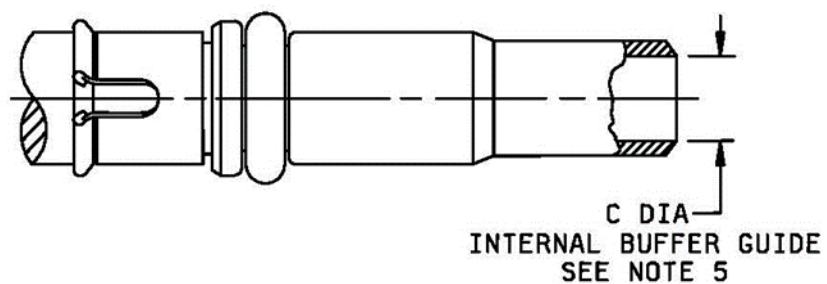
FIGURE 1. Pin terminus.

Inches	Millimeters
0.074	1.88
0.0787	1.999
0.0788	2.002
0.080	2.03
0.102	2.59
0.114	2.90
0.118	3.00
0.156	3.96
0.372	9.45
0.384	9.75
0.700	17.78
0.900	22.86

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters are to be concentric within 0.002 inch (0.05 millimeter).
4. Dimensions apply to plated/finished part.
5. The 0.384-inch (9.75-millimeter) or 0.372-inch (9.45-millimeter) dimensions are to be measured when installed in connector equivalent gauge fixture and when subjected to minimal compressive force. See [figure 3](#).
6. The TICC bands shall be at the rear of the pin terminus.
7. The 0.700-inch (17.78-millimeter) dimension is a maximum for the short terminus.
8. The TICC bands shall not appear on the short terminus. The individual bag or container shall have either TICC bands or the equivalent MIL-PRF-29504 PIN marking on container or on a tag inside the container.
9. All terminus metal parts are to be corrosion resistant. Crimp sleeve is to be metal.
10. Terminus shown with flat end face. Radiused end faces are also permissible.
11. The dimension shown is effective prior to the application of the TICC band marking.
12. Crimp grooves are permissible on the crimp diameter.
13. Ferrule dimension of 1.9990 to 2.0015 diameter can be used if ferrule is specified and inspected to metric units of measure in millimeters.

FIGURE 1. Pin terminus – Continued.

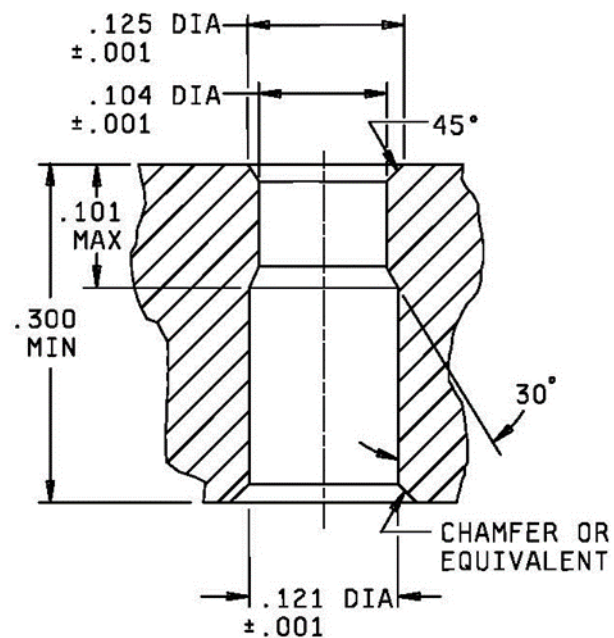


C diameter (internal buffer guide)	
Inches	Millimeters
0.056	1.42
0.053	1.35

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters are to be concentric within 0.002 inch (0.05 millimeter).
4. Dimensions apply to plated/finished part.
5. The "C" diameter of the internal buffer guide is used to center the optical waveguide fiber buffer.

FIGURE 2. Terminus internal buffer guide.



Inches	Millimeters
0.001	0.03
0.101	2.57
0.104	2.64
0.121	3.07
0.125	3.18
0.300	7.62

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters are to be concentric within 0.002 inch (0.05 millimeter).
4. Dimensions apply to plated/finished part.
5. Tolerance on all angles is ± 1 degree, unless otherwise noted.

FIGURE 3. Insert equivalent fixture for terminus measurement.

REQUIREMENTS:

Temperature: -18.4 to +149 °F (-28 to +65 °C) operating, -40 to +158 °F (-40 to +70 °C) non-operating, -40 to +158 °F (-40 to +70 °C) storage.

Design and construction:

Dimensions and configuration: See [figures 1](#) and [2](#) and [table I](#). Regardless of the end face geometry, the terminus shall meet the requirements of this specification when terminated using the procedures specified in MIL-STD-2042.

TABLE I. TICC numbers and dimensions for ferrule.

TICC number				A diameter ^{1/}	
Multimode (long)	Single-mode (long)	Multimode (short)	Single-mode (short)	Inches +0.00004 -0.0000	µm ^{2/} +1.0 -0.0
4130	4140	4150	4160	0.00492	125.0
4131	4141	4151	4161	0.00496	126.0
4132	NA ^{3/}	4152	NA ^{3/}	0.00500	127.0
4135	NA ^{3/}	4155	NA ^{3/}	0.00560	142.0
NOTES: ^{1/} For maximum performance, termini should be selected for the best (tightest) fit to the fiber. Fitting the next size larger terminus to a fiber may affect connector performance. ^{2/} Rounded to the nearest 0.5 micrometer. ^{3/} NA = Not Applicable.					

Size: For ferrule inside diameter and ferrule outside diameter inspection, ferrule manufacturer certification of compliance may be used in lieu of in-house inspection by the manufacturer at the terminus production facility.

Circular runout: The circular runout of the ferrule bore to the ferrule outer diameter shall be not greater than 1.0 micrometer. For ferrule circular run-out (concentricity) inspection, ferrule manufacturer certification of compliance may be used in lieu of in-house inspection by the manufacturer at the terminus production facility.

Weight: 0.035 ounce (1.0 gram) maximum.

Adhesives: Use MIL-PRF-24792 or as approved by the qualifying activity.

Material:

Ferrule: Ferrule materials shall have similar performance to zirconia. Termini shall meet all of the requirements of this specification when mated to qualified socket termini utilizing a zirconia alignment sleeve and zirconia ferrule.

Tools: See [table II](#).

TABLE II. Tools.

Tool	Part number
Insertion tool	Drawing 499-6872813 (NSN 5120-01-144-5338)
Removal tool	Drawing 499-6872813 (NSN 5120-01-419-2942)
Polishing tool	Drawing 499-6872813 (NSN 5120-01-419-3142)
Crimp tool	Drawing 499-6872813 (NSN 5120 01 419 3730)

Mating termini: MIL-PRF-29504/15.

Crimp sleeve: The crimp sleeve shall accept single fiber cable with a maximum outer diameter of 0.0945 inch (2.4 millimeters). The terminus shall meet all requirements when the crimp sleeve is assembled to the terminus using a hex crimp die with flats measuring 0.0945 inch + 0.002/-0.001 inch (2.400 millimeters + 0.050/-0.025 millimeter) across and 0.260 inch (6.6 millimeters) maximum long. Crimp sleeve is to be supplied with termini when specified in PIN.

Optical performance:

Insertion loss: The initial insertion loss of a mated pin and socket shall be not greater than 0.75 decibel. The maximum insertion loss of a mated pin and socket at any time during testing shall be not greater than 1.25 decibels.

Cleaning: Applicable except that cleaning shall be performed in accordance with MIL-STD-2042-5. Terminus cleaning is not required to be performed on unterminated termini.

Usage: Termini compliant with this specification sheet may be used in connectors other than MIL-PRF-28876 at the discretion of the acquiring activity.

VERIFICATION:

Environmental/mechanical: Termini shall be tested to the following MIL-PRF-28876 environmental and mechanical requirements. Change in optical transmittance and optical discontinuity requirements shall be as specified in MIL-PRF-28876. To qualify or requalify termini to this specification sheet, all requirements of MIL-PRF-28876 shall be met using the qualifying (candidate) terminus in a connector qualified to MIL-PRF-28876.

Impact

Vibration

Shock

Thermal shock

Temperature/humidity cycling

Temperature cycling

Temperature life

Flammability

Ozone exposure

Connector: The connector for this terminus shall be a qualified MIL-PRF-28876 connector.

Test specimens: Test specimens shall be constructed using a 62.5/125-micron optical fiber within a single fiber cable with an outer diameter not greater than 0.0945 inch (2.4 millimeters).

Qualification inspection: Qualification shall consist of performing testing specified in [table III](#) in the sequence listed.

TABLE III. Qualification inspections (except interoperability).

Test performed	Full qualification		Reduced qualification allowance ^{10/}	
	M29504 /14 & /15	MM after passed SM	SM after passed MM	/3 after /14 & /15 pass
Un-terminated termini tests				
Group 1 ^{1/}				
Size ^{2/}	X	X	X	X
Weight ^{2/}	X	--	--	X
Identification markings ^{2/}	X	X	X	X
Workmanship ^{2/}	X	X	X	X
Circular runout ^{2/}	X	--	--	--
Group 2 ^{3/}				
Terminus insertion & removal forces	X	--	--	--
Terminus retention ^{2/}	X	--	--	--
Maintenance aging	X	--	--	--
Terminus cleaning	X	--	--	--
Group 3 (polymeric materials only)				
Ozone	X	--	--	--
Fungus resistance	X	--	--	--
Termini as part of single fiber cable tests				
Group 1				
None	--	--	--	--
Group 2				
Fiber pull-out force ^{4/}	X	--	--	--
Cable pull-out force ^{4/}	X	--	X	--
Group 3				
None	--	--	--	--
Termini as an integral part of a multiple termini connector				
Group 1 ^{5/}				
Interoperability ^{6/}	X	X	X	--
Optical tests				
Insertion loss (initial)	X	X	X	--
Return loss	X	--	X	--

TABLE III. Qualification inspections (except interoperability) – Continued.

Test performed	Full qualification		Reduced qualification allowance ^{10/}	
	M29504 /14 & /15	MM after passed SM	SM after passed MM	/3 after /14 & /15 pass
Termini as an integral part of a multiple termini connector – Continued				
Group 2				
Mating durability	X	--	X	--
Terminus cleaning	X	--		--
Return loss ^{7/}	X	--	X	--
Group 3				
Mechanical tests				
Impact	X	--	--	--
Vibration, swept sine ^{8/}	X	--	--	--
Vibration, random ^{8/}	X	--	--	--
Shock, MIL-DTL-901 ^{8/}	X	X	X	--
Environmental tests ^{8/}				
Thermal shock	X	--		--
Temperature humidity cycling	X	--		--
Temperature cycling	X	--	X	--
Temperature life	X	--	X	--
Flammability	X	--	X	--
Insertion loss verification ^{9/}	X	--	X	--
Return loss ^{9/}	X	--	X	--
NOTES:				
^{1/} Sample size. One pair = one pin terminus and one socket terminus. A minimum sample size shall be used to ensure sufficient quantity for termini inspections as part of a single fiber cable and for termini inspections as an integral part of a multiple fiber connector. ^{2/} These inspections shall be performed by the manufacturer at the production facility. Exception may be taken for weight, circular run out, and terminus retention when approved by the qualifying activity. ^{3/} Test fixture for this test shall include fiber optic, MIL-PRF-28876 connectors, both plug and receptacle for retaining the termini during testing. ^{4/} Each terminus shall be terminated on one end of a single fiber cable. Cable used shall have provisions compatible with termini strain relief, as applicable. A minimum sample size of 16 pin termini and 16 of the applicable counterpart socket termini, selected from the group that underwent inspections for un-terminated termini, shall be used for each of these tests. Fiber pullout. Separate test samples for the socket termini must be prepared on single fiber cable without any strain relief. The change in optical transmittance shall be met both during and after the test for socket termini. The fiber pullout test does not need to be performed on the pin terminus. Cable pullout. Separate test samples for the socket termini must be prepared on single fiber cable with strain relief (aramid yarn on cable affixed to terminus via the crimp sleeve). The change in optical transmittance shall be met both during and after the test for socket termini. The cable pullout test does not need to be performed on the pin terminus.				

NOTES (continued):

- ^{5/} Test sample size (mechanical and environmental tests). Option of using separate test samples from group 2 for group 3 mechanical test. Otherwise, continue testing with those from group 2 to group 3, Mechanical. Separate test samples shall be used for group 3 environmental tests.
- ^{6/} Interoperability. This testing shall be performed by DLA Land and Maritime-VTP which maintains/retains the interoperability standards. Please note that separate test samples are required for interoperability testing. These test samples will then be retained by DLA Land and Maritime as interoperability standards.
- ^{7/} Return loss after mating durability. If failure occurs, ferrule end faces may be re-polished and test redone.
- ^{8/} Shock and vibration. Two connector mated pair shall be tested. At least four termini pair in each connector mated pair shall be monitored for optical signal discontinuity (and for change in optical transmittance). Any other mated pair not monitored for optical signal discontinuity shall be monitored for change in optical transmittance.
- ^{9/} An insertion loss verification and a return loss test are required and shall be performed after the conclusion of the mechanical tests and after the environmental tests. If both the mechanical tests and the environmental tests are done on the same two mated pair for a reduced qualification allowance, then only one insertion loss verification and one return loss test may be performed (after the conclusion of the mechanical and environmental tests).
- ^{10/} Reduced qualification is allowed if full qualification (per column 2) is performed and passed on the other fiber size (i.e., single-mode if multimode passed previously or if multimode if single mode passed previously).

Fiber pull-out force: Verification may be conducted using similarly designed MIL-PRF-29504/15 termini (from the same manufacturer) in lieu of using termini to this specification sheet. If verification is performed on MIL-PRF-29504/15 termini, then this inspection is satisfied for both MIL-PRF-29504/14 termini and MIL-PRF-29504/15 termini.

Cable pull-out force: Verification may be conducted using similarly designed MIL-PRF-29504/15 termini (from the same manufacturer) in lieu of using termini to this specification sheet. If verification is performed on MIL-PRF-29504/15 termini, then this inspection is satisfied for both MIL-PRF-29504/14 termini and MIL-PRF-29504/15 termini.

Fabrication: Shall be performed in accordance with MIL-STD-1678-4, requirement 4102.

Qualification by similarity: Manufacturers who are qualified under this specification sheet for single-mode termini, and whose multimode termini pass the size, identification markings, workmanship, insertion loss, and shock inspections specified herein, are qualified under this specification sheet for multimode termini sizes. Testing is to be performed using four mated pairs. This qualification by similarity is valid if the only difference between the previously qualified single-mode termini and the multimode termini is a change in the terminus ferrule dimensions.

Manufacturers who are qualified under this specification sheet for multimode termini, and whose single-mode termini pass the size, identification marking, workmanship, insertion loss, return loss, cable pull-out force, mating durability, shock, temperature cycling, temperature life, and flammability inspections specified herein, are qualified under this specification sheet for single-mode termini. Testing is to be performed using four mated pairs. This qualification by similarity is valid if the only difference between the previously qualified multimode termini and the single-mode termini is a change in the terminus ferrule dimensions.

Conformance inspection. Applicable for groups A, B, and C.

- a. Group A. Group A shall consist of the inspections/tests specified for group A in [table IV](#).

TABLE IV. Conformance inspections (groups A, B, and C).

Test performed ^{1/, 2/}	Groups A, B, C	Number of termini/number of mated pairs ^{9/, 11/}
Tests for unterminated termini		
Group 1		
Size ^{4/}	A	—
Identification markings ^{4/}	A	—
Workmanship ^{4/}	A	—
Circular runout ^{4/}	B	—
Group 2 ^{4/, 5/}		
Terminus insertion & removal forces	B	16 termini ^{12/}
Terminus retention	B	16 termini
Maintenance aging	B	16 termini from terminus retention
Group 3 (polymeric materials)		
None		
Tests for termini as part of a single fiber cable		
Group 2 (8 minimum each test)		
Fiber pull-out force ^{6/}	C	16 termini (8 termini mated pair)
Cable pull-out force ^{6/}	C	16 termini (8 termini mated pair)
Tests for termini as an integral part of a multiple termini connector		
Group 1 ^{3/, 7/, 10/}		
Optical tests		
Insertion loss ^{9/}	C	2 mated pairs - #1,2
Return loss ^{9/}	C	2 mated pairs - #1,2
Group 2 ^{3/, 7/, 10/}		
Mating durability	C	1 mated pair - # 1
Group 3 ^{3/, 7/, 10/}		
Mechanical tests ^{9/}		
Shock, MIL-DTL-901 ^{8/}	C	1 mated pair - # 1
Environmental ^{3/, 7/, 10/}		
Temperature humidity cycling	C	1 mated pair - # 2
Temperature cycling	C	1 mated pair - # 2

TABLE IV. Conformance inspections (groups A, B, and C) – Continued.

NOTES:

- ^{1/} Conformance tests are those inspections specified for unterminated termini (groups A, B), termini as part of a single fiber cable (groups B, C), and termini as an integral part of a multiple termini connector (group C).
- ^{2/} “A”, “B”, and “C” indicate test applies when performing a group A, B, or C conformance test.
- ^{3/} For group C conformance testing use a MIL-PRF-28876 shell size 13 connector with a 4-cavity insert. Connector is to be fully populated with PC polished termini. All insert cavity positions are to be active (monitored). Use of other connector configurations is not allowed (such as one MIL-PRF-28876 shell size 15 with an 8-cavity insert in lieu of two MIL-PRF-28876 shell size 13 connectors with 4-cavity inserts).
- ^{4/} These inspections shall be performed by the manufacturer at the production facility. Exception may be taken for circular runout, terminus insertion and removal forces, terminus retention, and maintenance aging.
- ^{5/} The test fixture for this test shall include fiber optic MIL-PRF-28876 connectors with either plug or receptacle for retaining the termini during testing.
- ^{6/} Each terminus shall be terminated on one end of a single fiber cable. Cable used is to have provisions compatible with termini strain relief, as applicable. Termini, selected from the group that underwent inspections for un-terminated termini, shall be used. A minimum sample size of 8 pin termini and 8 of the applicable counterpart socket termini, selected from the group that underwent inspections for un-terminated termini, shall be used for each of these tests.
- Fiber pullout. Separate test samples of the termini shall be prepared on single fiber cable without any strain relief. The change in optical transmittance shall be met after the test.
- Cable pullout. Separate test samples of the termini must be prepared on single fiber cable with strain relief (aramid yarn on cable affixed to terminus via the crimp sleeve). The change in optical transmittance shall be met after the test.
- ^{7/} Number of connector mated pairs for group C. Two connector mated pairs shall be tested for each PIN undergoing group C testing. The group C tests shall be performed for each row in [table VI](#) for which termini are offered.
- ^{8/} Shock. One connector mated pair shall be tested ^{11/}. The four termini pairs in the connector mated pair are to be measured for optical signal discontinuity and for change in optical transmittance.
- ^{9/} An insertion loss verification and a return loss test shall be performed at the start of group C testing. The initial insertion loss and return loss shall be performed on any new mated pair used in group C testing. The one exception is that return loss shall be performed only on termini with single mode fiber.
- ^{10/} Termini to be placed in each mated pair shall be selected based on [table VI](#).
- ^{11/} For each test in group C, the column for “Number of mated pairs” first specifies the total number of connector mated pairs tested followed by which connector mated pair is used for that test (each connector mated pair being assigned a number 1 through 2).
- ^{12/} When maintenance aging is performed, the first and last maintenance aging cycle can be used as the terminus insertion and removal force test. Otherwise, perform in the sequence listed (on the 16 termini prior to and used for the terminus retention test).

Group A sampling plan. Group A inspection shall be performed by random sampling for products supplied under this specification. This random sampling shall be performed in accordance with MIL-STD-1678-1, requirement 1304. The number of samples for random sampling inspected per lot size is specified in the “general inspection” table of MIL-STD-1678-1, requirement 1304. The required acceptance criterion is a zero nonconformance regardless of sample size.

Group A sampling plan for occurrence of a nonconformance. If any nonconformance is found, then 100 percent inspection shall be used until the qualifying activity is satisfied that the cause for the nonconformance has been corrected and will not reoccur. Also, until the nonconformance has been corrected, inspection with the requirement that data be provided (in lieu of inspection by attribute) may be specified by the qualifying activity.

- b. Group B. Group B inspection shall consist of the inspections/tests specified for group B in [table IV](#) on termini 24 months after initial qualification and within each 2-year period thereafter.

Group B test sample configurations.

Unterminated termini. No test sample preparation is required for circular runout, terminus insertion and removal forces, terminus retention, and maintenance aging.

Group B sampling plan. A minimum of 16 sample units shall be selected from a lot of the same PIN within 24 months after the date of notification of qualification and during every 24-month period thereafter. When a manufacturer is qualified for multiple TICC/PINs, then the group B inspection shall be performed every 2-year period on at least one TICC from each row in [table V](#) where the manufacturer has qualified parts. The terminus selected from each row shall be such that after three consecutive group B inspections, all qualified TICC/PINs from the same row in [table V](#) have been inspected. If a manufacturer is qualified for only 1 TICC in a particular row, then that TICC shall be inspected during every 2-year period. If a manufacturer is qualified for 2 TICC in a row, the manufacturer shall alternate inspections during each 2-year period.

TABLE V. Termini group B sampling plan by TICC.

Terminus length/ferrule hole diameter ^{1/}	TICC ^{2/}	Fiber type ^{1/}	Group B period 1 ^{3/, 4/, 5/}	Group B period 2 ^{3/, 4/, 5/}	Group B period 3 ^{3/, 4/, 5/}
L,S/ 125-126 µm	4140, 4141, 4160, 4161	SM	4140 or 4160	4141 or 4161	4140 or 4160
L,S/ 125,126-127 µm	4130, 4131, 4132, 4150, 4151, 4152	MM	4131 or 4151	4132 or 4152	4130 or 4150
L,S/ 142 µm	4135, 4155	MM	4135 or 4155	4135 or 4155	4135 or 4155
NOTES: ^{1/} SM = single mode, MM = multimode, L = long, S = short. ^{2/} If not qualified for all TICC's in a particular row, alternating inspections shall be performed for the qualified TICC's. (Ex: If qualified for 4140 and 4160, but not 4141 and 4161, perform inspection on 4140 or 4160 during Period 1 and during Period 2.) ^{3/} If qualified for both TICC's in a particular cell, then inspections shall be performed for the qualified TICC with the highest production volume during that group B period. ^{4/} Fabrication shall be performed in accordance with MIL-STD-1678-4, requirement 4102. ^{5/} See 4.7.1.3.1 of MIL-PRF-29504 for limited production guidance.					

- c. Group C. Group C inspection shall consist of the inspections/tests specified for group C in [table VI](#) on termini 60 months after initial qualification and within each 5-year period thereafter.

Group C test sample configurations.

(1) Termini as part of a single fiber cable. Test samples shall be fabricated on termini of the same PIN as described in the applicable note in [table VI](#) for single fiber cables.

(2) Termini as part of a multiple termini connector. Test samples shall be fabricated using two connector mated pair with termini of the same PIN for each row as listed in the applicable note in [table VI](#). Test samples shall be fabricated as specified in Requirement 4102 of MIL-STD-1678-4 with one exception. Use a MIL-PRF-28876 shell size 13 connector with a 4-cavity insert.

Group C sampling plan. Group C inspection shall be performed on termini of the same PIN from the highest production volume of each row in [table VI](#). For tests on termini as an integral part of a multiple termini connector, the two-connector mated pair shall be subjected to group 1 tests for each row in [table VI](#). For one mated pair in each row of [table VI](#), the connector mated pair undergoes the group 1 tests followed by the group 2 and group 3 mechanical tests. For the other mated pair in each row of [table VI](#), the other connector mated pair undergo group 1 tests followed by group 3 environmental tests. The terminus shall be selected such that the terminus is chosen with the ferrule hole diameter in each row of [table VI](#) with the largest volume of product produced during the 5-year group C period.

TABLE VI. Termini group C sampling plan by temperature range and TICC.

Terminus length/ ferrule hole diameter ^{2/}	TICC ^{1/}	Fiber type ^{2/}	Sampling plan (based on production volume)	Termini as a part of a	
				Single fiber cable	Multiple fiber connector ^{4/5/}
L,S/ 125-126 µm	4140, 4141, 4160, 4161	SM	Select highest volume SM from 5-year period; 4140, 4141, 4160, 4161	^{3/}	Mated pair 1 Mated pair 2
L,S/ 125, 126-127 µm	4130, 4131, 4132, 4150, 4151, 4152	MM	Select highest volume MM from 5-year period; 4131, 4132, 4151, 4152	^{3/}	Mated pair 1 Mated pair 2
L,S/ 142 µm	4135, 4155	MM	Select highest volume MM from 5-year period; 4130, 4150, 4135, 4155	^{3/}	Mated pair 1 Mated pair 2
NOTES: ^{1/} Select highest volume from 5-year period for each row of termini being offered. ^{2/} SM = single mode, MM = multimode, L = long, S = short. ^{3/} The number of termini of the same PIN needed for group C inspection of termini as part of a single fiber cable is as follows: Fiber pullout force = 16 (8 termini mated pair, see table II), Cable pullout force = 16 (8 termini mated pair, see table II). ^{4/} See table IV for tests to be performed for each connector mated pair. ^{5/} Fabrication shall be performed in accordance with MIL-STD-1678-4, requirement 4102.					

CHANGES FROM PREVIOUS ISSUE. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – SH
Air Force – 85
DLA – CC

Preparing activity:

Navy – SH
(Project 6060-2020-007)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.