



**M29504 /14 & /15**

### About M29504 /14 & /15

M29504/14 & /15 termini from Amphenol Fiber Systems International (AFSI) are qualified to MIL-PRF-29504B specifications. This series of fiber optic termini provide superior optical and mechanical performance and are compatible with M28876 and comparable military-style connectors.

Unlike other M29504/14 & /15 designs, the AFSI design is precision engineered allowing the ferrule to press fit and bottom out within the terminus bodies. This strict tolerance management eliminates loose fit or epoxy construction and yields better overall performance under stressful environmental conditions.

The M29504/15 features a ceramic alignment sleeve maximizing its ability to hold extremely tight dimensional tolerances while maintaining accurate concentricity, providing superior mechanical and optical performance.

### Applications

- US Navy shipboard, surface and submarine, mission critical combat and communication systems
- Mobile Tactical Shelters and Electronic Battlefield Networks
- Mobile Emergency Telecommunications Stations

### Features and Benefits

- Pre-radius zirconia ferrule tip provides optimal insertion loss performance
- Laser marked TICC codes eliminate the need to decipher complex color-code bands
- Precision ferrule alignment with captivated split zirconia sleeves
- Wide configuration selection
- Superior optical performance
- Custom sizes available (Commercial-off-the-Shelf only)
- Integrated environmental seal on each terminus
- Precision “press fit” terminus design
- Each terminus individually packaged and labeled for ease of identification, storage and use

### Materials

- **Ferrules:** Zirconia ceramic
- **Termini bodies:** Stainless steel, passivated
- **Retention clips:** Beryllium copper
- **Alignment sleeves:** Ceramic
- **Alignment sleeve hood:** Beryllium copper
- **O-ring seal:** Fluorosilicone

### Certifications and Qualifications

- MIL-PRF-29504B QPL listed

### How to Order

For more information on how to order or to obtain a price quote on any of our M29504 products, please call us at 800.472.4225. For international calls please dial 214.547.2400 or email us at [info@fibersystems.com](mailto:info@fibersystems.com)

TICC Dash Number								Maximum Fiber Diameter
M29504 /14-XXXX Pin Terminus				M29504 /15-XXXX Socket Terminus				
Multimode	Single Mode	Multimode (Short)	Single Mode (Short)	Multimode	Single Mode	Multimode (Short)	Single mode (Short)	Microns
<b>4131</b>	4141	4151	4161	<b>4171</b>	4181	4191	4201	126.0
4135	4145	4155	4165	4175	4185	4195	4205	142.0

*Bold items are most common styles. AFSI is qualified on all M29504 /14 & /15 products. Contact the factory for other ID sizes.*

*Note 1. Add a "C" at the end of the part number for included crimp sleeve.*

*Note 2. M29504/03-4038 - Dummy Terminus*

## Options Available

AFSI offers a complete line of termini insertion, extraction and polishing tools, which are compatible with NAVSEA specifications. These tools can be used with AFSI M29504/14 & /15 termini or other manufacturer's M29504/14 & /15 termini. Tools include termini extraction, termini insertion, alignment sleeve extraction, alignment sleeve insertion and single position polishing puck.

## M29504 /14 & /15 Termini Specifications

### Specification

Back Reflection  
 Insertion Loss  
 Operating Temperature  
 Temperature Cycling  
 Temperature Shock  
 Temperature Life  
 Vibration  
 Mechanical Shock  
 Mating Durability  
 Pressure Sealing (Wiper Seal)  
 Terminus Mating Force  
 Terminus Retention Force  
 Cable Retention Force  
 Weight  
 Ozone Exposure  
 Impact

### Measurement/Detail

<-40 dB – PC polish, <-50 dB – enhanced PC polish  
 0.45dB typical (measured with 62.5/125mm fiber @1310nm)  
 -65°C to +150°C (dependent on epoxy and cable)  
 -62°C to +70°C per MIL-STD-1344, Method 1003C  
 -54°C to +65°C per MIL-STD-1344, Method 1003  
 +110°C for 240 hours  
 MIL-STD-1344, Method 2005, Condition II & VI  
 MIL-STD-901C, Grade A  
 500 cycles per EIA-455-21  
 2,000 psi  
 5 lb [22.2 N] nominal  
 22 lb [97.9 N]  
 25 lb [111.2 N] (dependent on cable construction)  
 1.0 grams, max  
 MIL-STD-1344, 1007  
 MIL-STD-1344, Method 2015

## About Amphenol Fiber Systems International

Amphenol Fiber Systems International (AFSI) designs, manufactures, markets, and supports reliable and innovative fiber optic interconnect solutions that withstand the harsh environments of military, oil & gas, mining and broadcast applications. After more than a decade in business, AFSI continues to uphold its position as a global leader in fiber optic interconnect components and systems such as termini, M28876, MIL-ST, TFOCA and the TFOCA-II® connector, which AFSI developed and patented. Altogether, AFSI has delivered millions of fiber optic connectors worldwide. Whenever there is a need for superior cost-effective fiber optic systems and products that will stand up to demanding operating environments, you can rely on AFSI for engineering know-how, top-quality products and expert technical support.

For more information about AFSI, please visit our web site at [www.fibersystems.com](http://www.fibersystems.com)

Amphenol Fiber Systems International, Inc.  
 1300 Central Expressway North, Suite 100  
 Allen, TX 75013  
 Phone: 214.547.2400 - 800.472.4225  
 Fax: 214.547.9344

Publication: AFSI-M29504 /14 & /15-ds05092013. Specifications subject to change without notice. [www.fibersystems.com](http://www.fibersystems.com) - [info@fibersystems.com](mailto:info@fibersystems.com)

© 2013 Amphenol Fiber Systems International. All rights reserved.