



M29504/4 & /5 Fiber Optic Termini

About the M29504

Amphenol Fiber Systems International's (AFSI) M29504/4 & /5 style fiber optic termini, the M29K1000 and M29L1000 series, provide superior optical and mechanical performance. Designed to fit into MIL-DTL-38999 Series III, pin size 16 connectors, this low-cost, high-precision terminus family is ideal for harsh environment fiber optic interconnections. Available for single mode and multimode applications, these termini conform to the rigorous conditions of the MIL-PRF-29504D specification.

The M29K1000 and M29L1000 series termini utilize the highest quality zirconia ceramic ferrules and split alignment sleeves available. AFSI's tight-tolerance ferrules are optimized for low insertion loss, low back reflection and exceptional durability. All ferrules are available in standard and ultra polished end faces for those tight optical budget applications. In addition, epoxy removal and polishing times are minimized by the ferrule's pre-domed design feature.

The M29L1000's zirconia split alignment sleeve design ensures accurate physical contact, fiber-to-fiber alignment and guarantees the highest performing connector of its kind for use in a variety of demanding environmental conditions.

The M29K1000 and M29L1000 series fiber optic termination system offers precise, superior and reliable connections over repeated connector mating cycles and through a wide range of harsh environmental conditions.

Features & Benefits

- Precision fiber optic ceramic ferrules
- Pre-radius ferrule design
- Precision "press fit" stainless steel design
- Accurate ferrule alignment system
- Size 16 design (MIL-DTL-38999 compatible)
- Low insertion loss and back reflection
- Designed and manufactured to MIL-PRF-29504/4 and /5 specifications

Benefits

- Solid reliable connectivity through a wide range of harsh environmental conditions
- Compatible with all qualified MIL-DTL-38999, Series III connectors
- Fast termination and polish time
- Reliable, repeatable and durable connections
- Easy to clean

Applications

- Avionics
- NAVAIR
- Commercial aircraft
- Harsh environment
- Land tactical applications
- Shipboard

Product Specifications

| Specification | Measurement/Detail |
|-----------------------|---|
| Back Reflection | Better than -40dB – PC polish Better than -50dB – enhanced PC polish |
| Insertion Loss | 0.45 typical (measured with 62.5/ 125mm fiber @1310nm) |
| Operating Temperature | -65°C to +150°C |
| Temperature Life | +150°C for 1000 hours |
| Vibration | 40G random |
| Mechanical Shock | 500G |
| Mating Durability | 500 cycles |
| Cable Retention Force | 25lb (dependent on cable construction) |

M29504/4 Fiber Size Table

| AFSI Pin Part Number | Fiber Size Core/Cladding | A Diam. (Microns) | Reference Only M29504 /4-XXXX |
|----------------------|--------------------------|-------------------|-------------------------------|
| M29K2000 | 9/125 | 126 | M29504/4-4209 |
| M29K1001 | 50/125 & 62.5/125 | 126 | M29504/4-4210 |
| M29K1000 | 50/125 & 62.5/125 | 127 | M29504/4-4040 |
| M29K3000 | 100/140 | 142 | M29504/4-4043 |
| M29K3001 | 100/140 | 144 | M29504/4-4044 |
| M29K5000 | 62.5/125/155 (Polyimide) | 156 | M29504/4-4211 |
| M29K5001 | 62.5/125/155 (Polyimide) | 157 | M29504/4-4212 |
| M29K6000 | 100/140/172 (Polyimide) | 173 | M29504/4-4087 |
| M29K6001 | 100/140/172 (Polyimide) | 175 | M29504/4-4213 |
| M29K8000 | 200/233 | 236 | M29504/4-4214 |
| M29K8050 | 200/280 | 286 | M29504/4-4215 |
| M29K9000 | 400/440 | 448 | M29504/4-4216 |

M29504/5 Fiber Size Table

| AFSI Socket Part Number | Fiber Size Core/Cladding | A Diam. (Microns) | Reference Only M29504 /5-XXXX |
|-------------------------|--------------------------|-------------------|-------------------------------|
| M29L2000 | 9/125 | 126 | M29504/5-4238 |
| M29L1001 | 50/125 & 62.5/125 | 126 | M29504/5-4239 |
| M29L1000 | 50/125 & 62.5/125 | 127 | M29504/5-4046 |
| M29L3000 | 100/140 | 142 | M29504/5-4049 |
| M29L3001 | 100/140 | 144 | M29504/5-4050 |
| M29L5000 | 62.5/125/155 (Polyimide) | 156 | M29504/5-4240 |
| M29L5001 | 62.5/125/155 (Polyimide) | 157 | M29504/5-4241 |
| M29L6000 | 100/140/172 (Polyimide) | 173 | M29504/5-4088 |
| M29L6001 | 100/140/172 (Polyimide) | 175 | M29504/5-4242 |
| M29L8000 | 200/233 | 236 | M29504/5-4243 |
| M29L8050 | 200/280 | 286 | M29504/5-4244 |
| M29L9000 | 400/440 | 448 | M29504/5-4245 |



How to Order

For more information on how to order or obtain a price quote on our M29504 or other products, call toll free (US only) at 800.472.4225, international calls please use 1.214.547.2400 or e-mail sales@fibersystems.com.

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.

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, visit www.fibersystems.com.

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