FIBRE SYSTEMS

FIBRE OPTIC TERMINI

M29504/4 & /5 SIZE 16 TERMINI

For M38999 connectors

Socket

Fibre Systems provides M29504 termini, tooling, and assemblies engineered for high optical and mechanical performance in harsh environments. These cost-effective, precision termini fit MIL-DTL-38999 Series 3 size 16 cavities and meet MIL-PRF-29504 standards for both singlemode and multimode applications. Featuring tight-tolerance zirconia ceramic ferrules for low insertion loss and back reflection, the pre-domed ferrules support PC and ultra-PC polishing. Socket termini include zirconia split alignment sleeves for reliable, repeatable connections across many matings.

Pin

FEATURES AND BENEFITS

- Precision, pre-radius fibre optic ferrules
- Press-fit stainless-steel design
- Zirconia ferrule alignment sleeve
- Size 16 design, MIL-DTL-38999 compatible
- Low insertion loss and back reflection
- Designed and manufactured to MIL-PRF-29504 std.
- Compatible with all MIL-DTL-38999 Series III Connectors
- Reliable, repeatable and durable interconnect
- Allows for hybrid M38999 connectors with optical / copper termini in the same shell.

APPLICATIONS

- Avionics (military)
- Commercial Aircraft
- Land Tactical
- Shipboard / Naval
- Harsh Environment
- NAVAIR

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Fibre Systems is an Australian-owned provider of ruggedised, high-performance fibre optic cable systems.

FIBRE OPTIC TERMINI

Product Specification

SPECIFICATION	MEASUREMENT / DETAIL
Back reflection	Better than -40 dB – PC polish Better than -50 dB – UPC polish
Insertion loss	0.45 dB typical (62.5/125 µm fibre @ 1300 nm) MIL spec limit <1.5 dB
Operating temperature	-65°C to +150°C (fibre and cable dependent)
Temperature life	+150°C for 1000 hours
Vibration	40G random
Mechanical shock	500G
Mating durability	500 cycles
Cable retention force	25 lbs (cable dependent)

MIL Specification Reference

M29504/4 PIN VARIANTS

MIL Reference	Fibre core / cladding	Ferrule bore
M29504/4-4209	9/125 µm	126 µm
M29504/4-4210	50/125 µm 62.5/125 µm	126 µm
M29504/4-4040	50/125 µm 62.5/125 µm	127 µm
M29504/4-4043	100/140 µm	142 µm
M29504/4-4044	100/140 µm	144 µm
M29504/4-4211	62.5/125/155 µm (polyimide)	156 µm
M29504/4-4212	62.5/125/155 µm (polyimide)	157µm
M29504/4-4087	100/140/172 µm (polyimide)	173 µm
M29504/4-4213	100/140/172 µm (polyimide)	175 µm
M29504/4-4214	200/230 µm	236 µm
M29504/4-4215	200/280 µm	286 µm
M29504/4-4216	400/440 µm	448 µm

M29504/5 SOCKET TERMINI VARIANTS

MIL Reference	Fibre core / cladding	Ferrule bore
M29504/5-4238	9/125 µm	126 µm
M29504/5-4239	50/125 µm 62.5/125 µm	126 µm
M29504/5-4046	50/125 µm 62.5/125 µm	127 µm
M29504/5-4049	100/140 µm	142 µm
M29504/5-4050	100/140 µm	144 µm
M29504/5-4240	62.5/125/155 µm (polyimide)	156 µm
M29504/5-4241	62.5/125/155 µm (polyimide)	157 µm
M29504/5-4088	100/140/172 µm (polyimide)	173 µm
M29504/5-4242	100/140/172 µm (polyimide)	175 µm
M29504/5-4243	200/230 µm	236 µm
M29504/5-4244	200/280 µm	286 µm
M29504/5-4245	400/440 µm	448 µm

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