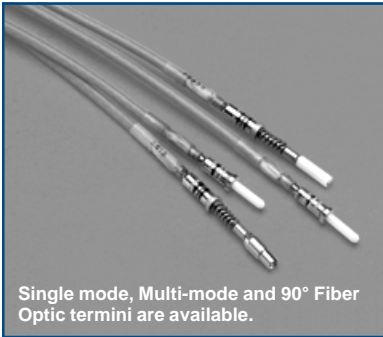


# Fiber Optic Products, cont.

## Multi-Channel Connectors - MIL-DTL-38999 Series III Cylindricals with Fiber Optic Termini

Reference Fiber Optic Catalog 12-352  
Reference Tri-Start Catalog 12-092



APPLICATION	STANDARDS/ REQUIREMENTS	COUPLING/ MOUNTING	CONTACT TERMINATION	PERFORMANCE ENVIRON./ELECT.
MIL-DTL-38999 Series III Tri-Start connectors with precision fiber optic termination systems for high speed and secure communication transmission.	Connectors are qualified to MIL-DTL-38999 Series III. Composite shells qualified to MIL-DTL-38999 Rev. J. Fiber optic size 16 multi-mode termini are qualified to MIL-T-29504/4 & 5.	Threaded coupling. Quickly, completely mates in one 360° turn of the coupling nut which is self locking. Lockwiring is eliminated. 5 key/keyway polarization eliminates mismatching. Universal mounting holes for front or rear mounting, locksmith metal keying to aid in blind mating.	Termination with inserts that allow for fiber optic termini in sizes 16 and 20. Recessed pins (100% scoop-proof feature minimizes contact damage).	Connector performances include temp. range of -55°C to +200° C, superior EMI shielding, shock resistance and IP67 environmental sealing which are consistent with MIL-DTL-38999 Series III. (See Subminiature Cylindrical Section) Optical performance is maximized with the unique methods of alignment in the termination systems. Insertion losses range from .3dB to <1/5dB depending upon launch conditions, fiber NA, fiber size and the type of termination.

### OPTIONAL FEATURES

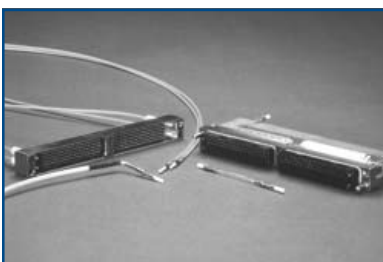
- Any of the shell styles of Tri-Start, MIL-DTL-38999 Series III are offered for incorporation of fiber optics. (See Subminiature Cyl. section for Tri-Start features and options).
- 35 popular insert patterns allow for fiber optics in any size 16 and 20 contact cavities and also for hybrid combinations of fiber optics, power contacts and shielded coax or twinax contacts.
- Size 16 multi-mode and single mode fiber optic termini and size 20 multi-mode fiber optic termini are readily available.
- 90 degree multi-mode size 16 are available.
- Optional fiber optic tools and termination tool kits are available for polishing, inserting and removing of fiber optic termini. (See fiber optic termination tool kit on page 42).

### MARKETS

- Military Aerospace
- Military Vehicles
- Communications
- Commercial Aircraft
- Medical Equipment

## Fiber Optic LRM (Line Replaceable Module) Rectangular Connectors

Reference Fiber Optic Catalog 12-352  
Reference LRM Publication L-2104



APPLICATION	STANDARDS/ REQUIREMENTS	COUPLING/ MOUNTING	CONTACT TERMINATION	PERFORMANCE ENVIRON./ELECT.
Fiber optic high speed transmission available within high density Line Replaceable Modules for use in advanced avionics printed circuit boards. LRM connectors meet avionics packaging in SEM-E form factor, VHSIC and MMIC and custom form factors.	LRM connectors meet requirements of MIL-C-55302. Fiber Optic termini meet MIL-T-29504/4, /5, /14 & /15.	For attachment to printed circuit boards. Polarization is controlled by insert arrangement. Up to 4096 keying combinations.	Fiber optic termini for LRM connectors are available in size 16, straight and 90 degree styles, and are combined with low mating force Bristle Brush contacts or with power contacts. LRM connectors are available in several grid patterns that incorporate from 300 to 472 contacts in 6 to 8 rows.	LRM connectors typically house Bristle Brush contacts which provide low mating and unmating force advantages - 70% to 90% lower than with conventional pin and socket. (For other advantages of Brush contacts see Rectangular section). Optical performances of fiber optic termini within LRM connectors are the same as termini used in cylindrical connectors. (See above).

### OPTIONAL FEATURES

- Fiber optic termini are available for LRM connectors in the following configurations:
  - MIL-T-29504/4, /5, /14 & /15 termini
  - Lucent ROC (Robust Optical Connector)
  - MT ferrule (2-24 fiber lines per ferrule) (See other MT Series, page 40).
- Hybrid arrangements with fiber optic termini, Brush contacts, power contacts and coaxial or twinax contacts are available. (See Rectangular section for more information on LRM connectors and Brush contacts).

### MARKETS

- Military Aerospace
- Military Vehicles
- Communications
- Commercial Aircraft
- Medical Equipment