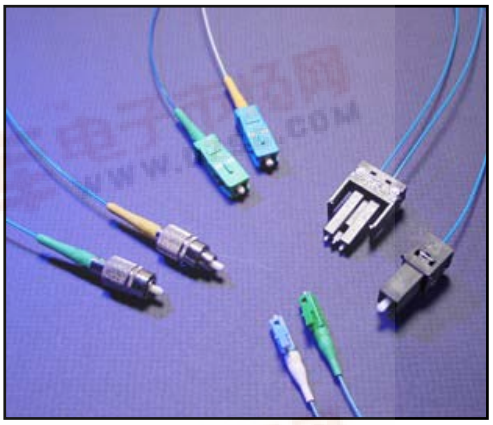
PM (Polarization Maintaining) Fiber Assemblies

86265



FEATURES AND SPECIFICATIONS

Features and Benefits

- BLC™, BSC™, FC, LC, MU, SC and ST* connector styles available, allowing for flexibility of system design and compatibility with industry standard devices
- Optical or Mechanical alignment, allows for optimization specific to the customers application
- Blindmate SC or LC connectors, can be easily used in board mount applications
- 100% tested for ER, IL, and RL, ensures quality performance of all assemblies provided
- Low stress epoxies and manufacturing process provide stable performance over temperature and wavelength changes

Physical

Fiber Type: Singlemode panda style (standard)
Jacketing Type: 250um or 400um bare fiber, 900um, 1.6mm, 2.0mm, 3.0mm
Fiber Alignment: Aligned to slow axis (standard) or fast axis; mechanical alignment to the stress rods or active alignment to the optical plane

*ST is a trademark of Lucent Technologies

Applications

- Telecommunication Equipment
  - High speed transmission devices
  - Switching
  - Multiplexing
  - EDFAs
  - Modulators
  - Laser Pigtailing
  - Raman amplifiers
- Medical/Industrial Equipment
  - Interferometric sensors
  - Fiber optic gyroscopes

Reference Information

Extinction Ratio: ≥20dB or ≥ 25dB standard, -28dB typical
Insertion Loss: <-0.4dB
Return Loss: Super Polish >40dB, Ultra Polish >50dB, Angle Polish >60dB
Wavelength: 1300nm or 1550nm (standard)

Molex Fiber Optic's family of Polarization Maintaining (PM) cable assemblies is specifically designed to provide high Extinction Ratios (ER) with accurate alignment to the key and low insertion losses. Polarization Maintaining fiber is a type of singlemode fiber that preserves the plane of polarization of light launched into it as the beam propagates through its length. Utilizing proprietary assembly techniques, connectors, and customized testing processes, Molex is able to offer PM fiber assemblies that are precisely aligned to either the mechanical plane (with respect to the stress rods), or to the optical plane (active alignment with respect to the launched optical signal). All assemblies are tested for Insertion Loss, Return Loss and Extinction Ratio to ensure the highest quality assemblies are supplied.

Molex has developed stable processes for termination of PM fiber into industry standard connector types including SC, ST, FC, LC, and MU as well as blind mate backplane connectors including the BSC and BLC connectors. The unique feature of PMF terminations is that the fibers must be accurately aligned with respect to the connector key. The alignment ensures that when two PM fibers are mated in an adapter, or when a PM assembly is connected to a polarized source, the optical polarization planes are in close alignment to minimize optical losses.

Alignment is typically performed to the slow axis, however other orientations are achievable. Molex utilizes the Panda PM fiber construction, available in 1300nm and 1550nm wavelengths as a standard, other fiber types and wavelengths can be supplied. Assemblies are also available with either a standard PC type polish or an 8° angled polish for lower Return Loss requirements.

FIBER ALIGNMENT

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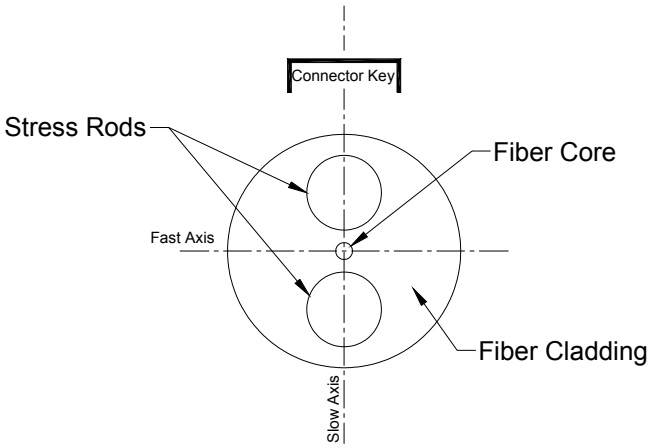
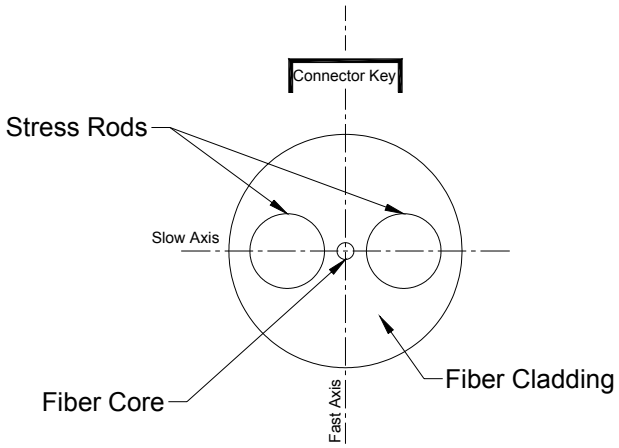


Panda Style
PM Fiber
"Slow Axis"
Alignment



Panda Style
PM Fiber
"Fast Axis"
Alignment

ORDERING INFORMATION

Order Number	Description
86265-XXXX	Contact Inside Sales for Ordering Information

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Visit our Web site at http://www.molex.com/product/pmfiber.html

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