

# DIAMOND

## Fiber Optic Components

### CABLE ASSEMBLIES AND ADAPTERS

Mode Conditioning Patchcords (MCP) are used to minimize Differential Mode Delay (DMD) which can occur when a single-mode laser source is launched into the center of a multimode fiber. The most common use for MCP are long wave Gigabit Ethernet applications (1000BASE-LX) in which a 1310nm single mode transceiver is being deployed into an existing multimode fiber plant.

A MCP minimizes DMD signal degradation by offsetting the launch of the laser source away from the center of the multimode fiber. This is typically accomplished by using an offset splice between a single mode and multimode fiber on the transmit side of the patchcord.

At DIAMOND, we eliminate the need to introduce a splice into the assembly by leveraging our ferrule drilling capabilities to produce a precise offset at the connector end face. The DIAMOND MCP assembly offers the same physical dimensions and reliability of a standard patchcord, by eliminating the splice enclosure thus increasing reliability and making them easier to handle and route.

DIAMOND's MCP are available for almost all connector styles with 2.5 or 1.25mm ferrules and common multi-mode fiber types (50 & 62.5µm). Custom configurations or fiber types, such as attenuated fibers can be accommodated to meet your specific application needs.

DIAMOND's MCP specifications are compliant with IEEE 802.3.

### FEATURES AND BENEFITS

- ▶ DIAMOND's precision offset ferrule  
*No need of fiber splicing and special closure*
- ▶ Minimizes DMD signal degradation  
*Extends the effective operating distance of your network infrastructure*
- ▶ 100% performance testing  
*The performance you expect with every assembly*
- ▶ Same physical dimensions as a standard patchcord assembly  
*Easy handling and routing*
- ▶ Available in E-2000™, SC, F-3000™, and MU connectors styles in both Simplex & Duplex configurations. (Custom configurations available upon request)

### APPLICATIONS

- ▶ Gigabit Ethernet 1000BASE-LX over multi-mode cable

### AVAILABLE AS

- ▶ Terminated connector

### SPECIFICATIONS

|                           | 62.5 µm MM Fiber | 50 µm MM Fiber   | UNITS |
|---------------------------|------------------|------------------|-------|
| Operating wavelength      | 1310             |                  | nm    |
| Coupled Power Ratio (CPR) | 28 < CPR < 40    | 12 < CPR < 20    | dB    |
| Optical Center Offset     | 17 < offset < 23 | 10 < offset < 16 | µm    |
| Operating temperature     | -20/+80*         |                  | C°    |

\* May be further limited by cable specifications

**NOTE** Values in the table are compliant with IEEE 802.3-2002, Section three specifications for offset-launch mode conditioner



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## MCP

(Mode Conditioning Patchcords)

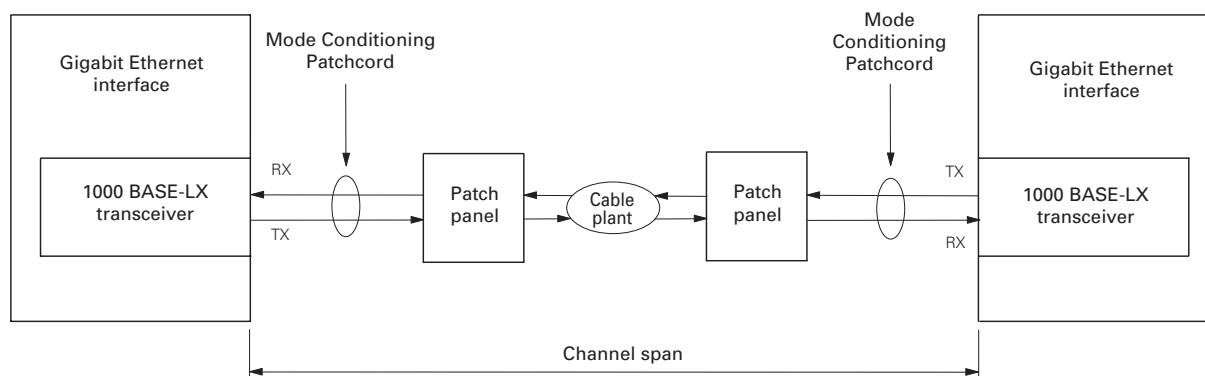
SINGLE MODE PC  
MULTIMODE PC



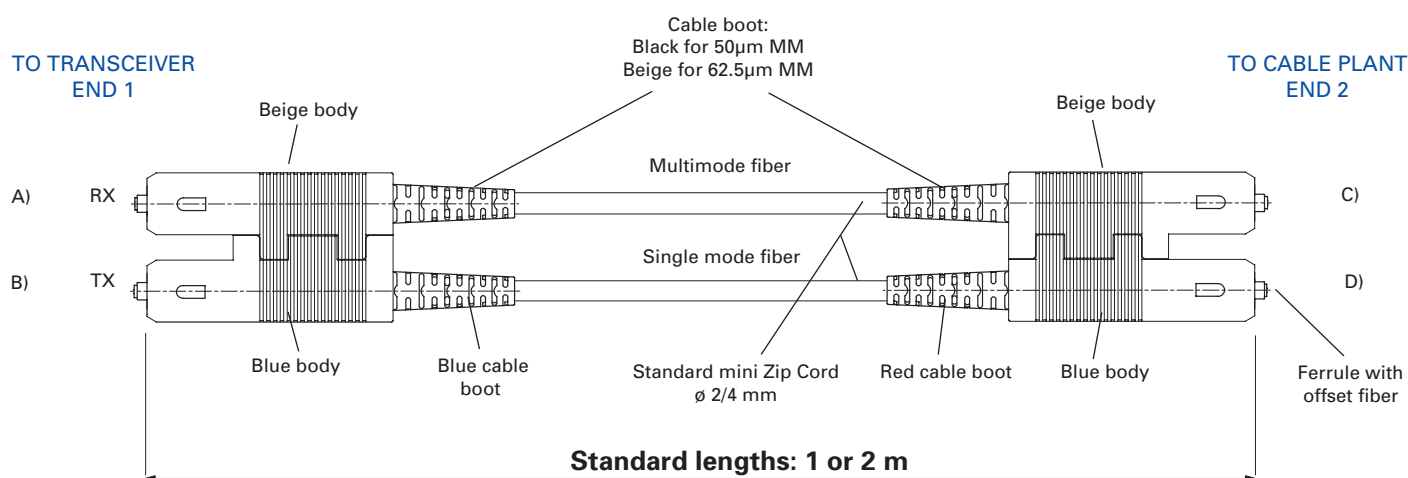
Specifications subject to change  
without notice

BDD 1950281 06\_14

## TYPICAL APPLICATION OF A MODE CONDITIONING PATCHCORD (MCP)



## DIAMOND MCP STANDARD ASSEMBLY



## CONNECTOR TYPES

Standard Duplex MCP connector assembly

Available types:

- MCP SC Duplex**
- MCP E-2000™ Duplex**
- MCP E-2000™ Compact Duplex**
- MCP F-3000™ Duplex**
- MCP MU Duplex**

Simplex MCP connector assembly

Available types:

- MCP SC Simplex**
- MCP E-2000™ Simplex**
- MCP F-3000™ Simplex**
- MCP MU Simplex**

Ferrule material: Zirconia/metal insert

**NOTE** Other configurations upon request. Please contact your local DIAMOND representative to discuss application specific information.

## ORDER INFORMATION

Please contact your nearest local Diamond representative or fill in the contact form available on the [www.diamond-fo.com](http://www.diamond-fo.com) website.