

PASSIVE OPTICAL PRODUCTS



Mode Conditioning Patchcords

Opterna Mode Conditioning Patchcord (MCP) is designed for long wave (LX) multimode applications of Gigabit Ethernet. It is compliant with the IEEE 802.3z application standard. The purpose of Mode Conditioning Patchcord is to condition the launch to ensure specified link lengths and it should be inserted on both ends of a link to interface between a single mode adapter card and a multimode cable plant. They are used to minimize Differential Mode Delay (DMD) which can occur when a singlemode laser source is launched into the center of a multimode fiber.

The most common use for MCP is long wave Gigabit Ethernet applications (1000BASE-LX) in which a 1310nm single mode transceiver is being deployed into an existing multimode fiber plant. Opterna MCP uses the most reliable offset method that launches laser source away from the center of the multimode fiber. This ensures effective bandwidth for the system, closer to that measured by over-filled launch method.

Opterna MCP assembly offers the same reliability of a standard patchcord. They are available in all connector styles with 2.5 or 1.25mm ferrules and common multimode fiber types (50 & 62.5µm).

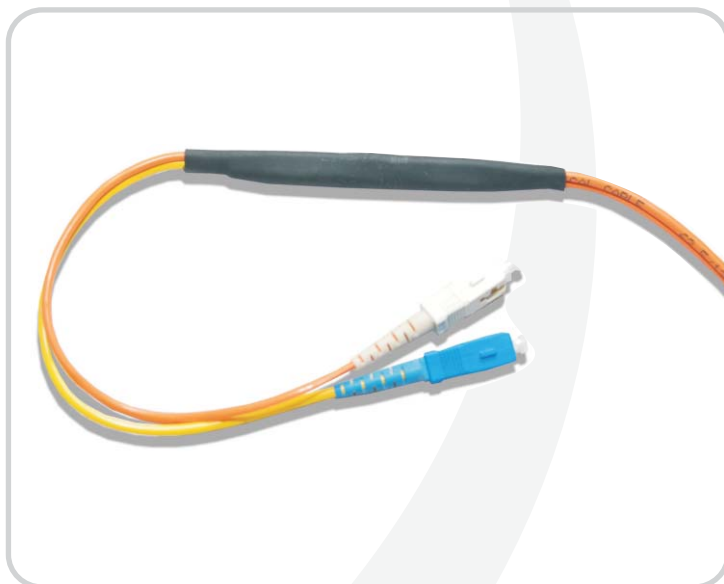
Features & Advantage

- ☒ Designed for 1000BASE-LX Transmitters (GbE)
- ☒ Available in 50/125 and 62.5/125 fiber options
- ☒ Fully compliant with IEEE 802.3z
- ☒ Eliminates differential mode delay
- ☒ Available in all connector options
- ☒ Compact and reliable packaging
- ☒ Uses offset method to ensure reliability and are 100% tested for Coupled Power Ratio (CPR)
- ☒ Individual test sheet with IL & CPR and unique product identification number for traceability
- ☒ RoHS compliant
- ☒ Low Insertion Loss & Back Reflection



Applications

- ☒ Gigabit Ethernet 1000BASE-LX over multimode cable



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Specification

Description		62.5 μ m MMF	50 μ m MMF
Operating wavelength		1310 nm	
Maximum Insertion loss		0.4 dB	
Coupled Power Ratio (CPR)		28<CPR<40 dB	12<CPR<20 dB
Return Loss (RL)	SM channel	>30 dB	
	MM channel	>20 dB	
Offset between SMF and MMF		17<Offset<23 μ m	10<Offset<16 μ m
Connector finish		UPC (RL> 50dB) or APC (RL> 60dB)	
Ferrule Geometry	Radius of Curvature	10 to 25 mm	
	Apex offset	$\leq 50 \mu$ m	
	Fiber height	$-50 \leq Ht \leq 50$ nm	
Maximum Angular Offset		1 Degree	
Connector options		SC, ST, FC, LC, MU, E -2000, MTRJ	
Operating temperature		-40 to + 80°C	

Ordering Information

