

**Purpose:**

To describe the Fiberdyne Labs mode-conditioning patch cord assembly.

**Device Description:**

Fiberdyne Labs manufactures the mode-conditioning patch cords, using high-quality, single-mode/multimode fiber and connectors. These cable assemblies are primarily used in Gigabit Ethernet (1000Base-LX) applications. Their use prevents DMD (Differential Mode Delay), and allows a singlemode signal to travel over Multimode fiber. IEEE Std 802.3 specifies the use and format for mode-conditioning patch cords.

Generally a mode-conditioning cable is required at each end of the fiber run so they are usually ordered in pairs or even numbers.

Fiberdyne uses state-of-the-art equipment in every manufacturing and inspection phase, ensuring each assembly meets our ISO 9001 standards.

**Cable & Connector Specifications:**

Description	Units	Value
Fiber Type	μm	Single-mode (9/125) Multimode (50 or 62.5/125)
Insertion Loss (transmit)	dB	< 0.8
Insertion Loss (receive)	dB	< 0.5 (0.35 typical)
Return Loss	dB	> 50 (55 typical)
Radius of Curvature	mm	7 to 25
Apex Offset	μm	< 50
Fiber Height	nm	< 100
Repeatability	Cycles	> 500
Operating Temperature	°C	-40 to +75
Humidity Range (non-condensing)	%	5 to 95
Standards Compliance		IEEE Std 802.3

**Cable Jacket Colors:**

Yellow on Singlemode Fiber the equipment transmit section  
 Orange on Multimode Fiber sections

**Connector Types:**

LC, SC, ST, FC, MT-RJ