

WaveReady MDC Series Ruggedized Couplers

MDC-01UXW001A, MDC-01AX5001A,
MDC-01AY5001A, 525.725.006



WaveReady MDC Series Ruggedized Couplers provide a plug-and-play 2-to-1 fiber solution for 1310/1550 nm and 1553/1557 nm transmission systems, as shown in Figures 1 and 2.

MDC series couplers are compact passive optical devices that multiplex and demultiplex two channels onto a single fiber. Four models satisfy requirements for medium reach (MDC-01UXW001A), extended reach (MDC-01AX5001A and MDC-01AY5001A), and extended temperature (525.725.006) applications.

MDC series couplers are ideal for remote cabinets or customer premises deployment where power and alarm connections are unavailable. The couplers are completely independent of data rate and formats. The extremely compact form factor ensures that they fit in existing fiber trays.

Key Features

- Supports bidirectional transmission through a single fiber
- Provides low end-to-end insertion loss
- Highly compact form factor fits existing fiber routing hardware

Applications

- Provides simple and robust 2:1
- fiber sparing for point-to-point connections
- Enables fiber reclamation with legacy 1310 nm optical equipment
- Supports hybrid optical transport for both CWDM and DWDM optical systems

Compliance

- GR-1221-CORE

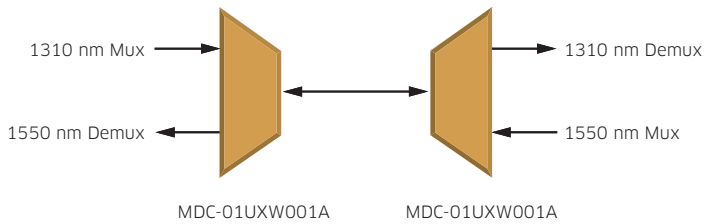


Figure 1. Typical 1310/1550 nm application

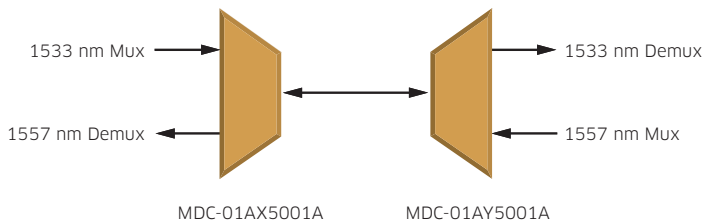


Figure 2. Typical 1533/1557 nm application

Performance Specifications

Parameter	Minimum	Typical	Maximum
Optical Characteristics - MDC-01AX5001A			
1533 nm insertion loss (to COM port)			0.7 dB
1557 nm insertion loss (to COM port)			1.0 dB
1533 nm passband	1529.5 nm	1533 nm	1536.5 nm
1557 nm passband	1553.5 nm	1557 nm	1560.5 nm
Channel isolation - 1533 nm Mux	10 dB		
Channel isolation - 1557 nm Demux	35 dB		
Optical Characteristics - MDC-01AY5001A			
1533 nm insertion loss (to COM port)			1.0 dB
1557 nm insertion loss (to COM port)			0.7 dB
1533 nm passband	1529.5 nm	1533 nm	1536.5 nm
1557 nm passband	1553.5 nm	1557 nm	1560.5 nm
Channel isolation - 1533 nm Demux	35 dB		
Channel isolation - 1557 nm Mux	10 dB		
Optical Characteristics - MDC-01UXW001A & 525.725.006			
1310 nm insertion loss (to COM port)			0.8 dB
1550 nm insertion loss (to COM port)			0.8 dB
1310 nm passband		1260 to 1360 nm	
1550 nm passband		1463.5 to 1617.5 nm	
Channel isolation - 1310 nm Mux or Demux	50 dB		
Channel isolation - 1550 nm Mux or Demux	50 dB		
Optical Characteristics - Common			
Polarization dependent loss			0.1 dB
Optical return loss	45 dB		
Physical Characteristics			
Size (W x H x D)	8.1 x 14.7 x 82.6 mm (0.32 x 0.58 x 3.25 in)		
Optical connectors	SC/PC		
Fiber type (all ports)	3 mm Jacketed 9/125 μ m Single-mode fiber		
Pigtail lengths	Common port: 3.0 m, Wavelength ports: 1.5 m		
Pigtail lengths (525.725.006 only)	Common port: 0.5 m, Wavelength ports: 0.5 m		
Weight	0.23 kg (0.5 lbs)		
Environmental Characteristics			
Operating ambient temperature	-5°C	—	70°C
Operating extended temperature (525.725.006 only)	-40°C	—	85°C
Storage temperature	-40°C	—	85°C
Relative humidity (non-condensing)	5%	—	95%

Product Information

For more information on WaveReady or other products and their availability, please contact your local Lumentum account manager or Lumentum directly at sales@lumentum.com.

Sample: MDC-01AX5001A

Product code	Description
MDC-01UXW001A	1310/1550 nm Universal Ruggedized Coupler
525.725.006	1310/1550 nm Universal Ruggedized Coupler, extended temperature
MDC-01AX5001A	1533 Mux/1557 Demux Ruggedized Coupler
MDC-01AY5001A	1533 Demux/1557 Mux Ruggedized Coupler



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