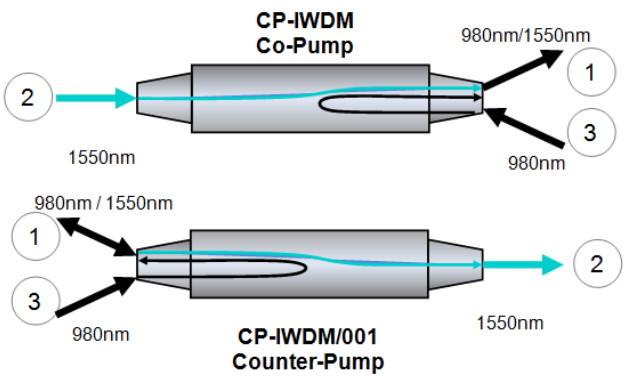
ISOLATING WAVELENGTH DIVISION MULTIPLEXER CP-IWDM

CP-IWDMs are hybrid products combining an integrated isolator and 980nm/1550nm Wavelength Division Multiplexer (WDM).

They are designed to combine high power Multimode (MM) pump light and Single-Mode (SM) signal light into SMM900(105/125) dual clad pump signal fiber. The signal is carried in the single-mode core while pump energy is confined within the large area 105µm multimode guide for delivery to dual cladding doped fibers.



The CP-IWDM is designed specifically as a partner for the cladding pump amplifier fiber CP1500Y. It is ideally suited to systems incorporating Fibercore's other cladding pump component fibers: Multimode Pump Fiber (MM105), a large core pump guide fiber, and Passive Dual Clad Fiber (SMM900), a dual clad fiber with single-mode core for signal propagation and multimode pump guide for high power pump light delivery.

Two variants of the CP-IWDM are available, a co-pump CP-IWDM and counter-pump CP-IWDM/001 to offer customers flexibility in their amplifier or laser design.

FEATURES

Advantages

- Single component for WDM and isolating function
  - Small package size
  - Compatible with CP1500Y
  - Epoxy free optical path
- High stability and reliability
- Ultra low Polarization Dependant Loss (PDL) & Polarization Mode Dispersion (PMD)

Product Variants

- CP-IWDM
  Co-pumping isolating wavelength division multiplexer
- CP-IWDM/001
  Counter-pumping isolating wavelength division multiplexer

Typical Applications:

- High Power Erbium Doped Fiber Amplifiers (EDFAs)
- Fiber Lasers
- WDM systems
- Cable Television (CATV)

SPECIFICATIONS

General Mechanical	Package Size (mm)	5.5 x 54
	Operating Temperature (°C)	0 to +70
	Storage Temperature (°C)	-40 to +85
General Optical	Directivity (dB)	≥40
	Polarization Mode Dispersion (ps)	≥0.25
	Polarization Dependent Loss (dB)	≥0.1
	Isolation @23°C (dB)	≥31
	Signal Wavelength Isolation (dB) (1 to 3)	≥12
S Single-Mode Fiber	Cladding Diameter (µm)	125
	Operating Wavelength (nm)	1550
	Numerical Aperture nominal	0.12
	Max Input @1550nm (mW)	300
P Multimode Input	Cladding Diameter (µm)	125
	Pump Guide Diameter (µm) nominal	105
	Numerical Aperture nominal	0.22
	Max Input @970nm (mW)	5000
C Dual Clad Fiber	Cladding Diameter (µm)	125
	Single-Mode Cut-Off Wavelength (nm)	870 - 970
	Single-Mode NA	0.18 - 0.20
	Pump Guide Diameter (µm) nominal	105
	Pump Guide NA nominal	0.22

Specifications continued on next page.

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SPECIFICATIONS CONTINUED

Reduced Cladding Erbium Doped Fiber For Mini and Micro EDFAs

	I-15(980/80)HC	I-25H(1480/80)
Cut-Off Wavelength (nm)	1200 - 1320	900 - 1075
Numerical Aperture	0.24 - 0.26	≥0.30
Mode Field Diameter (μm)	4.8 - 5.4 @1550nm	3.8 - 4.7 @1550nm
Absorption (dB/m)	27 - 33 @1531nm	23 - 27 @1531nm
Attenuation (dB/km)	≤15	≤30
Proof Test (%)	2 (200 kpsi)	1 (100 kpsi)
Polarization Mode Dispersion (ps/m)	≤0.005	
Cladding Diameter (μm)	80 ± 1	
Core Cladding Concentricity (μm)	0.3	≤0.5
Coating Diameter (μm)	170 ± 5	160 ± 5
Coating Type	Dual Layer Acrylate	
Operating Temperature (°C)	-55 to +85	

RELATED PRODUCTS

- Dual Clad Erbium/Ytterbium Doped Fiber
- Large Core Fiber
- All Silica Double Clad Fiber

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