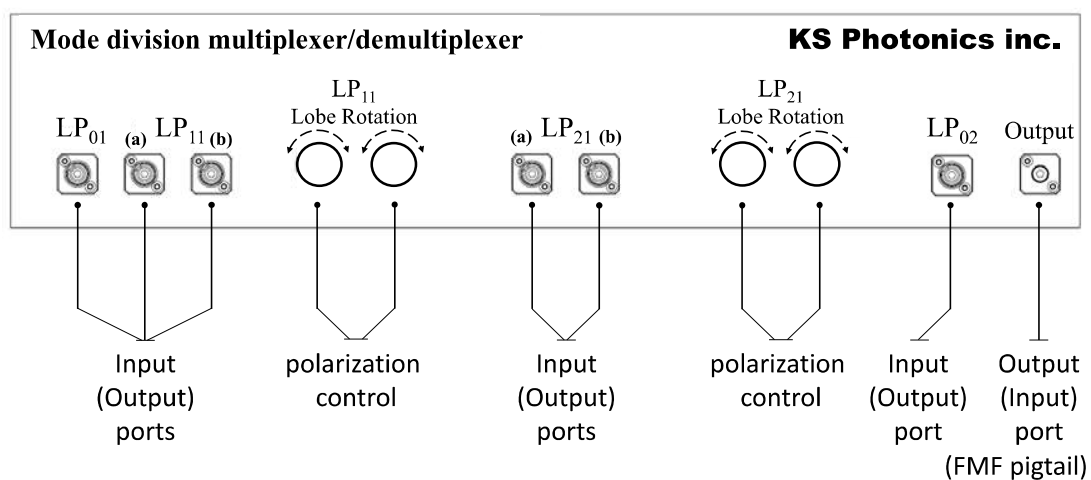


General description

Mode Division Multiplexer/Demultiplexer (MDDM) converts from LP₀₁ mode into desired higher order modes, and vice versa.

Configuration

6-mode division multiplexer/demultiplexer



Input port: Fiber connector adaptor. (Customer specified FC/PC, FC/APC, etc.)

Output port: Few-mode fiber pigtail

Dimension: 90 mm (H) X 20 mm (W) X 250 mm (D)

Operation

Mode division multiplexer operation:

- Connect the light source to the desired input port.
- Incident light is converted to the specified higher order modes and transmitted to the FMF output pigtail.
- Coupling efficiency is defined as

$$\text{coupling efficiency (\%)} = 100 \times \frac{P_{\text{target mode}}}{P_{\text{input}}}$$

- Extinction ratio is defined as

$$\text{Extinction ratio (dB)} = 10 \times \log \left(\frac{P_{\text{target mode}}}{P_{\text{other}}} \right)$$

- Coupling ratio and extinction ratio can vary at different temperature.

Mode division demultiplexer operation:

- Connect the FMF to the 'Output' FMF pigtail.
- For LP_{11a}, LP_{11b}, LP_{21a} and LP_{21b} mode output, adjust the 'Lobe Rotation knobs' to maximize the output power.
- The process is reversed.

Specifications

	LP ₀₁	LP _{11a}	LP _{11b}	LP _{21a}	LP _{21b}	LP ₀₂
Coupling Efficiency (%)	87-94	61-76	76-86	20-61	57-66	57-82
Extinction Ratio (dB)	14-19	20-37	19-38	7-12	5-10	5-11

Wavelength : 1515-1590 nm, Temperature : 25 °C

*Due to the manual fabrications, coupling efficiency and extinction ratio can vary for individual units.

Product code

MDDM - ① - ② - ③ - ④

① Wavelength	② Desire mode	③ Input port connectors	④ Pigtail length
15: 1500 nm band	111: LP ₀₁ , LP ₁₁	NO: none	B: Basic (2 m of pigtail)
CU: customized	211: LP ₀₁ , LP ₂₁	FA: FC/APC	C: Customized
	021: LP ₀₁ , LP ₀₂	FP: FC/PC	
	112: LP ₀₁ , LP _{11a} , LP _{11b}	FU: FC/UPC	
	212: LP ₀₁ , LP _{21a} , LP _{21b}	FS: FC/SC	
	004: LP ₀₁ , LP ₁₁ , LP ₂₁ , LP ₀₂		
	006: LP ₀₁ , LP _{11a} , LP _{11b} , LP _{21a} , LP _{21b} , LP ₀₂		
	CU: customized		

Warranty

KS Photonics provides 1-year warranty. However, any damages caused by customer's fault will not be covered by the warranty.

Note

Do not disassemble the device. You will not have our warranty policy if anti-disassembling seal is damaged.