Mode Multiplexer / Demultiplexer

Features

- **Mode multiplexer/demultiplexer**
- **Full mode control**
- **Flexible options**
- **High quality mode excitation**
- **Low insertion loss**

Product Overview

The mode mux/demux is built around Phoenix Photonics mode selective all fiber lantern and PC controlled all-fibre precision polarization controllers. The Higher order modes of the FMF (LP_{11} and LP_{21}) rotate during propagation. Controlling the state of polarization of the input allows rotation of the modes for optimum demultiplexeing at the receiver.
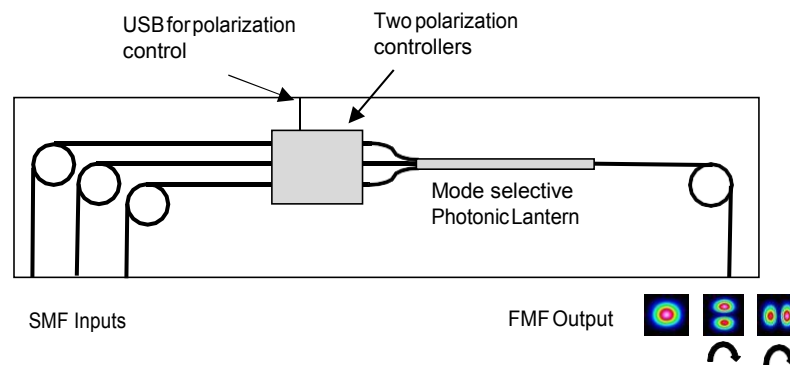
Product Details

The instrument is available in 3- and 6-mode versions. There are three options available:

- Mode multiplexer consisting photonic lantern and polarization controllers.
- Mode multiplexer and demultiplexer consisting two photonic lanterns one to multiplex and one to demultiplex with polarization control on one (multiplexer) only.
- Full two-way mode multiplexer and demultiplexer consisting two photonic lanterns and polarization control on both lanterns.

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Technical Information

Parameter		Specification
Input fiber		Corning SMF28
Connectors		Optional – please specify
Output fiber[2]		OFS two or four mode graded index
Wavelength range	nm	1450 - 1640

Parameter		Specification			
		With polarization controllers		*Without polarization controllers*	
Input ports		3	6	3	6
Mode ER[1]	dB	>15	>7	>15	>7
Insertion loss[1]	dB	<3.5	<5	<2.5	<4

[1] *Loss and ER will vary between input fibres, in general the high order modes have higher IL and poorer ER*

[2] *Alternative fibre types can be used on request*

Options:

1. One mode multiplexer/demultiplexer with 2 polarization controllers (LP_{11}) for 3-mode version or 4 polarization controllers (LP_{11}, LP_{21}) for 6-mode version.
2. Two mode multiplexers/demultiplexers one with polarization controllers as in option 1 and the other without polarization controllers.
3. Two mode multiplexers/demultiplexers both with polarization controllers as in option 1.

Order code:

P	M	M	D	-	☐	-	☐☐	-	1	5	-	☐	-	☐	-	☐

No modes:
3
6

FMF:
GI – Graded Index
SI – Step index

Wavelength:
15 – 1530nm
14 – 1480 nm
13 – 1300 nm

SMF Connectors:
0 – none
1 – FC/SPC
2 – FC/APC
* Others available

FMF Connectors:
0 – none
1 – FC/SPC
2 – FC/APC
* Others available

Option
1 – Single mux. With PCs
2 – One mux with PCs + demux without PCs
3 – Both mux and demux with PCs

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