

## Mode Multiplexer/Demultiplexer

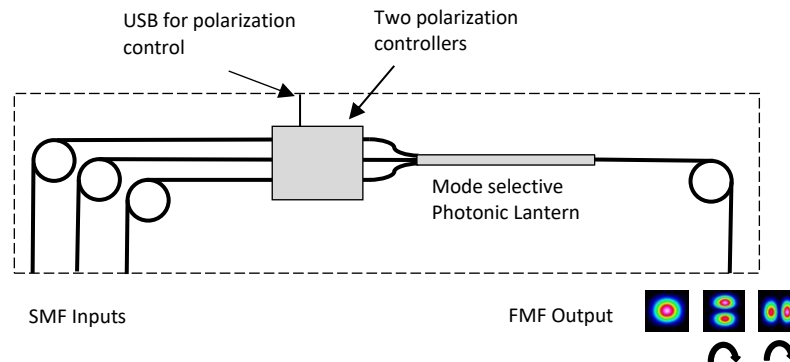


### Features

- 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 demultiplexing 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.

For more information please contact Phoenix sales:  
[sales@phoenixphotonics.com](mailto:sales@phoenixphotonics.com) or visit us at  
[www.phoenixphotonics.com](http://www.phoenixphotonics.com)

# Mode Multiplexer/Demultiplexer

## Technical Information

| Parameter                 |    | Specification                     |
|---------------------------|----|-----------------------------------|
| Input fiber               |    | Corning SMF28                     |
| Connectors                |    | Optional – please specify         |
| Output fiber <sup>2</sup> |    | 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 <sup>1</sup>        | dB | >15                           | >7 | >15                              | >7 |
| Insertion loss <sup>1</sup> | dB | <3.5                          | <5 | <2.5                             | <4 |

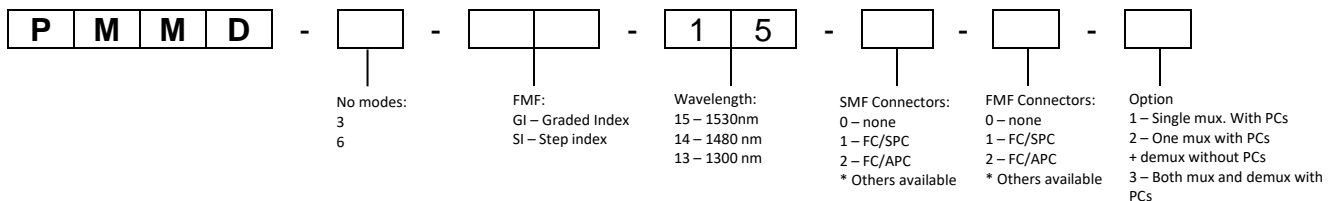
<sup>1</sup> Loss and ER will vary between input fibres, in general the high order modes have higher IL and poorer ER

<sup>2</sup> Alternative fibre types can be used on request

## Options:

1. One mode multiplexer/demultiplexer with 2 polarization controllers (LP<sub>11</sub>) for 3-mode version or 4 polarization controllers (LP<sub>11</sub>, LP<sub>21</sub>) 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:



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