



PASSIVE DEVICES

Employing an Integrated Mode Multiplexer on Silicon-on-Insulator for Few-mode Fiber Transmission

H. Chen, R. van Uden, C. Okonkwo, B. Snyder, O. Raz, P. O'Brien, H van den Boom, H de Waardt, T Koonen

ECOC2013, paper Tu.1.B.4

Scalable Multi-segment Phase Mask for Spatial Power Splitting and Mode Division Demultiplexing

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ECOC2013, paper P.2.13

Single Multi-mode Mask for Multi-channel Mode Division Demultiplexing

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OFC2013, paper OTh1B.4

Packaged Mode Multiplexer based on Silicon Photonics

H. Chen, T. Koonen, B. Snyder, P. O'Brien, X. Chen, G.T. Reed, H. van den Boom and O. Raz,

Asia Communications and Photonics Conference (ACP) 2012, paper ATh2B.4

LP01 and LP11 mode division multiplexing link with mode crossbar switch

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Electronics Letters, 48 (19), 1222 – 1223, 2012

Silicon Photonic Integrated Mode Multiplexer and Demultiplexer

A.M.J. Koonen, H. Chen, H.P.A. van den Boom, and O. Raz

IEEE Photonics Technology Letters, 24 (21), 1961-1964, 2012

A. Integration strategies for mode multiplexing

M.J. Koonen, H. Chen



Presentation in Workshop at ECOC2013 “Integration of Optical Devices for SDM Transmission”, London, Sep. 22, 2013

Dual mode fused optical fiber couplers suitable for mode division multiplexed transmission

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Integrated Mode Group Division Multiplexer and Demultiplexer based on 2 Dimensional Vertical Grating Couplers

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ECOC’12, paper Th.1.B.2

Integrated mode group multiplexer and demultiplexer are proposed for Mode Group Division Multiplexing (MGDM). The architecture with optical MIMO demultiplexing and mode-selective spatial filtering is introduced. Simulations show this architecture can successfully track PDMDQPSK MGDM signals with mode group crosstalk.

Silicon Photonic Integrated Mode Multiplexer

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IEEE Summer Topical Meeting 2012, Paper WC4.2. (WP4)

Abstract: A novel passive integrated optical circuit for mode-multiplexing 6 channels in two-moded fiber has been designed and tested. It can outperform present bulk-optics solutions by its compactness, high coupling efficiency and excellent crosstalk suppression.

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6280816>

All Fiber Components for Multimode SDM Systems

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SUM 2012 IEEE Photonics Society Summer Topical Meeting on Space Division Multiplexing for Optical Systems and Networks, paper WC1.1 (Invited)



Fiber based mode converters and mode splitters are important elements in the FMF mux./demux. Long Period Gratings (LPGs) have been investigated and results presented together with a potential technique for real time mode monitoring during manufacture.

<http://dx.doi.org/10.1109/PHOSST.2012.6280802>