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Accession number:12687957
Title:All optical mode-multiplexing using holography and multimode fiber couplers
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Source title:Journal of Lightwave Technology
Abbreviated source title:J. Lightwave Technol. (USA)
Volume:30
Issue:12
Publication date:15 June 2012
Pages:1978-84
Language:English
ISSN:0733-8724
CODEN:JLTEDG
Document type:Journal article (JA)
Publisher:IEEE
Country of publication:USA
Material Identity Number:BU40-2012-013
Abstract:A spatial light modulator at the transmitter is used in conjunction with a standard multimode coupler at the receiver to modally multiplex 2 × 12.5 Gb/s nonreturn-to-zero channels using direct detection over 2 km of 940 MHz OM2 fiber without electronic processing. The wavelength dependence of this technique over a 4.5 THz band is also investigated.
Number of references:16
Inspec controlled terms:holography - multiplexing - optical fibre communication - optical fibre couplers - optical transmitters - spatial light modulators
Uncontrolled terms:all optical mode multiplexing - holography - multimode fiber coupler - spatial light modulator - optical transmitter - nonreturn-to-zero channels - bit rate 12.5 Gbit/s - distance 2 km
Inspec classification codes:A4280S Optical communication devices - A4240M Applications of holography - A4281M Fibre couplers and connectors - A4280K Optical beam modulators - B6260M Multiplexing and switching in optical communication - B6260C Optical communication equipment - B4350 Holography - B4150 Electro-optical devices - B4125 Fibre optics
Numerical data indexing:bit rate 1.25E+10 bit/s;distance 2.0E+03 m
Treatment:Practical (PRA); Experimental (EXP)
Discipline:Physics (A); Electrical/Electronic engineering (B)
DOI:10.1109/JLT.2012.2191586
Database:Inspec
IPC Code:G02B6/24; G02F2/00; G03H; H04B10/02; H04B10/04; H04B10/12; H04J