

Implementation of microoptical branching circuit array by the use of planar microlenses

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Abstrak

ABSTRAK

A micro optical branching circuit [MOBC] array by the use of planar micro lens array and a cubical beam splitter was proposed in a previous study. To study further the performance of the elements of the branching array, the constructed circuit has been implemented by modulating three optical signals on different wave lengths of carrier waves transmitted by LD optical sources. The measurement on coupling efficiency gives a value of 36,4 % which is uniform for the three channels of the branching circuit. The branching circuit also shows a negligible cross-talk on the branched signals. It is summarized that the proposed MOBC implemented by modulated signals can be used in practice. The insertion loss could be reduced by appropriate positioning of each elements to achieve optimum focusing and collimating beams.