

EXTERNALLY MODULATED LASER SOURCE FOR ARRAY ILLUMINATION

Abstract

An arrangement for generating an array (one- or two-dimensional) of
5 optical beams, or spots, is disclosed. The array is particularly useful in conjunction
with an array of optically sensitive devices utilized in applications such as optical
computing or photonic switching. The array generator includes an optical gain
medium (12) and a partially reflecting mirror (20) disposed to form an externally
modulated laser arrangement. A diffraction grating (22), such as a Dammann
10 grating, is disposed in the signal path to form the required array of optical beams. A
wavelength control element (40), including transparent and non-reflecting regions,
may be disposed beyond the output of the diffraction grating to provide optical
feedback for wavelength stabilization of the gain medium.

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