

ABSTRACT

A semiconductor laser source integrated on a single substrate comprises a plurality of light emitters in the form of a laser diode array, and an arrayed waveguide grating (AWG) portion, wherein a plurality of input channel waveguides are connected to a first slab waveguide which is in turn connected to a second slab waveguide through internal channel waveguides. The second slab waveguide has at least one output channel waveguide. The light emitted from each light emitter of the said laser diode array propagates in the input channel waveguide which is of the wider band-gap than that of the gain medium of the said emitter. Bragg grating is provided on each of the input channel waveguide of the AWG to lock the light emitted from the emitter. The invention relates particularly to pumping light source for high power applications such as optical amplification in communication systems.

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(FIG. 4)

