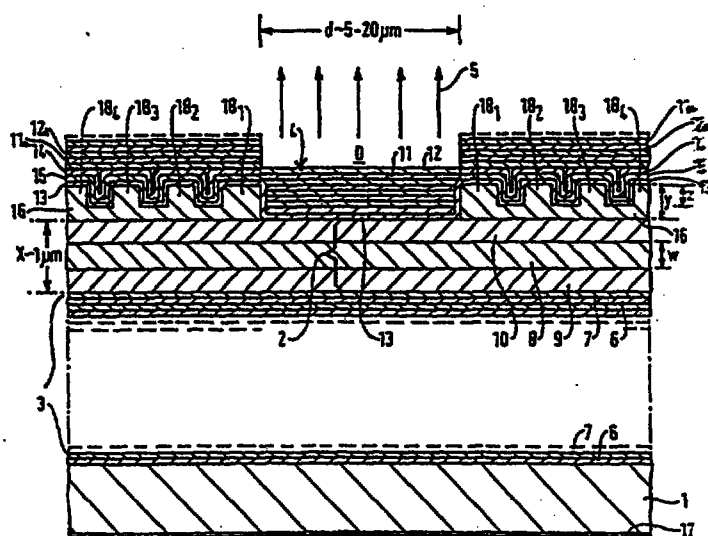




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(54) Title: OPTICALLY RESONANT STRUCTURE



(57) Abstract

A vertical cavity surface emitting laser comprises a resonant cavity (2) formed between a distributed Bragg reflector formed of semiconductor material (3) and an overlying distributed Bragg reflector (4) formed of dielectric material. The resonant cavity contains a layer (8) of laser active material sandwiched between spacer layers (9, 10), and a blocking layer (15, 19) which confines an energising electric current to flow through the cavity between a metallic contact layer (13) on the underside of the Bragg reflector (4) and a contact (17). In order to support a preselected resonant mode, a series of concentric rings (18) is formed in the blocking layer (16, 19), surrounding the resonant cavity (2) so as to provide a Bragg structure which reflects light from the cavity with a phase characteristic that supports the preselected transverse resonant mode.