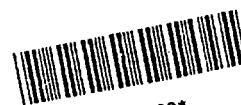


A B S T R A C T

Provided is an optical device (1) including a first waveguide layer (41,42) in which multiple-beam interference occurs, a second waveguide layer (10) which includes a back surface facing the first waveguide layer (41,42) and a front surface as a light output surface, and a diffraction grating (30) which is arranged on a back side of the second waveguide layer (10) and faces the first waveguide layer (41,42), wherein a grating constant of the diffraction grating (30) is defined such that a first-order diffracted light emerges from the second waveguide layer (10), the first-order diffracted light being generated when a light component having a highest intensity of light which propagates in an in-plane direction while causing multiple reflection in the first waveguide layer (41,42) enters the diffraction grating (30).



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