Title (en)

SYSTEM FOR REDUCING THE COHERENCE OF LASER RADIATION

Title (de)

SYSTEM ZUR REDUZIERUNG DER KOHÄRENZ EINER LASERSTRAHLUNG

Title (fr)

SYSTEME PERMETTANT DE REDUIRE LA COHERENCE D'UN RAYONNEMENT LASER

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2005083511A2] The invention relates to a system for reducing the coherence of a wave front-emitting laser radiation (10b), especially for a projection lens for use in semiconductor lithography, wherein a first partial beam (10a) of a laser beam (10) incident on a surface (11) of a resonator body (9) is partially reflected. A second partial beam (10b) penetrates the resonator body (9) and emerges from the resonator body (9) at least approximately in the area of entry after a plurality of total internal reflections. The two partial beams (10a and 10b) are then passed on jointly to an illumination plane. The resonator body (9) is adapted, in addition to splitting the laser beam into partial beams (10a, 10b), to modulate the wave fronts of at least one partial beam (10b) during a laser pulse. The partial beams (10a, 10b) reflected on the resonator body (9) and penetrating the resonator body are superimposed downstream of the resonator body (9). The resonator body (9, 9') is provided with a phase plate (12) having different local phase distribution.

IPC 8 full level

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CPC (source: EP KR US)

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