

Title (en)

LITHOGRAPHY DEVICE WHICH USES A SOURCE OF RADIATION IN THE EXTREME ULTRAVIOLET RANGE AND MULTI-LAYERED MIRRORS WITH A BROAD SPECTRAL BAND IN THIS RANGE

Title (de)

LITHOGRAPHISCHES VERFAHREN MIT EUV-STRAHLENQUELLE UND BREITBAND-MEHRSCHEIPTSPIEGELN

Title (fr)

DISPOSITIF DE LITHOGRAPHIE UTILISANT UNE SOURCE DE RAYONNEMENT DANS LE DOMAINE EXTREME ULTRAVIOLET ET DES MIROIRS MULTICOUCHES A LARGE BANDE SPECTRALE DANS CE DOMAINE

Publication

EP 1240551 A2 20020918 (FR)

Application

EP 00988892 A 20001207

Priority

- FR 0003429 W 20001207
- FR 9915470 A 19991208

Abstract (en)

[origin: WO0142855A2] The invention relates to a lithography device which uses a source of radiation in the extreme ultraviolet range, and to multi-layered mirrors with a broad spectral band in this range. Each mirror (24, 26, 29) comprises a stack of layers consisting of a first material and layers consisting of a second material alternating with said first layers. The atomic number of the first material is greater than of the second material. The thickness of pairs of adjacent layers is a monotonic function of their depth in the stack. The source (22) comprises at least one target (28) which emits the radiation by interacting with a laser beam that is focused on one of its surfaces. The device uses part (36) of the radiation emitted from the other surface. The invention can be used for producing integrated circuits with a high degree of integration.

IPC 1-7

G03F 1/14; G03F 7/20; H05G 2/00; G21K 1/06; G02B 5/08

IPC 8 full level

G02B 5/26 (2006.01); **G02B 5/28** (2006.01); **G03F 1/24** (2012.01); **G03F 7/20** (2006.01); **G21K 5/04** (2006.01); **H01L 21/027** (2006.01);
H05G 2/00 (2006.01)

CPC (source: EP KR US)

B82Y 10/00 (2013.01 - EP US); **B82Y 40/00** (2013.01 - EP US); **G03F 1/24** (2013.01 - EP US); **G03F 7/20** (2013.01 - KR);
G03F 7/70033 (2013.01 - EP US); **G03F 7/702** (2013.01 - EP US); **G03F 7/70233** (2013.01 - EP US); **G03F 7/70575** (2013.01 - EP US);
H05G 2/001 (2013.01 - EP US)

Citation (search report)

See references of WO 0142855A2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0142855 A2 20010614; WO 0142855 A3 20011227; AU 2524201 A 20010618; CN 1222829 C 20051012; CN 1433531 A 20030730;
EP 1240551 A2 20020918; FR 2802311 A1 20010615; FR 2802311 B1 20020118; JP 2003516643 A 20030513; KR 100695480 B1 20070314;
KR 20030009329 A 20030129; RU 2002118110 A 20040320; RU 2249840 C2 20050410; TW 539911 B 20030701; US 2002171817 A1 20021121;
US 6724465 B2 20040420

DOCDB simple family (application)

FR 0003429 W 20001207; AU 2524201 A 20001207; CN 00818880 A 20001207; EP 00988892 A 20001207; FR 9915470 A 19991208;
JP 2001544085 A 20001207; KR 20027006996 A 20001207; RU 2002118110 A 20001207; TW 89125049 A 20001124; US 13051902 A 20020520