

(51) International Patent Classification:
H01S 3/10 (2006.01)(21) International Application Number:
PCT/US2011/031116(22) International Filing Date:
4 April 2011 (04.04.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/755,772 7 April 2010 (07.04.2010) US(71) Applicant (for all designated States except US):
CYMER, INC. [US/US]; (a Nevada Corporation), 17075
Thornmint Court, San Diego, CA 92127-2413 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **O'BRIEN, Kevin, M.** [US/US]; 9267 Lethbridge Way, San Diego, CA 92129 (US). **TRINTCHOUK, Fedor, B.** [RU/US]; 16132 Turtleback Road, San Diego, CA 92127 (US).(74) Agent: **BROOKS, Jeffrey, J.**; Cymer, Inc., Legal Dept., MS/4-2D, 17075 Thornmint Court, San Diego, CA 92127-2413 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: METHOD AND APPARATUS FOR CONTROLLING LIGHT BANDWIDTH

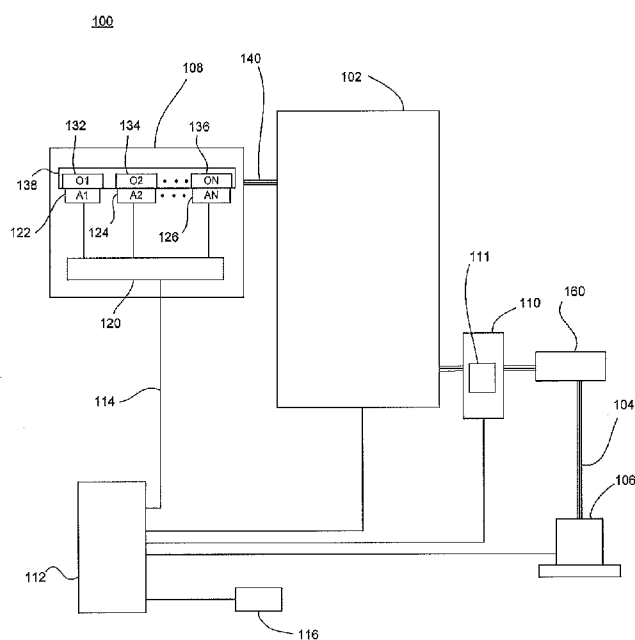


Fig. 1

(57) Abstract: An apparatus includes a light source that produces a light beam, a bandwidth measurement system, a plurality of bandwidth actuation systems, and a control system. Each bandwidth actuation system includes one or more bandwidth actuators and each bandwidth actuation system is connected to an optical feature that is optically coupled to the produced light beam and operable to modify the connected optical feature to select a bandwidth within a bandwidth range of the produced light beam. The control system is connected to the bandwidth measurement system and to the plurality of bandwidth actuation systems. The control system is configured to switch between activating and operating a first bandwidth actuation system and activating and operating a second bandwidth actuation system independently and separately of activating and operating the first bandwidth actuation system based on a provided bandwidth measurement and a selected target bandwidth.