

ABSTRACT

ILLUMINATION OPTICAL SYSTEM, EXPOSURE APPARATUS, AND DEVICE MANUFACTURING METHOD

An illumination optical system which illuminates an irradiated plane with illumination light provided from a light source (1) includes a spatial light modulator (S1) which is arranged in an optical path of the illumination optical system and cooperates with part of the illumination optical system to form a desired light intensity distribution at a pupil position of the illumination optical system or a position optically conjugated with the pupil position. A detection unit (30-33) detects the light intensity distribution of the illumination light at a position in an optical path extending from the light source to the spatial light modulator. The detection unit includes a light receiving surface (32a, 33a) which receives some of the illumination light. A control unit (20) controls the spatial light modulator based on the light intensity distribution detected by the detection unit.

Fig. 1