

EXPOSURE APPARATUS AND EXPOSURE METHOD
CAPABLE OF CONTROLLING ILLUMINATION DISTRIBUTION

ABSTRACT

An exposure apparatus radiates an exposure light beam from an exposure light source onto a reticle via an illumination optical system including a first fly's eye lens, a second fly's eye lens, a lens system, a blind, and a condenser lens system, and it projects an image of a pattern on the reticle onto a wafer via a projection optical system. An illumination characteristic is measured by using an evaluation mark plate on a reticle stage and a spatial image-measuring system provided for a wafer stage. The states of the second fly's eye lens and the lens system are adjusted by the aid of a driving unit on the basis of the measured value. A concentration filter plate, which is formed with a pattern of a predetermined transmittance distribution, is rotatably arranged in the vicinity of a conjugate plane with respect to an image plane between the second lens system and the blind. The angle of rotation of the concentration filter plate 51 is controlled so that the uneven illuminance is corrected. The illumination optical system can be adjusted correctly for a short period of time. It is possible to improve the uniformity of the exposure amount distribution.

(Figure 1)



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