

ABSTRACT

Process for Electron Beam Lithography, and Electron-Optical Lithography System

The present invention relates to a method for electron beam lithography which consists of a combination of electron beam projection lithography and electron beam writing. In a first step, the exposure of the substrate takes place by imaging of a mask (8). In a second step, structures not present on the mask are written on the substrate by electron beam writing. The invention furthermore relates to an electron-optical lithography system which can be used both for projection lithography and for electron beam writing. The system has a projective system by means of which a mask plane (8) can be imaged on a reduced scale in a substrate plane (16). The system furthermore has an electron-optical illumination system by means of which selectively either a large field in the mask plane (8) can be illuminated or the electron beam can be focused in the mask plane (8) or can be shaped to a desired beam profile.

Figure 1