

ABSTRACT

PHOTOMASK PRODUCING METHOD AND APPARATUS
AND DEVICE MANUFACTURING METHOD

A photomask producing method according to the present invention segments a parent pattern 36 which is an α -magnification of an original pattern 27 which is a β -magnification of a circuit pattern 35 into α lengthwise and breadthwise, thereby forming parent patterns p1 to PN on data. The parent patterns p1 to PN are written on a substrate at equal magnification by using an electron beam lithography system, thereby producing master reticles R1 to RN. Reduced images of the parent patterns of the master reticles R1-RN are transferred on a substrate while performing screen linking, thereby producing working reticle 34. This photomask producing method can form an original pattern with a high precision and in a short period of time.