

[Document] ABSTRACT

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[PROBLEM TO BE SOLVED]

Provided is a mask blank that can prevent reduction of an etching rate of an entire hard mask film while enhancing pattern resolution, in-plane CD uniformity, and CD linearity.

[MEANS FOR SOLVING THE PROBLEM]

The mask blank has a structure where a thin film for pattern formation and a hard mask film are stacked in this order on a transparent substrate, featured in that the thin film is formed of a material containing chromium, the hard mask film includes a stacked structure of a lower layer and an upper layer, the lower layer is formed of a material containing silicon and oxygen, the upper layer is formed of a material containing tantalum and oxygen with an oxygen content of 30atom% or more, and the ratio of a thickness of the upper layer relative to a total thickness of the hard mask film is 0.7 or less.

[SELECTED DRAWING] FIG. 1