PHOTOMASK BLANK, PROCESS FOR PRODUCTION OF PHOTOMASK, AND CHROMIUM-CONTAINING MATERIAL FILM

ABSTRACT

In the chromium-containing material film of the present invention, an element is added thereto and is capable of bringing a mixture of the element and the chromium into a liquid phase at a temperature of 400°C or lower. The use of such a chromium-containing material film as an optical film (e.g., a light-shielding film, an etching mask film, or an etching stopper film) of a photo mask blank can achieve an improvement in chlorine-dry etching while retaining the same optical characteristics and the like as those of the conventional chromium-containing material film, thereby increasing the patterning precision.

Fig. 1