

Photomask Blank, and Preparation Method Thereof

ABSTRACT

5 A photomask blank including a transparent substrate, and at least one film (A) containing chromium and free of silicon and at least one film (B) containing silicon, and oxygen or oxygen and nitrogen, and free of a transition metal that are contacted to each other. In the blank, when an intensity of secondary ions is measured along a thickness direction of the films by a time-of-flight secondary ion mass spectrometry (TOF-SIMS), an
10 intensity of secondary ions derived from Cr_2O_5 is lower than an intensity of secondary ions derived from Cr, at a position located at the interface or its vicinity of the film (A) and film (B) and having a maximum intensity of secondary ions derived from SiCrO_5 .

[FIG. 2]