

PHOTOMASK BLANK, AND MANUFACTURING METHOD THEREOF

ABSTRACT

5 In a photomask blank including a transparent substrate and a first inorganic film
containing either or both of a transition metal and silicon, and optional a second inorganic
film containing either or both of a transition metal and silicon, when an intensity of
secondary ions is measured in the thickness direction of the transparent substrate and the
inorganic films by TOF-SIMS with using a primary ion source of Bi and a sputtering ion
10 source of Cs, an intensity of secondary ions containing carbon detected at the interface of
the transparent substrate and the inorganic film or the inorganic films is higher than both
intensities of the secondary ions containing carbon detected, respectively, at the sides
remote from the interface.

15 [Figure 1A]