ABSTRACT

Disclosed is a blankmask for EUV lithography. The blankmask has a reflective flim formed on a substrate, a capping film containing ruthenium (Ru), an etch stop film containing tantalum (Ta) and antimony (Sb), and a phase shift film containing ruthenium (Ru). The etch stop film has a composition ratio of tantalum (Ta) and antimony (Sb) ranging from 3:7 to 7:3. The stacked structure of the phase shift film containing ruthenium (Ru) and the etch stop film containing tantalum (Ta) and antimony (Sb) results in achieving a high extinction coefficient (k) and a low refractive index (n).

FIG. 3