

ABSTRACT

A reflective mask blank having a conductive film with little transmittance variation in light transmittance at 632 nm and 1064 nm, and excellent flatness is provided.

A reflective mask blank for EUV lithography comprising: a substrate; a conductive
5 film provided on one side of the substrate; a multilayer reflective film to reflect EUV light, provided on the other side of the substrate; and an absorber film provided on a side of the multilayer reflective film opposite to the substrate, wherein the conductive film comprises at least one element selected from the group consisting of tantalum and chromium, wherein the total content of nitrogen and boron in the conductive film is more
10 than 33 atomic% relative to all the atoms in the conductive film, wherein the conductive film has a thickness of from 20 to 150 nm, wherein the conductive film is thicker at the center of the substrate than at a peripheral portion of the substrate, and wherein the maximum in-plane thickness variation of the conductive film is from 0.30 to 1.00 nm.