ABSTRACT

REFLECTIVE MASK BLANK FOR EUV LITHOGRAPHY AND SUBSTRATE WITH CONDUCTIVE FILM

The purpose of the present invention is to provide, in order to enable defect inspection after the formation of a conductive film, a conductive film having low transmittance in a wavelength range including Ar laser inspection light (a wavelength of 488 nm) and having high transmittance in a wavelength range including Nd:YAG laser (a wavelength of 1064 nm) and He:Ne laser (a wavelength of 632 nm) that are used to improve substrate deformation caused by internal stress of a multilayer reflection film and an absorption film. Provided is a reflective mask blank for EUV lithography having a conductive film (12) on the back surface side of a substrate (11), the reflective mask blank being configured such that the refractive index and extinction coefficient at wavelengths of 1000-1100 nm of the conductive film (12), the refractive index and extinction coefficient at wavelengths of 600-700 nm of the conductive film (12), the refractive index and extinction coefficient at wavelengths of 400-500 nm of the conductive film (12), and the film thickness t of the conductive film (12) each fall within a specific range.

Figure 1