

ABSTRACT

Provided are a phase shift mask blank that suppresses the formation of haze on a phase shift film surface and reduces film peeling during cleaning or a level difference in a cross-section of a modified portion during modification etching to improve transfer performance, a phase shift mask, and a method for manufacturing a phase shift mask. A phase shift mask blank (10) according to an embodiment of the present invention is a phase shift mask blank used for producing a phase shift mask to which exposure light having a wavelength of 200 nm or less is applied, the phase shift mask blank (10) including a transparent substrate (11) and a phase shift film (12), in which the phase shift film (12) includes a phase difference and transmittance adjustment layer (13), a protective layer against gas permeation (15), and a compositionally graded layer (14), and in the compositionally graded layer (14), a content of a component configuring the phase difference and transmittance adjustment layer (13) decreases from the substrate side (11) toward the protective layer against gas permeation (15) side, and a content of a component configuring the protective layer against gas permeation (15) increases from the substrate (11) side toward the protective layer against gas permeation (15) side.

FIG. 1