

ABSTRACT

5 Provided is a phase shift-type photomask blank that includes a transparent substrate,
and a phase shift film thereon, the phase shift film consisting of a single layer or multiple
layers, the single layer or multiple layers including at least one layer selected from the
group consisting of a layer composed of transition metal, silicon, nitrogen and oxygen, and a
layer composed of silicon, nitrogen and oxygen, the phase shift film having a phase shift of
10 150 to 250°, and a transmittance of 60 to 80%, with respect to light having a wavelength of
up to 200 nm, the phase shift film having a thickness of up to 150 nm, and the layer
composed of transition metal, silicon, nitrogen and oxygen having a content (atomic ratio)
of up to 0.03, as a ratio of the transition metal to a total content of the transition metal and
silicon.

15 [Fig. 1A]