ABSTRACT

A blank mask and the like are disclosed, which comprises a transparent substrate, a phase shift film disposed on the transparent substrate, and a light shielding film disposed on the phase shift film. A Photon energy of incident light in a point having a Del_2 value of 0 is 3.8 eV to 4.64 eV, when PE_1 value is 3.0 eV and PE_2 value is 5.0 eV. It can help manufacture a semiconductor device having a minute line width easily.

FIG. 1