CLAIMS

1. A reflective photomask blank for producing a reflective photomask for pattern transfer using extreme ultraviolet light as a light source, the reflective photomask blank comprising:

a substrate;

a reflective layer including a multilayer film and formed on the substrate; and

a light absorbing layer formed on the reflective layer, the light absorbing layer including a tin oxide film with a film thickness of 17 nm or more and less than 25.0 nm;

wherein

an atomic ratio (O/Sn) of oxygen (O) to tin (Sn) contained in the tin oxide film is 1.0 or more and 2.0 or less; and

given that Rm is a reflected light intensity from the reflective layer and that Ra is a reflected light intensity from the light absorbing layer, an OD (Optical Density) defined by a formula (1) below is 1 or more and less than 1.5,

$$OD = -\log (Ra/Rm) \quad (1).$$

2. The reflective photomask blank according to claim 1, wherein a material forming the tin oxide film contains 80 at% or more of tin (Sn) and oxygen (O) in total.

3. The reflective photomask blank according to claim 1, further comprising a capping layer formed between the light absorbing layer and the reflective layer.

4. The reflective photomask blank according to claim 2, further comprising a capping layer formed between the light absorbing layer and the reflective layer.