

Photomask Blank

ABSTRACT

5 A photomask blank comprising a transparent substrate and
a chromium-containing film is provided. The
chromium-containing film is formed of a chromium compound
containing Cr, N, and optionally O, has a total Cr+N+O content
≥ 93 at%, and meets the formula: $3\text{Cr} \leq 2\text{O} + 3\text{N}$. A chromium
10 compound layer meeting a first composition having a N/Cr
atomic ratio ≥ 0.95, a Cr content ≥ 40 at%, a Cr+N content ≥
80 at%, and an O content ≤ 10 at% accounts for 10-70% of the
overall thickness of the chromium-containing film.

15 Fig. 1