

ABSTRACT

TARGET FORMED OF SINTERED ZINC SULFIDE-SILICON DIOXIDE AND METHOD OF PRODUCING THE SAME

The invention provides a sputtering target formed of sintered zinc sulfide-silicon dioxide, which target attains a high deposition rate without excessive elevation of the input power; prevents breakage and like accidents; and contains, inside the target, residual impurities in reduced amounts, and also provides a method of producing the sputtering target. The sputtering target contains ZnS in an amount of 70-90 mol%, the balance being SiO₂ and unavoidable impurities, wherein ZnS constituting the sputtering target exhibits, in an X-ray diffraction chart showing the crystal structure of ZnS, peak intensities satisfying the following expression:

$$0 \leq I(w100)/(I(zb111) + I(w002)) \leq 0.2,$$

wherein $I(w100)$ represents the intensity of the (100) diffraction peak attributed to wurtzite structure;

$I(w002)$ represents the intensity of the (002) diffraction peak attributed to wurtzite structure;

$I(zb111)$ represents the intensity of the (111) diffraction peak attributed to zinc blende structure; and

$(I(zb111) + I(w002))$ represents the intensity of the diffraction peak observed as overlapped diffraction peaks.

FIGURE : NONE