

ABSTRACT

A magnetic disk glass substrate contains Li_2O in an amount of 0.1 to 1 mol% as a glass composition. A fracture toughness value K_{IC} [$\text{MPa} \cdot \text{m}^{1/2}$] of this glass substrate is greater than or equal to 1 [$\text{MPa} \cdot \text{m}^{1/2}$]. A compressive stress layer is provided on a surface of the glass substrate by chemical strengthening, and a depth D [μm] of the compressive stress layer satisfies $D \geq 57 \cdot K_{\text{IC}}^{-1.6}$ and $D \geq 20$ [μm]. This glass substrate can be obtained by adjusting conditions of chemical strengthening processing.

10 (Fig. 5)