

**GLASS SUBSTRATE FOR PERPENDICULAR MAGNETIC RECORDING DISK
AND METHOD OF PRODUCING SAME**

Abstract

An object of this invention is to provide a glass substrate for a perpendicular magnetic recording disk, having an average surface roughness of $2.0\text{\AA}$ or less and surface height variations of $1\text{\AA}$ or less with wavelengths in the range of 0.05mm - 0.5mm in both radial and circumferential directions, as well as a method of producing such a glass substrate. Such a glass substrate for perpendicular magnetic recording is produced by rotating a glass substrate, supplying polishing slurry containing a specified amount of abrading particles of artificial diamond on its surface, pressing a polishing tape on the surface and causing this polishing tape to travel in a direction opposite to the direction of rotation of the glass substrate. The polishing slurry comprises abrading particles and a dispersant, the abrading particles comprising artificial diamond particles with diameters less than 50nm , say, obtained by a shock wave method. The polishing slurry contains such abrading particles in an amount of 0.005 weight % - 0.5 weight % of the polishing slurry. The polishing tape has a contact part comprising a material selected from the group consisting of woven cloths, unwoven cloths, flocked cloths and raised cloths comprising fibers with thickness of $0.1\mu\text{m}$ - $5.0\mu\text{m}$.

(Fig. 1)