Abstract

EPITAXIAL WAFER AND METHOD FOR PRODUCTION OF EPITAXIAL WAFER

[Problem] This invention is aimed at providing a method for producing an epitaxial wafer allowing uniform occurrence of oxygen precipitate in the radial direction part of a base plate and excelling in the crystal quality of an epi-layer.

[Means for solution] A method for the production of an epitaxial wafer, characterized by using as a substrate a base plate of nitrogen and carbon added silicon single crystal having a nitrogen concentration of $5 \times 10^{14} \sim 5 \times 10^{15}$ atoms/cm^3 and a carbon concentration of $1 \times 10^{16} \sim 1 \times 10^{18}$ atoms/cm^3, having a crystal growth condition during the production of silicon single crystal in a range in which the whole surface of substrate becomes an OSF region, and being pulled at a cooling speed of not less than 4°C/minute between 1100 and 1000°C during the growth of crystal, and depositing the silicon single crystal layer on the surface of the substrate by the epitaxial method.

FIG. 8a