Abstract

Unpolished Semiconductor Wafer and a Method for Producing an Unpolished Semiconductor Wafer

The invention relates to a method for producing an unpolished semiconductor wafer, which comprises the following steps: (a) pulling a single crystal of a semiconductor material, (b) grinding the single crystal round, (c) separating a semiconductor wafer from this crystal, (d) rounding the edge of the semiconductor wafer, (e) surface-grinding at least one side of the semiconductor wafer, (f) treating the semiconductor wafer with an etchant, (g) finally cleaning the semiconductor wafer.

The invention furthermore relates to an unpolished semiconductor wafer having a front side and a rear side, wherein at least its front side is ground and its front and rear sides are etched, and which has a reflectivity of 95% or more at least on its front side, a surface roughness of 3 nm or less at least on its front side, a thickness of 80-2500 µm, an overall planarity value GBIR of 5 µm or less, which is based on an edge margin of 3 mm and which has a photolithographic resolution of up to 0.8 µm, and which furthermore contains a native oxide layer with a thickness of 0.5-3 nm respectively on its front and rear sides.

No Figure to accompany Abstract