

ABSTRACT

WAFER PRODUCING METHOD

Disclosed herein is a wafer producing method for producing a hexagonal single crystal wafer from a hexagonal single crystal ingot. The wafer producing method includes a modified layer forming step of relatively moving the focal point of a laser beam in a first direction perpendicular to a second direction where the c-axis in the ingot is inclined by an off angle with respect to a normal to the upper surface of the ingot and the off angle is formed between the upper surface and the c-plane in the ingot, thereby linearly forming a modified layer extending in the first direction. In the modified layer forming step, the depth of the focal point of the laser beam is gradually changed from a shallow position not reaching the depth corresponding to the thickness of the wafer to a deep position corresponding to the thickness of the wafer in such a manner that a parabola is described by the path of the focal point, and when the spot area of the laser beam on the upper surface of the ingot becomes a predetermined maximum value, the deep position of the focal point is maintained.

(Figure 9B)