

WHAT IS CLAIMED IS:

1. A wafer processing method dividing a wafer into a plurality of individual devices along a plurality of crossing division lines, said wafer being composed of a substrate and a functional layer formed on a front side of said substrate, said division lines being formed on a front side of said functional layer to thereby define a plurality of separate regions where said devices are respectively formed, said wafer processing method comprising:

a protective member attaching step of attaching a protective member to the front side of said functional layer of said wafer;

a height recording step of holding said wafer on a chuck table in a condition where said protective member is in contact with said chuck table after performing said protective member attaching step, detecting a height of a back side of said wafer held on said chuck table in a Z direction in an area corresponding to each division line as moving said chuck table in an X direction, and recording an X coordinate on each division line and a Z coordinate corresponding to said X coordinate;

a cut groove forming step of positioning a cutting blade on a back side of said substrate of said wafer in the area corresponding to each division line after performing said height recording step and relatively moving said chuck table and said cutting blade in said X direction to thereby form a cut groove having a depth not reaching said functional layer with a part of said substrate left between a bottom of said cut groove and said functional layer; and

a laser processing step of applying a laser beam to said wafer from the back side thereof along the bottom of said cut groove after performing said cut groove forming step, thereby dividing said wafer along each division line;

wherein said cut groove forming step moves said cutting blade in said Z direction

according to said X coordinate and said Z coordinate recorded in said height recording step to thereby make a thickness (h) of said part of said substrate left between the bottom of said cut groove and said functional layer uniform in said X direction,

wherein said height recording step includes: a height measuring step of measuring a height (H) of the back side of said wafer held on said chuck table by using height measuring means; a thickness measuring step of measuring a thickness (t) of said wafer by using thickness measuring means; and a Z coordinate calculating step of calculating a height (H-t) of the front side of said wafer in the area corresponding to each division line according to said height (H) and said thickness (t) and adding said uniform thickness (h) to said height (H-t) to obtain a Z coordinate (H-t+h) where an outer circumference of said cutting blade is to be positioned.

2. The wafer processing method according to claim 1,

wherein said height recording step is performed at the same X coordinate as the X coordinate where said cutting blade is to be positioned in said cut groove forming step.