

WHAT IS CLAIMED IS:

1. A processing method for a wafer in which a front surface of the wafer on which a device is formed in each of chip regions partitioned by a plurality of scheduled division lines formed in a crossing relationship on the front surface of the wafer is sealed with a sealing member and a plurality of bumps are formed individually in the chip regions of the sealing member, the processing method comprising:

an alignment step of picking up an image of a front surface side of the wafer through the sealing member by infrared image pickup means equipped with an exposure with adjustable exposure time from the front surface side of the device wafer to detect alignment marks and detecting a scheduled division line to be laser processed based on the alignment marks; and

a modified layer formation step of positioning, after the alignment step is carried out, a focus point of a laser beam of a wavelength, which can pass the wafer and the sealing member, in an inside of the wafer or the sealing member and irradiating the laser beam along the scheduled division line from the front surface side of the device wafer to form a modified layer in the inside of the wafer and the sealing member; and

a division step of applying, after the modified layer formation step is carried out, external force to the wafer and the sealing member to divide the wafer from a division start point given by the modified layer into individual device chips each sealed with the seal member; wherein

the sealing member has such transparency that infrared rays to be received by the infrared image pickup means pass the sealing member;

the sealing member contains carbon black, and

the content of the carbon black is 0.1% by mass or more and 0.2% by mass or less.

2. The processing method for the wafer according to claim 1, wherein the infrared image pickup means used at the alignment step includes an InGaAs image pickup element.