WHAT IS CLAIMED IS:

1. A wafer processing method of processing a wafer in which each of devices having a plurality of bumps is formed in each of regions of a front surface partitioned by a plurality of division lines formed in an intersecting manner, the wafer processing method comprising:

a cut groove forming step of forming cut grooves each having a depth corresponding to a finished thickness of each of device chips by a cutting blade along the division lines from a front surface side of the wafer;

a sealing step of sealing the front surface of the wafer including the cut grooves with a sealing material, after the cut groove forming step is performed;

a grinding step of grinding the wafer from a back surface side of the wafer to the finished thickness of each of the device chips to expose the sealing material in the cut grooves, after the sealing step is performed;

an alignment step of capturing the front surface side of the wafer through the sealing material by infrared imaging means from the front surface side of the wafer, detecting an alignment mark, and detecting the division line to be laser processed based on the alignment mark, after the grinding step is performed;

a modified layer forming step of emitting a laser beam of such a wavelength as to pass through the sealing material along the division lines from the front surface side of the wafer, with a focal point of the laser beam being positioned inside the sealing material in the cut grooves, to form modified layers inside the sealing material, after the alignment step is performed; and

a dividing step of applying an external force to the sealing material in the cut grooves, and dividing the wafer, with the modified layers serving as starting points of division, into individual device chips each of which has its front surface and four side surfaces surrounded by the sealing material, after the modified layer forming step is performed,

wherein, in the sealing step, the front surface of the wafer is sealed with the sealing material that contains carbon black, having such a transmitting property that infrared rays to be received by the infrared imaging means pass through the sealing material; and

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

2. The wafer processing method according to claim 1, wherein the infrared imaging means used in the

alignment step includes an InGaAs imaging element.