CLAIMS

1. A detection method of a transmission laser beam for irradiating a laser beam of a wavelength having a transparency to a plate-shaped workpiece having a first face and a second face opposite to the first face upon the workpiece from the first face side with a focal point of the laser beam positioned in the inside of the workpiece to detect laser beam which has passed through the workpiece to the second face side, comprising:

a photosensitive sheet positioning step of holding the workpiece on a holding face of a chuck table with a photosensitive sheet, which has a photosensitive layer, interposed therebetween such that the photosensitive layer is opposed to the second face of the workpiece;

a laser beam irradiation step of irradiating, after the photosensitive sheet positioning step is performed, the laser beam from the first face side of the workpiece; and

a confirmation step of confirming, after the laser beam irradiation step is performed, whether the intensity distribution of the transmission laser beam is symmetrical with respect to the center of the transmission laser beam from a photosensitive reaction region formed in the photosensitive layer of the photosensitive sheet.

2. The detection method of a transmission laser beam according to claim 1, wherein, at the photosensitive sheet positioning step, the photosensitive sheet is adhered to the second face of the workpiece with a layer of liquid, which has a transparency, interposed therebetween.

3. The detection method of a transmission laser beam according to claim 1, wherein the second face of the workpiece includes a plurality of devices thereon that are separated from each other by a plurality of division lines formed in a grating pattern.

4. The detection method of a transmission laser beam according to claim 1, wherein said laser beam irradiation step results in the formation of a modified layer within the workpiece.

5. The detection method of a transmission laser beam according to claim 4, wherein said modified layer does not extend to either the first or second faces of the workpiece.

6. The detection method of a transmission laser beam according to claim 1, wherein said confirmation step includes confirming the positioning of a mask including a pinhole therein, whereby the laser beam is passed through the pinhole.

7. The detection method of a transmission laser beam according to claim 6, further comprising an adjusting step of adjusting the alignment of the mask based on the results of said confirmation step.

8. A detection method of a transmission laser beam for irradiating a laser beam of a wavelength having a transparency to a plate-shaped workpiece having a first face and a second face opposite to the first face upon the workpiece from the first face side with a focal point of the laser beam positioned in the inside of the workpiece to detect laser beam which has passed through the workpiece to the second face side, comprising:

a photosensitive sheet positioning step of holding the workpiece on a holding face of a chuck table with a photosensitive sheet, which has a photosensitive layer, interposed therebetween such that the photosensitive layer is opposed to the second face of the workpiece, wherein the second face of the workpiece includes a plurality of devices thereon that are separated from each other by a plurality of division lines formed in a grating pattern and further wherein the photosensitive sheet is in contact with the second face of the workpiece;

a laser beam irradiation step of irradiating, after the photosensitive sheet positioning step is performed, the laser beam from the first face side of the workpiece; and

a confirmation step of confirming, after the laser beam irradiation step is performed, whether the intensity distribution of the transmission laser beam is symmetrical with respect to the center of the transmission laser beam from a photosensitive reaction region formed in the photosensitive layer of the photosensitive sheet.

9. The detection method of a transmission laser beam according to claim 8, wherein said devices are formed in a device region of the workpiece, and further wherein said device region is surrounded by a peripheral redundant region of the wafer.

10. The detection method of a transmission laser beam according to claim 9, wherein said photosensitive layer is at least positioned in an area corresponding to the device region.

11. The detection method of a transmission laser beam according to claim 9, wherein said photosensitive layer is at positioned in an area corresponding to both the device region and the peripheral redundant region.

12. A detection method of a transmission laser beam for irradiating a laser beam of a wavelength having a transparency to a plate-shaped workpiece having a first face and a second face opposite to the first face upon the workpiece from the first face side with a focal point of the laser beam positioned in the inside of the workpiece to detect laser beam which has passed through the workpiece to the second face side, comprising:

a photosensitive sheet positioning step of holding the workpiece on a holding face of a chuck table with a photosensitive sheet, which has a photosensitive layer, interposed therebetween such that the photosensitive layer is opposed to the second face of the workpiece;

a laser beam irradiation step of irradiating, after the photosensitive sheet positioning step is performed, the laser beam from the first face side of the workpiece; and

a confirmation step of confirming, after the laser beam irradiation step is performed, whether the intensity distribution of the transmission laser beam is symmetrical with respect to the center of the transmission laser beam from a photosensitive reaction region formed in the photosensitive layer of the photosensitive sheet,

wherein said confirmation step also includes confirming the positioning of at least one optical part included in an optical system, whereby the laser beam is passed through the optical part.

13. The detection method of a transmission laser beam according to claim 12, wherein, at the photosensitive sheet positioning step, the photosensitive sheet is adhered to the second face of the workpiece with a layer of liquid, which has a transparency, interposed therebetween.

14. The detection method of a transmission laser beam according to claim 13, further comprising an adjusting step of adjusting the alignment of the optical part based on the results of said confirmation step.