

WHAT IS CLAIMED IS:

1. A processing method for processing a plate-shaped workpiece having a division line on a front side and a multilayer member containing metal formed on a back side, wherein the front side includes a plurality of devices thereon, said processing method comprising:

a holding step of holding the front side of said plate-shaped workpiece on a holding table in a condition where said multilayer member formed on the back side of said plate-shaped workpiece is exposed;

a cutting step of cutting said plate-shaped workpiece along said division line by using a cutting blade after performing said holding step, thereby forming a cut groove dividing said multilayer member, with a remainder portion of said plate-shaped workpiece remaining below a base of the cut groove; and

a laser processing step of applying a laser beam to said plate-shaped workpiece along said cut groove after performing said cutting step, wherein the laser beam passes through said cut groove before passing into said plate-shaped workpiece, wherein said laser beam is applied to the back side of said plate-shaped workpiece in said laser processing step;

said cutting step including supplying a cutting fluid containing an organic acid and an oxidizing agent to said plate-shaped workpiece, and

wherein the base of said cut groove formed during said cutting step is slightly lower in level than a lower surface of the multilayer member, such that a depth of said cut groove is less than a thickness of the remainder portion of said plate-shaped workpiece remaining below the base of the cut groove, and

wherein said laser processing step includes applying a laser beam having a wavelength capable of being transmitted through said plate-shaped workpiece along said cut groove to thereby form a modified layer inside said plate-shaped workpiece along said cut groove;

said processing method further comprising a dividing step of dividing said plate-shaped workpiece along said modified layer after performing said laser processing step.

2. A processing method for processing a plate-shaped workpiece having a division line on a front side and a multilayer member containing metal formed on a back side, wherein the front side

includes a plurality of devices thereon, said processing method comprising:

a holding step of holding the front side of said plate-shaped workpiece on a holding table in a condition where said multilayer member formed on the back side of said plate-shaped workpiece is exposed;

a cutting step of cutting said plate-shaped workpiece along said division line by using a cutting blade after performing said holding step, thereby forming a cut groove dividing said multilayer member, with a remainder portion of said plate-shaped workpiece remaining below a base of the cut groove; and

a laser processing step of applying a laser beam to said plate-shaped workpiece along said cut groove after performing said cutting step, wherein the laser beam passes through said cut groove before passing into said plate-shaped workpiece, wherein said laser beam is applied to the back side of said plate-shaped workpiece in said laser processing step;

said cutting step including supplying a cutting fluid containing an organic acid and an oxidizing agent to said plate-shaped workpiece, and

wherein the base of said cut groove formed during said cutting step is slightly lower in level than a lower surface of the multilayer member, such that a depth of said cut groove is less than a thickness of the remainder portion of said plate-shaped workpiece remaining below the base of the cut groove, and

wherein said laser beam applied during said laser processing step has a wavelength capable of being absorbed by said plate-shaped workpiece along said cut groove to thereby fully cut said plate-shaped workpiece along said cut groove.

3. The processing method according to claim 1,

said processing method further comprising a sheet attaching step of attaching a sheet to the front side of said plate-shaped workpiece before performing said laser processing step.

4. The processing method according to claim 1, further comprising a sheet attaching step of attaching a protective member to the front side of said plate-shaped workpiece, wherein the sheet attaching step is performed before the holding step.

5. The processing method according to claim 1, wherein said devices each comprise an integrated circuit.

6. The processing method according to claim 1, wherein said multilayer member is formed on the entire back side of the plate-shaped workpiece.