

Laser Bar Cleaving For High Volume Production

DTX & GSX Scribe & Break Laser Bar Cleaving

- Fast, accurate and automatic alignment of the individual laser diode bars.
- The ability to program the location of the scribe in relationship to the edge of the bar.
- The ability to program the length of the scribe with a high level of accuracy.
- Delicate touchdown and lift off from the wafer during scribing to prevent damage.

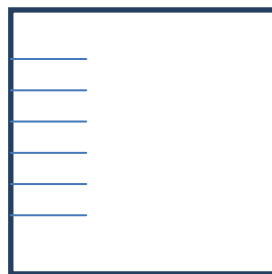
Process Background:

Edge emitting lasers are created using InP and GaAs as the base material. These materials are used for their ability to create an optical quality surface on the edges.

Benefits of Laser Bar Cleaving:

- Scribe and Break is the only method that can be used to propagate a cleave along the crystal plane.
- Breaking along the crystal plane allows for narrow streets and little, or no material loss.
- Short skip scribes are used to induce the cleave propagation, optimizing processing speed and extending the life of the scribe tool.
- Crating an optical quality edge prevents the need for additional polishing.

Edge scribing for
cleaving into bars



Skip scribing
on laser bars



DTX & GSX Application Note



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