

## Opto System LD Breaker LDH-50TSR



The LDH-50TSR automatically cleaves pre-scribed laser diode wafers into bars or laser diode bars to chips. The maximum wafer size is 2 inches.

The machine is designed to process material mounted on a ring. The ring supporting the substrate to be cleaved is placed upside down on the holder; this allows the vision system to automatically recognize the structure and accurately align the wafer to the knife that cleaves the substrate from the back. . A support mechanism with an adjustable gap on the front side (scribed side) secures the structure and allow bending over the breaking street

The combination of these and other features ensures high quality mirror like facets, high yields, reliable machine performance and overall low cost of ownership.

## FEATURES

- Robust design, low maintenance, reliable high-performance machine
- High precision/Versatile tool for R&D and Production
- Fully automatic operation mode
- Semi-Automatic operation mode
- Parameter saving and retrieval function for R&D and qualified production recipe
- Adjustable gap support to facilitate bending angle control
- Vision System using multiple cameras to ensure accurate auto alignment
- Remote access with TeamViewer
- Windows 10 PC ,15" monitor and touch screen.
- Three-point pinching fixture for precision alignment and cleaving.
- Adjustable pressure and touch-down position function from the first break to the last.

## SPECIFICATION

1. LD Work	<ul style="list-style-type: none"> <li>• Area Size                    60mm x 60mm (For maximum 2 inches wafer)</li> <li>• Chip Size                    Minimum 200 <math>\mu</math>m</li> <li>• Wafer Set                    6-Inch Frame 2-6-1 (Disco Standard)</li> </ul>
2. Frame Holder ( $\theta$ Axis)	<ul style="list-style-type: none"> <li>• Rotation                    0°/ 90° Pulse Motor/Pulley</li> <li>• Accuracy                    <math>\pm 0.02^\circ</math></li> <li>• Frame                        Spring Clamp Fixture</li> </ul>
3. X-Y Axis	<ul style="list-style-type: none"> <li>• Servo/Ball Screw Drive</li> <li>• Speed                        Maximum 50mm/sec</li> <li>• Accuracy                    <math>\pm 0.005</math>mm</li> </ul>
4. Support Unit	<ul style="list-style-type: none"> <li>• Rubber Type</li> </ul>
5. Cutter	<ul style="list-style-type: none"> <li>• Servo Motor/Ball Screw Drive</li> <li>• Travel                        70mm</li> <li>• Accuracy                    <math>\pm 5\mu</math>m</li> <li>• Cutter Length            10mm</li> <li>• Cutter Material Ceramic</li> <li>• Load cell is used for WF0 detection</li> </ul>
6. Optical System/Vision Unit	<ul style="list-style-type: none"> <li>• High Magnification Camera located under the support</li> <li>• Low Magnification Camera located above the frame</li> </ul>
7. Parameters	<ul style="list-style-type: none"> <li>• Cut Depth                  1 ~ 999<math>\mu</math>m</li> <li>• Cut Times                  1 ~ 999</li> <li>• Table Index 0 ~ 9.999 mm</li> <li>• Cut Address 0 ~ 99999 <math>\mu</math>m</li> <li>• Cut Speed                  0.01 ~ 99.99 mm/sec</li> <li>• Cut Depth                  0.01 ~ 1 mm</li> <li>• Holding Time at Cutter Down    0 ~ 1 sec</li> <li>• Total Cut Times          1 ~ 99999</li> <li>• Alignment Interval 0 ~ 99</li> <li>• Parameter Saving and Loading function <ul style="list-style-type: none"> <li>• Data for each model can be saved as a recipe in the controller and loaded as desired.</li> </ul> </li> </ul>
8. Utilities	<ul style="list-style-type: none"> <li>• Power Supply AC120V 500VA</li> </ul>
9. Size	<ul style="list-style-type: none"> <li>• 650(W) <math>\times</math> 700(D) <math>\times</math> 1400(H) mm</li> <li style="padding-left: 40px;">Excluding a Signal Tower</li> </ul>
10. Weight	<ul style="list-style-type: none"> <li>• Approx. 300 Kg</li> </ul>
11. Signal Tower	<ul style="list-style-type: none"> <li>• 3 Color status signal tower</li> </ul>