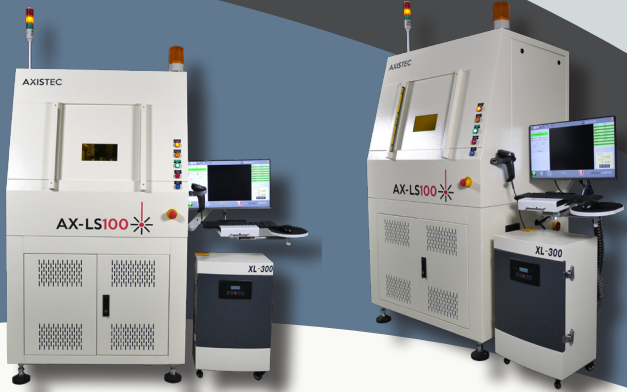


AX-LS Series



Highly Cost Effective Laser Scribing System

Engineered to high standards, the Axis Tec AX-LS series of Laser Scribers improve yield by creating much narrower scribe lines than traditional mechanical scribing using conventional blade dicers.

The non contact scribing process works by carving a groove hole while melting/vaporizing the wafer surface layers away using a laser beam at a wavelength that causes the material to absorb it.

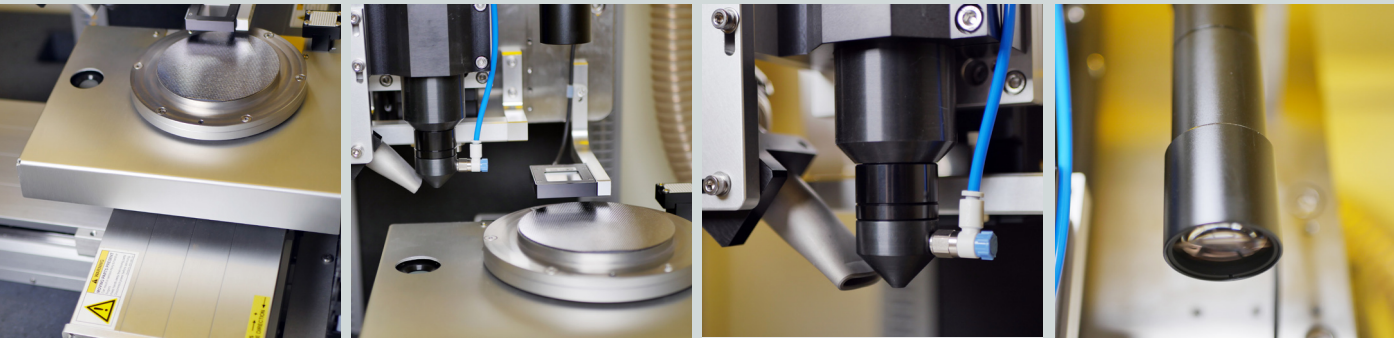
The AX-LS series allows manufacturers to cleanly scribe brittle materials with its robust, user friendly platform, allowing for reliable manufacturing at a lower cost.

Applications

- Silicon Wafer Scribing
- Ceramic Panel Grooving/Cutting

Advantages

- Robust & Reliable
- Low Maintenance Cost
- Minimal Downtime
- High Process Repeatability



◆ Specifications

Machine Dimensions	
Foot Print	1,530mm (W) × 900mm (D) × 1,780mm (H)
Weight	750 kg
Granite Table	<ul style="list-style-type: none"> 800mm (W) X 700mm (D) x 100mm (H) Flatness grade = 00
Laser Module	
Laser Type	<ul style="list-style-type: none"> Pulse (Multimode) QCW (Single/Multimode/Picosecond)
Oscillation Wavelength	1060~1070 nm (IR)
Max Average Output	100 W
Repetition Frequency	0~500 kHz
Diode Life Time	5 Years or 50,000 hrs (Optimal)
Positioning Mechanism	
XY Table with Linear Servo Motor System	
Processing Range	300mm x 300mm
Moving Speed	1 ~ 800 mm/s
Drive Motor	Linear Servo
Resolution	0.5μm
Repeatability	±5μm
Z-Axis	
Processing Range	10mm
Resolution	1μm
Repeatability	±5μm
θ-axis (Chuck Table)	
Max Rotating Angle	360°
Wafer Chuck	
Substrate Workpiece Size	φ8", φ6", φ5", φ4"
Substrate Workpiece Fixing	Vacuum suction method. O/F standard alignment with controller and vacuum gauge
Substrate Loading Method	<ul style="list-style-type: none"> Manual Auto L/UL with Wafer Robot & Aligner
Optic System	
20 MP High Resolution Monochromatic Camera	
Simultaneous focusing method of laser optical system & vision system	
Single element focusing lens	
Auto focus by servo motor drive	
LED dome light	
Environment	
Temperature	23 ± 5°C
Humidity	RH35% - 85%
Power Requirement	Single Phase 50/60Hz AC230 ± 10% , 20A
Air Pressure	4 ~ 6 Bar
Air Flow	20 L/Min
Software & Control	
Computer Control System	Industrial PC with Intel Core Processor
Motion & Laser Interface	PCI PC Based Communication
Application Software	LabView
Safety	
Class 1 Enclosure with Viewing Glass	