

PRODUCT

BD Atomic Edge™ Surgical Knives

BD Atomic Edge™ is the first single-use, safety engineered silicon surgical knife designed for use in cutting corneal tissue, available to combine diamond-like performance.

BD Atomic Edge safety slit knives feature an edge radius of approximately 40 nm, versus 20 nm for the typical diamond blade and approximately 600 nm for metal.

LMJ used for:

- Cutting the Silicon blades out of a wafer



CHALLENGE

Perfect cut without any weakening of mechanical properties

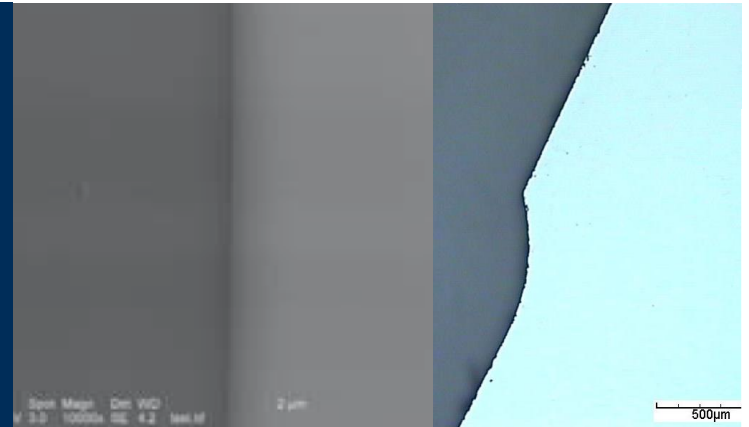
The cutting process shall not generate any effect on the strength of the Silicon blades

Main processing criteria:

- No reduction of strength
- No heat affected zone (HAZ)
- No depositions
- No burrs
- Perfect verticality
- Narrow tolerances
- No cracks, no shipping

Machining technologies able to reach these criteria:

- Etching
- Laser MicroJet (LMJ) - water jet guided laser technology



SOLUTION

No HAZ, production-proven, better ROI

LMJ advantages versus Etching:

- Significantly faster
- Production-proven
- Low consumables
- High stability and flexibility

Installed machine type:

- 1 x LDS 300
- 100 W green laser

