### 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

### 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

### 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

Sources: Becton Dickinson.org websites, Synova