

# CASE STUDY



Semicase-09 Date: 16.10.2020



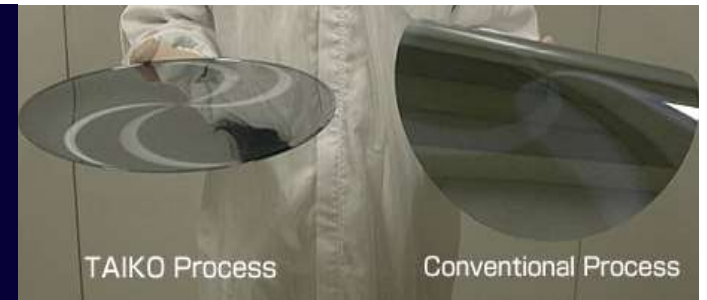
## PRODUCT

### TAIKO thin wafers

The TAIKO process is the name of a wafer back grinding process that uses a new grinding method. This method is different to conventional back grinding. When grinding the wafer, the TAIKO process leaves an edge (approx. 3 mm) on the outer most circumference of the wafer and thin grinds only the inner circumference.

LMJ used for:

- Ring cutting



## CHALLENGE

### Perfect for Taiko ring removal

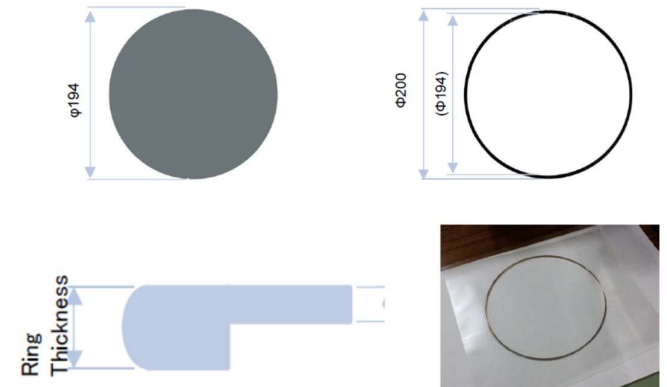
Thin wafers are a challenging material to manipulate and to process due to its high flexibility and fragility

Main processing criteria:

- Adapted to thin wafers
- Round cutting
- No chipping
- Clean surfaces
- Straight walls
- Narrow tolerances
- Fast process

Machining technologies able to reach the following criteria:

- Diamond blade saw
- Laser MicroJet (LMJ) - water jet guided laser technology



## SOLUTION

### Fast and stable cutting by the wet laser

LMJ advantages versus dicing blade:

- Better adapted to thin wafers
- High tact time
- High chip yield
- 300 mm wafer capable

Installed machine type:

- 5 x Sanwa RCM with LMJ inside + Takatori Dicing Tape Mounter
- Total integration
- 50 W green laser

