





The Synergy of Water and Fire

Application Examples



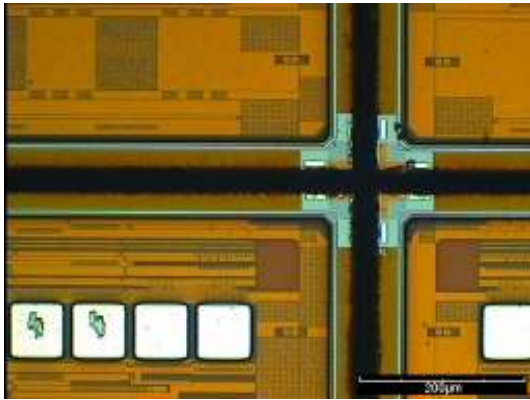
Synova Confidential

Applications

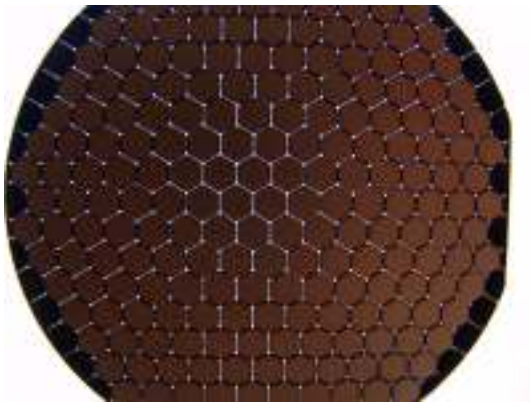
	Semiconductors, Electronics and Photovoltaics	Machining	
			
	Dicing	Cutting	
	LDS200/ 300	LCS 150/300	
Materials	Silicon, GaAs, InP, Sapphire, CZT, PZT	Metals SS, Al, Ni, Ti, W, Cu	Hard Materials Ceramics, Natural Diamonds, Synthetic Diamonds (PCD, CBN)
Typical widths	30- 50 Microns (20- 25 Microns in development)	30- 50 Microns	50 --> 80 Microns (40 Microns under development)
Typical thicknesses	50- 800 Microns	50 Microns- 3 mm	1 to 10 mm
Maximum Thickness	50 mm	50 mm	50 mm
Applications	Wafers, Diodes	Machining Housings, Bars, Strips, etc.	Cutting Diamonds, Tooling bits, Probes, etc.
Operations	Dicing, Scribing, Cutting, Trimming, Chamfering	Cutting holes and lines (Straight or Perimeter), Grooving	Cutting, Shaping, Drilling, etc.



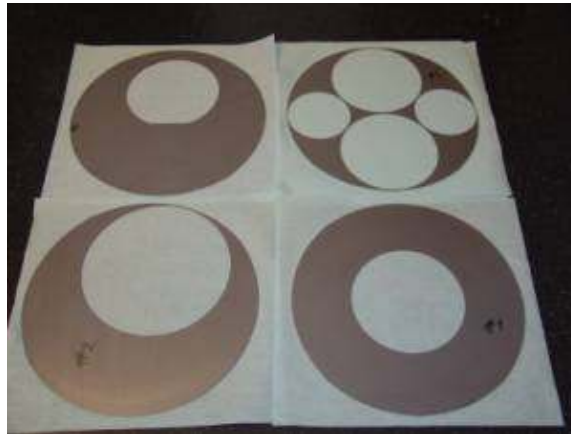
Semiconductors



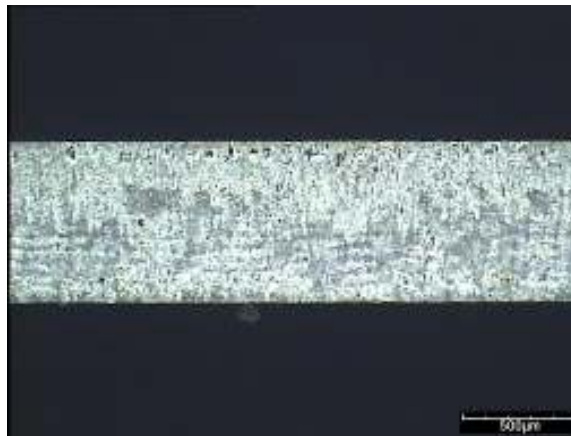
- Si, Ge, GaAs, CZT wafer dicing
 - Up to 5mm thickness



- Hexagonal diodes dicing
 - 220µm thickness



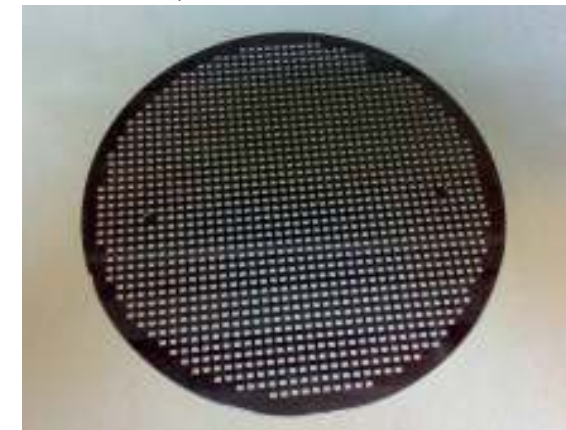
- Wafer downsizing
 - Up to 2.5mm thickness



- Edge grinding
 - Up to 2mm thickness



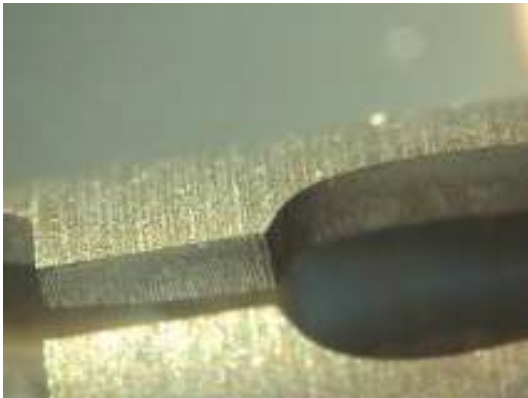
- Solar cell cutting
 - 250µm thickness



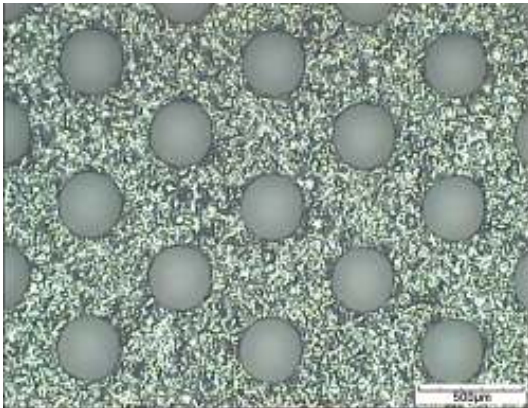
- Window cutting/drilling
 - 1.2mm thickness



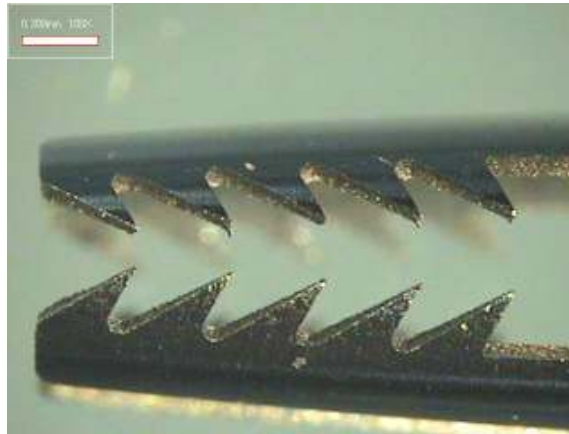
Cutting Metals



- **Stainless steel cutting**
 - Up to 550 μ m thickness



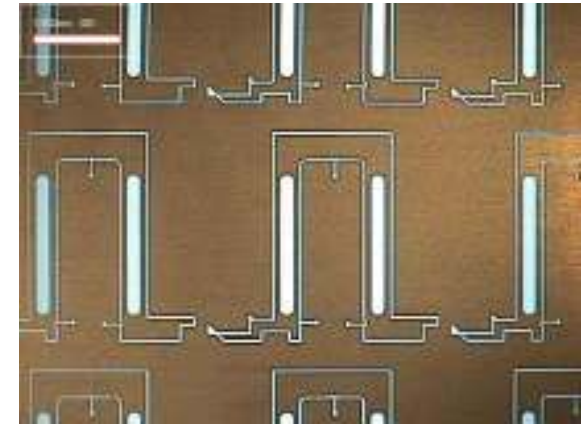
- **Aluminum hole drilling**
 - 700 μ m thickness
 - 300 μ m hole diameter



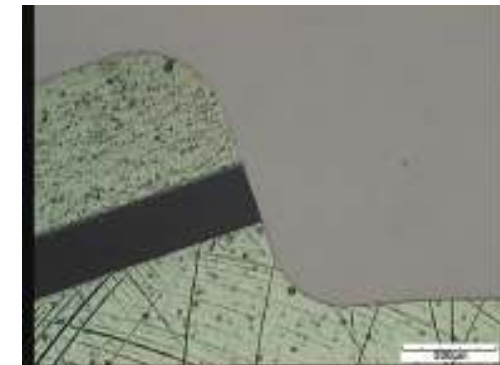
- **Nitinol tube cutting**
 - 150 μ m thickness
 - 1.5mm outer diameter



- **Titanium cutting**
 - 500 μ m thickness



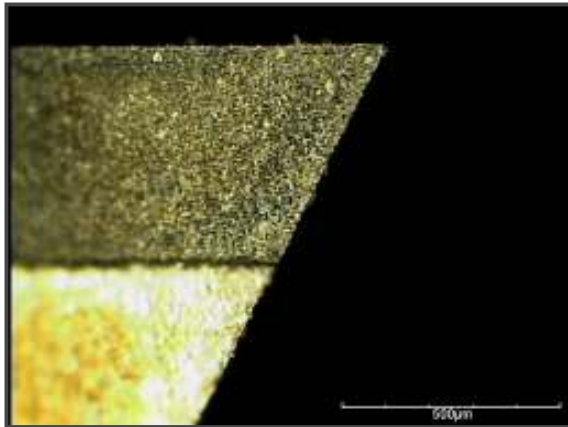
- **Copper Beryllium cutting**
 - 100 to 500 μ m thickness
 - 200 μ m hole diameter



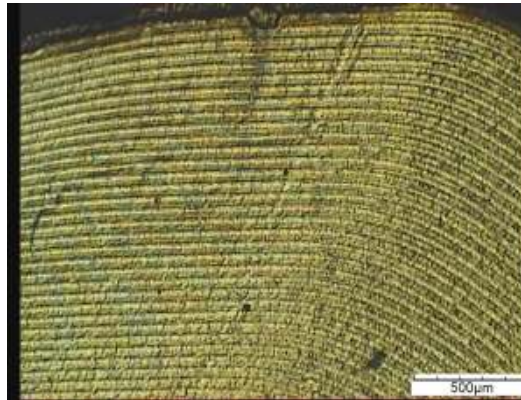
- **Nickel sheet cutting**
 - 80 μ m thickness



Cutting Hard materials



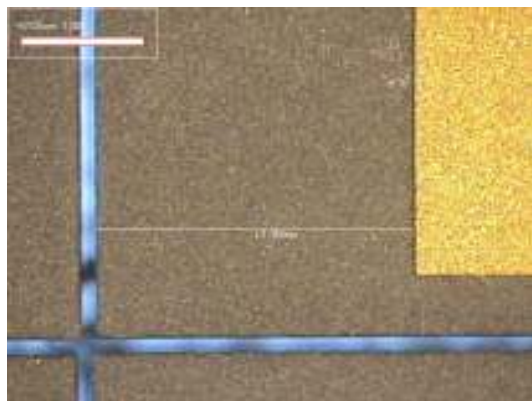
- PCD/WC cutting
 - Up to 3.2mm thickness



- Raw diamond cutting
 - Up to 12mm thickness



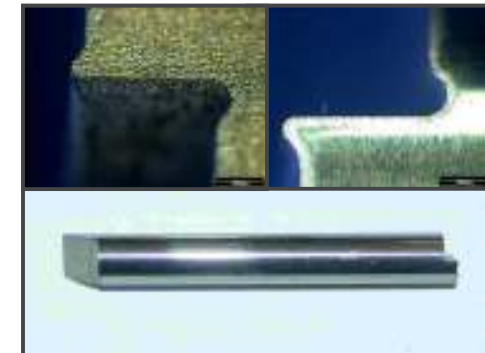
- PCD grooving
 - Up to 300µm thickness
 - Various shapes



- Dark ceramic cutting
 - 1.5mm thickness



- CBN/WC cutting
 - Up to 3.2mm thickness



- WC rod cutting
 - 6mm thickness

