WAFER SINGULATION

Semiconductor Fabrication & Assembly

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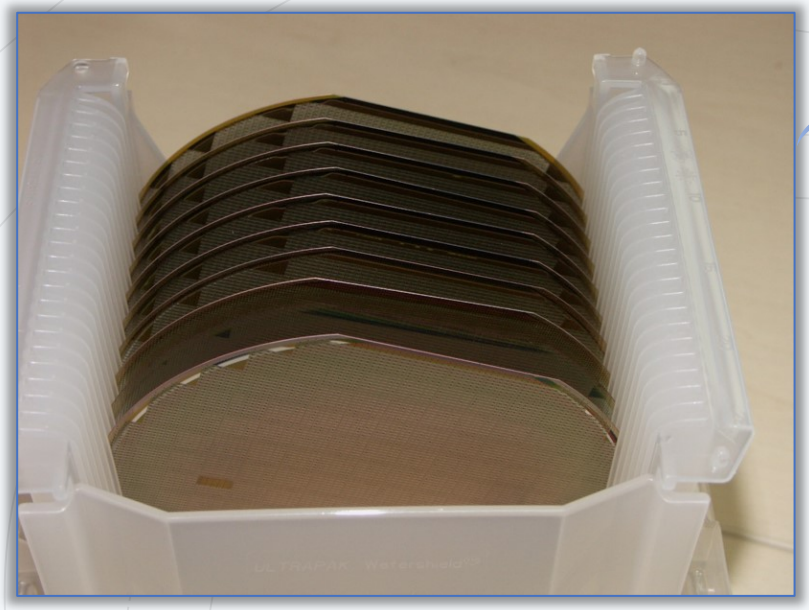
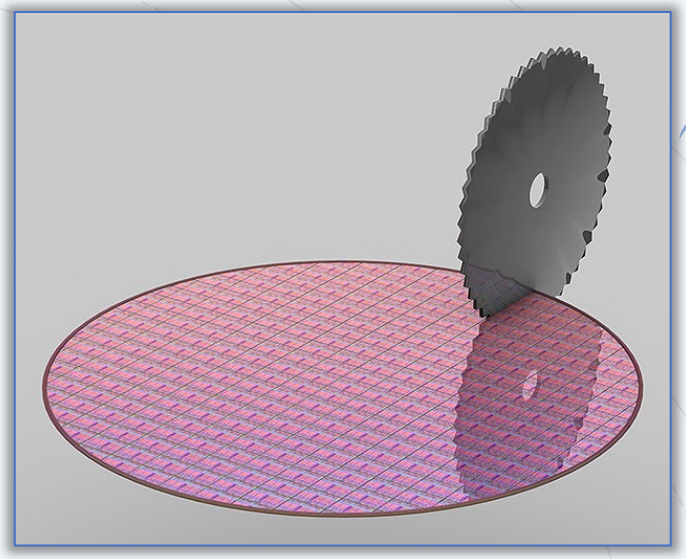
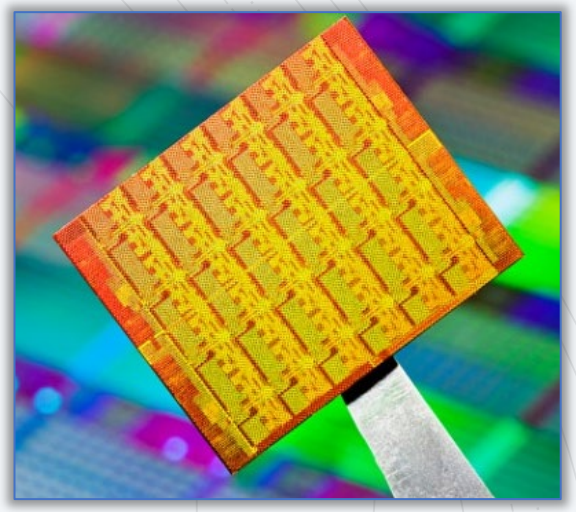
Wafer Dicing







From Wafer to Die

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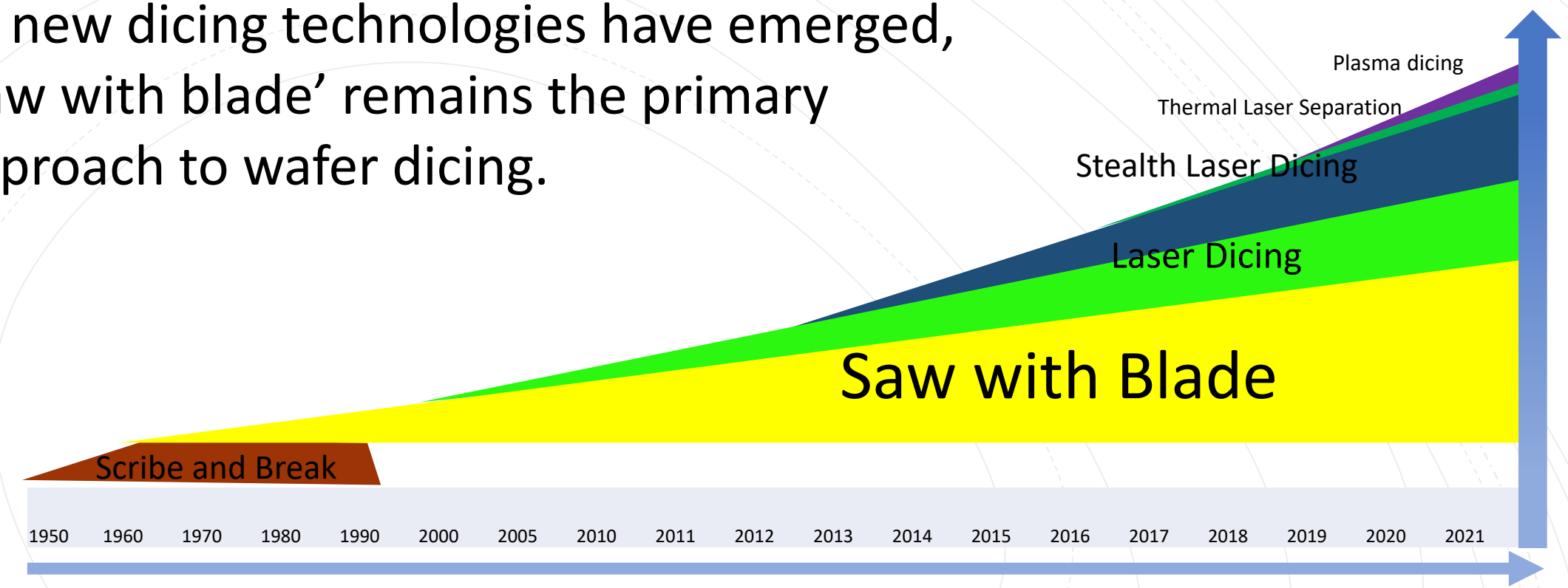
Advances in Dicing Technologies

As new dicing technologies have emerged, ‘saw with blade’ remains the primary approach to wafer dicing.



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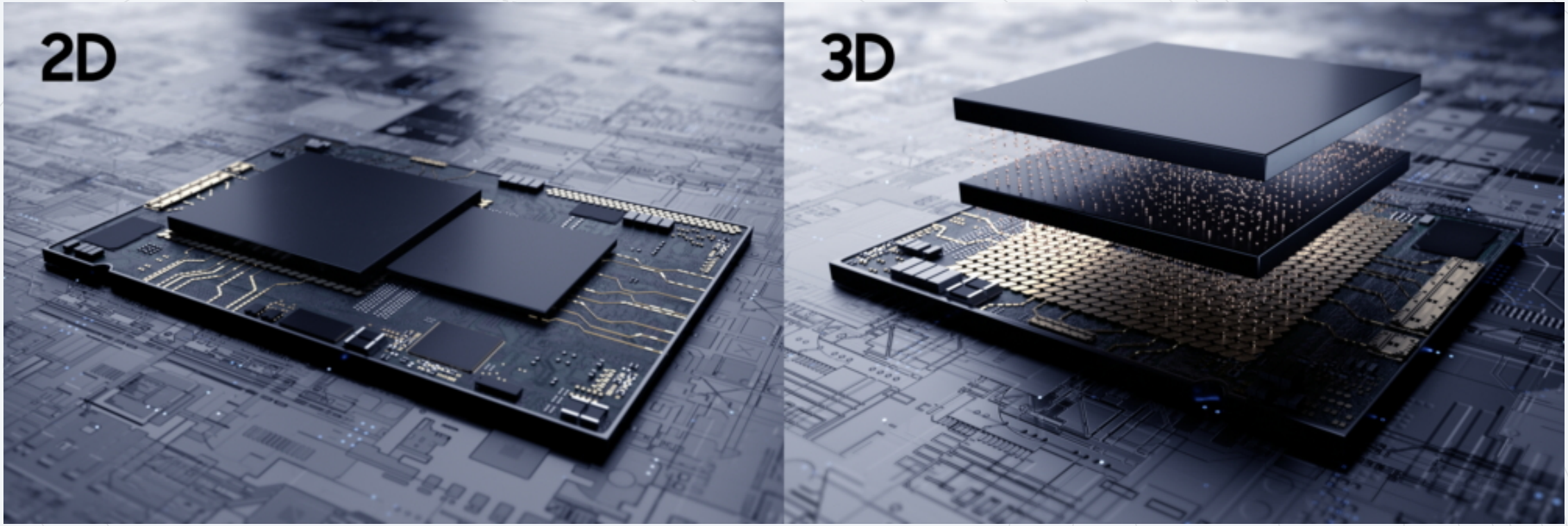
Demand for Thinner Dies

The need for thinner dies for 3D stacked assemblies has pushed advances in dicing technology



Growing demand for 3D assemblies in -

- Medical device development
- Biotech instrumentation

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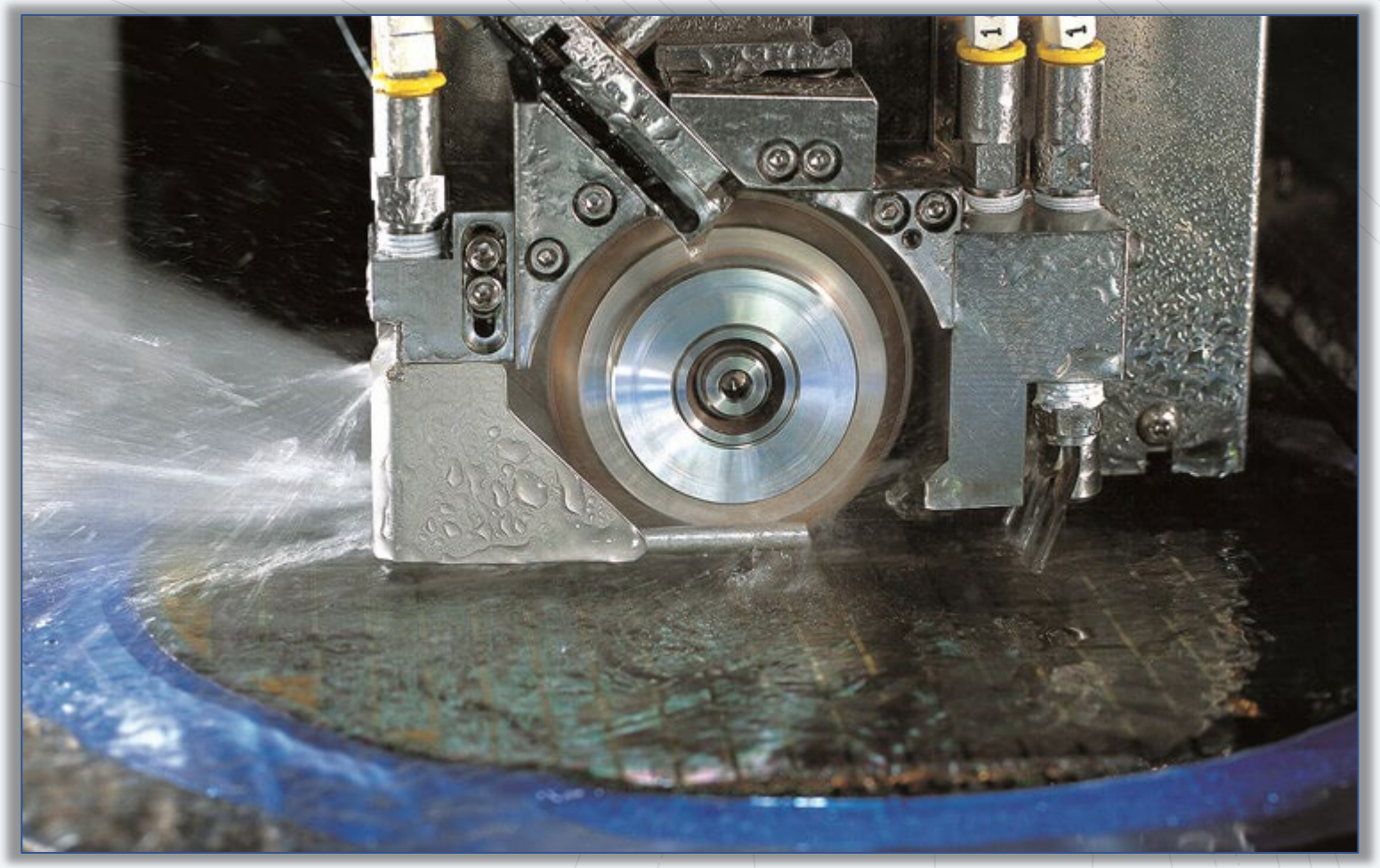
Saw Cutting vs Laser Cutting

Saw Cutting remains
the low-cost option

- 10µm Blades
- 10-12 µm Kerfs
- Cut Precision to 0.1µm
- Height control to 0.1µm
- Suitable for Silicon & Glass



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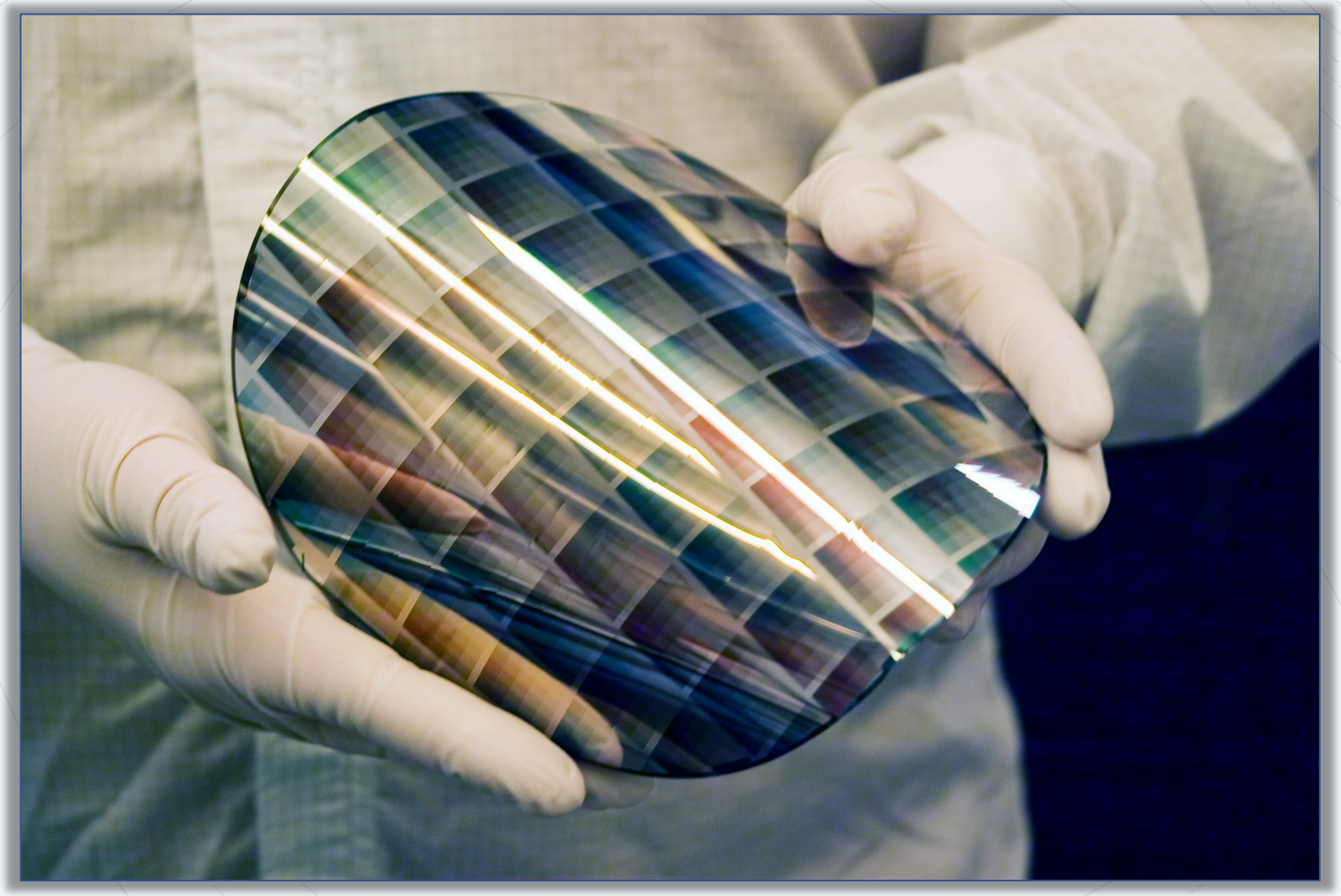
Blade Dicing of Ultrathin Wafers



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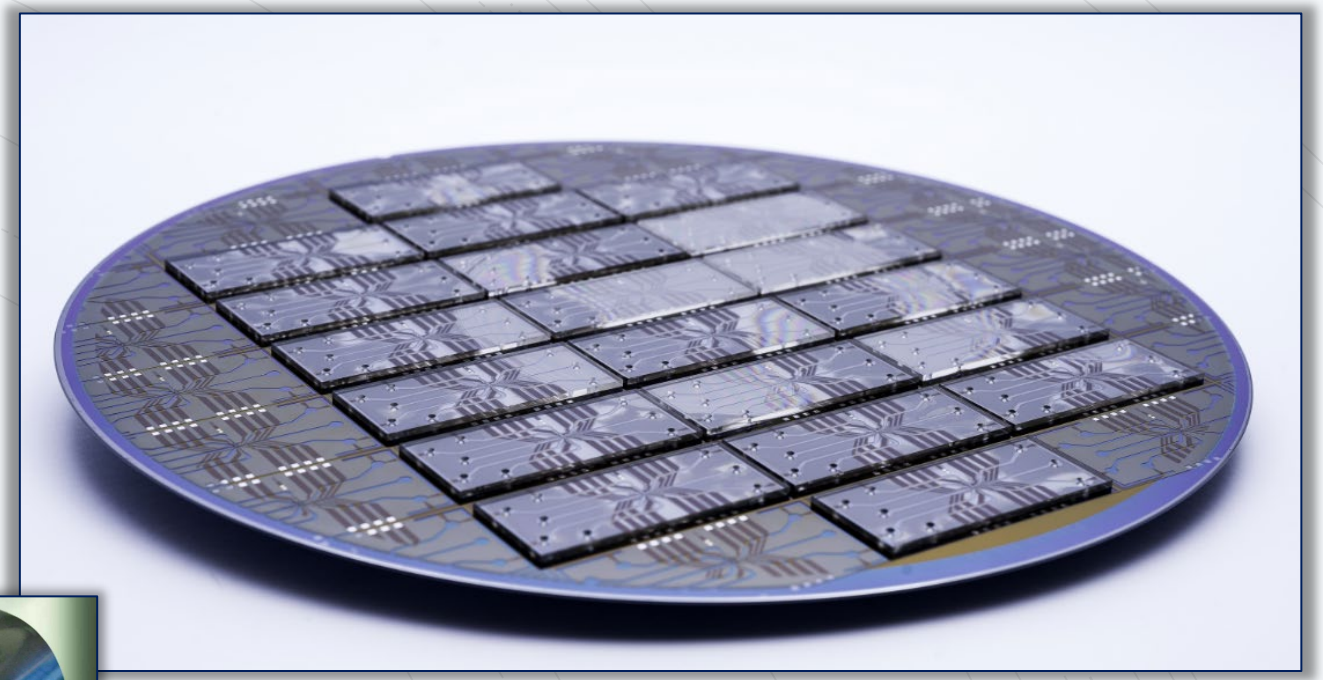
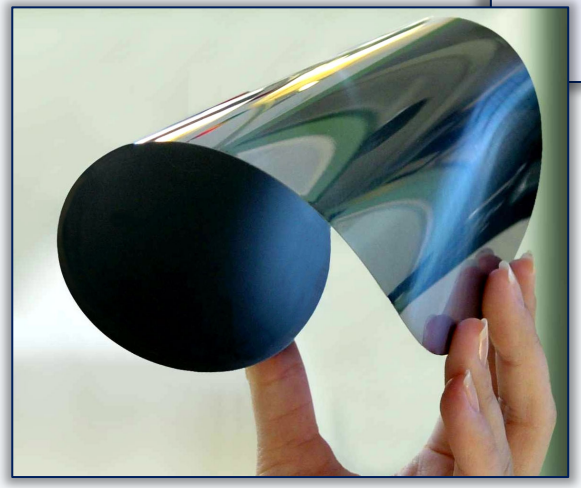
Blade Dicing of Ultrathin Wafers

Saw Cutting remains suitable even for ultrathin wafers

- 5-10 µm thickness
- medical device applications
- Microfluidics applications





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Blade Cutting Still the Choice for Singulation

Blade cutting of silicon wafers remains

- Competitive with laser cutting for most silicon applications
- Even for newer ultra-thin dies and membranes
- Blades down to 10µm width
- With 10-12 µm Kerfs

A microelectronics assembly supplier needs to bring a portfolio of capabilities for starting with a customer's wafer and processing it to reach the ultimate objective of ending up with a die of the right thickness and shape for your specific application.

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