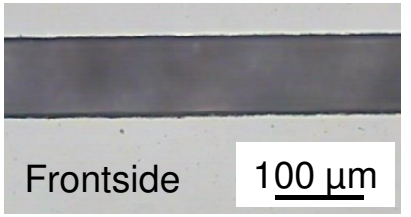
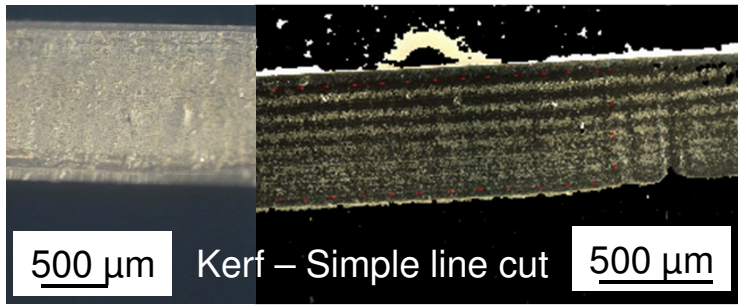
Sapphire overview March 2015

- Cutting speed 30 mm/s with multipass strategy
- Specifications:

Magnitude	Value
Cutting speed for depending on thickness: 0.5 mm 1.0 mm 3.0 mm	 2.00 mm/s 0.15 mm/s 0.04 mm/s
Chipping on frontside with all strategies	0 µm
Chipping on backside for «high quality strategy»	< 20 µm
Roughness on the kerf	< 0.5 µm
Radius of the kerf	< 10 µm
Angle of the kerf	90°
Kerf width	High speed: 60 µm 1/4th of high speed: 40 µm
Max. sample thickness	3 mm

- Smallest diameter cut = 1 mm in 1 thick sapphire – not yet with «High quality cut»
  → «High quality cut» needs to be implemented in the CAD/CAM system to be able to cut more complex geometries





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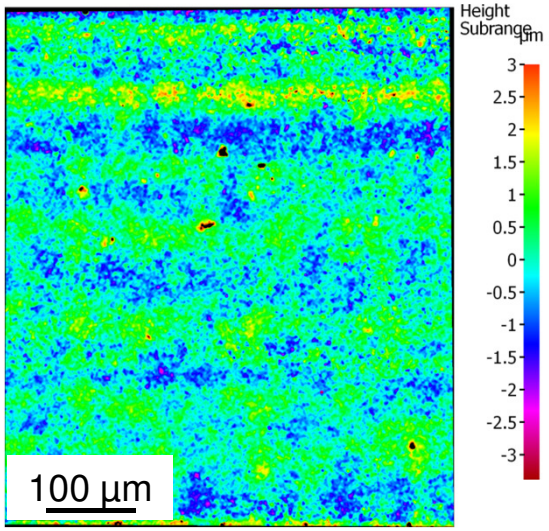
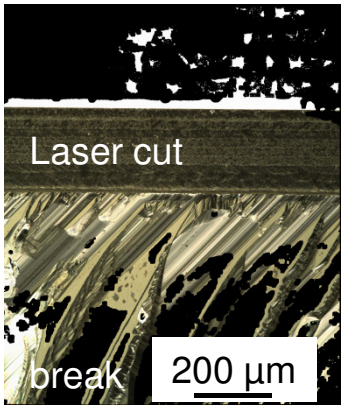
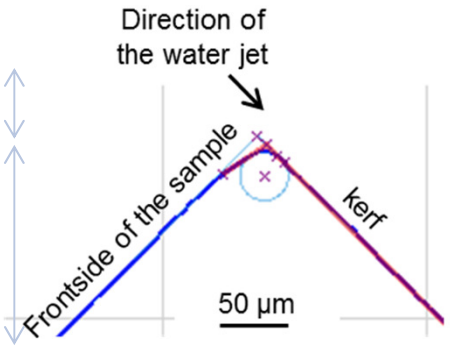


Roughness measurement



Kerf view



Edge radius measurement