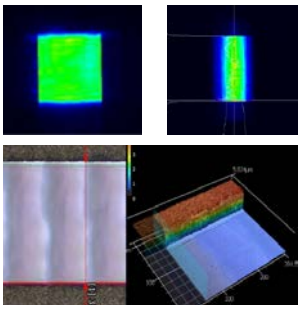
InnoSlab Lasers

Application Examples

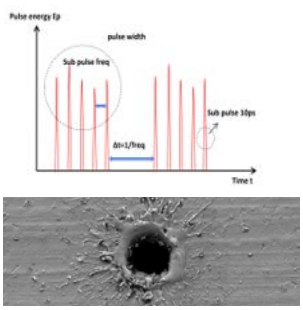
Tailored Beam Shape for Film Patterning



- 1D top-hat / 2D top-hat
- Wavelength: IR, Green, UV
- Pulse length: ns, ps, fs
- Energy up to multi mJ

· BIPV patterning, LIFT/LLO, Low-E coating deletion
· High energy and large spot size
· Area rate 30 cm²/(min·W)

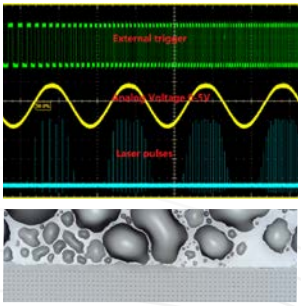
Versatile GHz Pulse for Volume Subtraction



· MHz or/and GHz, incl. burst-in-burst
· Wavelength: IR, Green, UV
· Pulse length: ps, fs
· Power up to 600 W

· Hydrogen energy, water treatment, Semiconductor dicing
· Scan/Punch process
· Ablation rate:
  Steel: 0.5 mm³/(min·W)
  SiC: 0.3 mm³/(min·W)

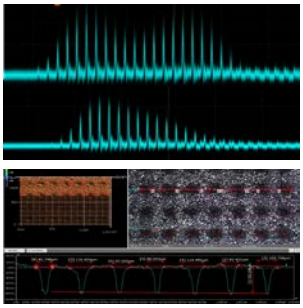
High Frequency Pulse for Surface Texturinng

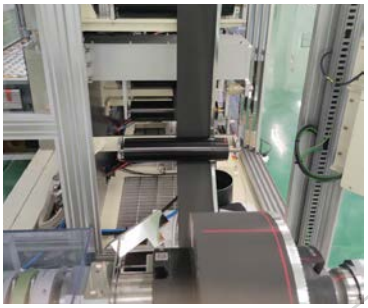


· Free Trigger up to 8 MHz
· Addressable pulse energy
· Pulse length: ps, fs
· Gaussian, top-hat

· Hydrophilic/hydrophobic, anti-fog/anti-corrosion surface properties
· Arbitrary patterning/ functionization
· PSO function at very high speed

Tailored Beam Shape for Film Patterning

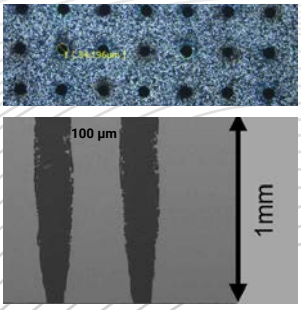


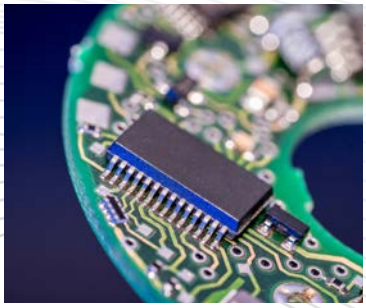


· Programable pulse profile
· Rep rate up to 8 MHz
· Power up to 600 W
· Energy up to 20 mJ

· Solid-state batteries
· Surface deterministic/statistic structuring, film cutting
· 250 W up to 378,000 holes/s

High Energy Pulse for Through Vias Drilling

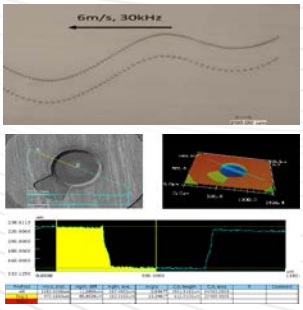


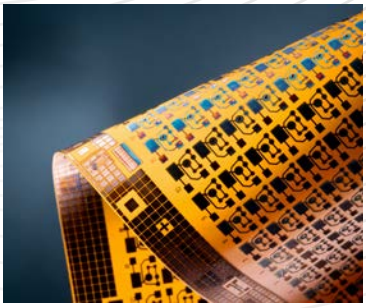


· Adjustable pulse length: ns via µs to cw
· Flexible rep rate: single shot to 8 MHz
· Wavelength: IR, power up to 600 W

· 3D packages / 3D MEMS in electronic engineering
· Through Via drilling by punch
· High energy for large aspect ratio, >1:10 vias on 1 mm thick Si wafer

Free Triggerable Pulse for Microelectronics





· Free Trigger up to 8 MHz
· Analog modulation of pulse energy up to 2 MHz
· Wavelength: IR, Green, UV
· Pulse length: ns, ps, fs

· Blind Vias in flexible PCB
· PSO signal enhanced constant pulse density
· Scalable process speed with high frequency/high power lasers

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