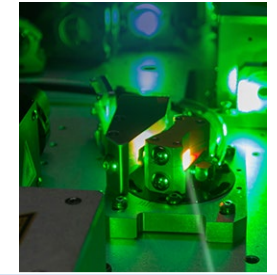
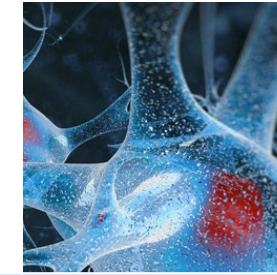
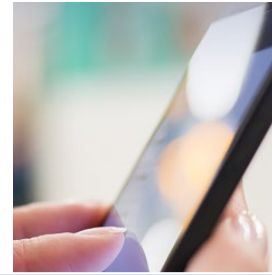


Coherent, Inc. – Corporate Profile



- Corporate Headquarters: Santa Clara, California, USA
- Founded in 1966
- Sales \$1.4 Billion (FY19)
 - Asia: 63 %; US: 16 %; EU: 18 %; RoW: 3 %
- ~5,200 Employees
- 27 Manufacturing Sites in 10 Countries



| Laser technology | Microelectronics | Material Proc. | OEM Components & Instrumentation | Scientific Research Government Prog. |
|------------------|------------------|----------------|----------------------------------|--------------------------------------|
| CO | ☑ | ☑ | ☑ | ☑ |
| CO2 | ☑ | ☑ | ☑ | ☑ |
| Excimer | ☑ | ☑ | ☑ | ☑ |
| CW Tunable | | ☑ | ☑ | ☑ |
| Diodes | ☑ | ☑ | ☑ | ☑ |
| DPSS (CW, Q-S) | ☑ | ☑ | ☑ | ☑ |
| OPSL (CW) | ☑ | | ☑ | ☑ |
| Ion | ☑ | ☑ | ☑ | ☑ |
| Pico/femto | ☑ | ☑ | ☑ | ☑ |
| Fibers | ☑ | ☑ | ☑ | ☑ |
| Tools | ☑ | ☑ | ☑ | |
| Measurement | ☑ | ☑ | ☑ | ☑ |

Ultrafast Technologies for Material Processing

Technology

ps lasers

fs fiber lasers



HyperRapid NXT



Monaco 80-60



Monaco UV

Performance

| | | |
|---|---|--|
| IR: 1064 nm 100 W to 4 MHz 250 μJ/400 kHz | green : 532 nm 50W at 500 kHz 125 μJ/ 400 kHz | UV: 355 nm 30W at 500 kHz 75μJ/400 kHz |
|---|---|--|

| | | |
|--------------------------------------|---|------------------------------------|
| IR: 1035 nm 60 W 80 μJ/750 kHz | green : 517 nm 30 W 40 μJ/750 kHz | UV: 345 nm 20W 20μJ/1.25 MHz |
|--------------------------------------|---|------------------------------------|

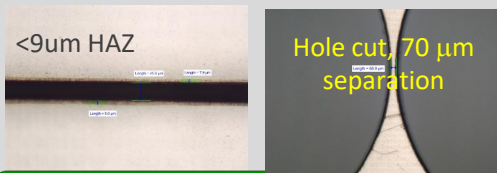
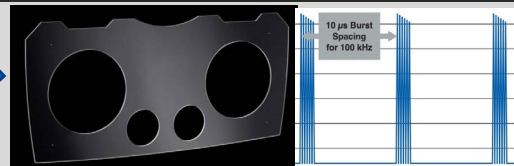
Enablement

SmartCleave/burst

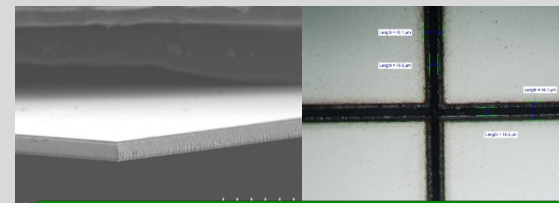
HALT/HASS testing

UV/DUV Expertise

Applications



OLED processing



Si wafer cutting



Glass/Sapphire processing

Complementary Ultrafast Technologies for Material & Life Sciences

Technology

Ti:Sapphire (800 nm)

Ytterbium (1040 nm)

“mode-Locked”
50-100 MHz

Vitara



Chameleon



Axon



Fidelity



Discovery



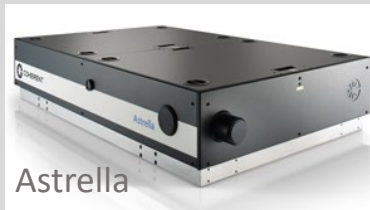
Shortest pulses, intrinsic tuneability

Highest power, add-on tunability

Performance

“amplified”
1-1000 kHz

Astellra



Legend Elite



Low rep rate, shortest pulses, highest energy
1-10 kHz 25 fs 20 mJ

High, flexible rep rate, highest power
SS to 50 MHz 60 W

Monaco/
Monaco/HE



Enablement

Vertical supply chain

Industrial mftg.

HALT/HASS testing

Applications

EUV generation

Atto Physics

NL-Imaging

THz generation

Time-res Spectr.

2D spectr

Matl. Proc.