

Astrella

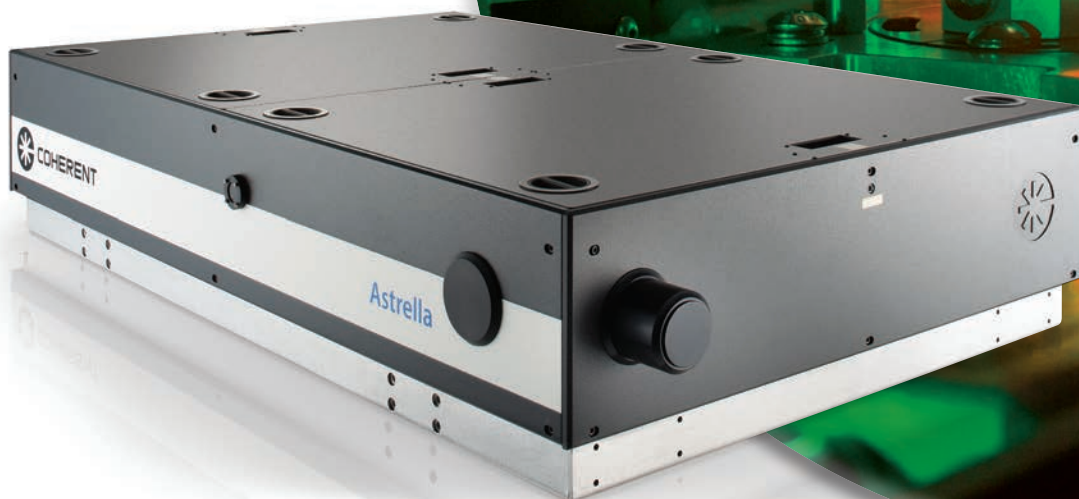
Industrial Reliability for Femtosecond Research



Superior Reliability & Performance

Astrella

Ultrafast Ti:Sapphire
Amplifier



Astrella is a next-generation, high-performance, kHz amplifier at the forefront of ***the Industrial Revolution in Ultrafast Science.***

- Unmatched combination of performance, reliability, and affordability
- Designed and manufactured using advanced stress testing (HALT/HASS) in a customized test chamber
- Industrial-grade laser reliability allows you to focus on results, publication, and funding

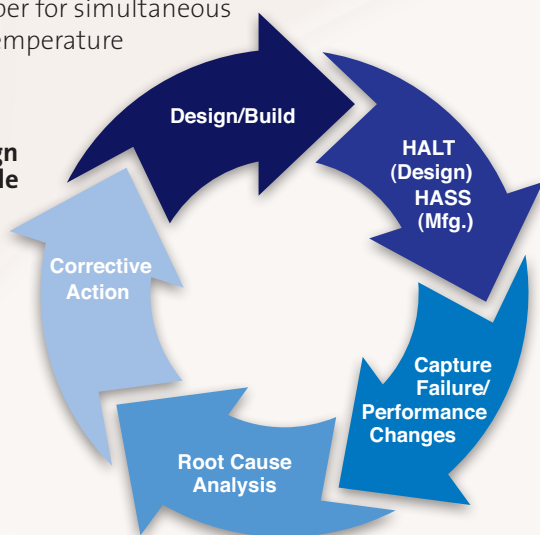
The Industrial Revolution in Ultrafast Science

A Superior Way to Design and Build Ultrafast Lasers

Unique HALT/HASS testing with enhanced engineering margins drives reliability and lifetime

- HALT (Highly Accelerated Lifetime Testing)
- HASS (Highly Accelerated Stress Screening)
- In-house chamber for simultaneous vibration and temperature stressing

Industrial Design and Testing Cycle

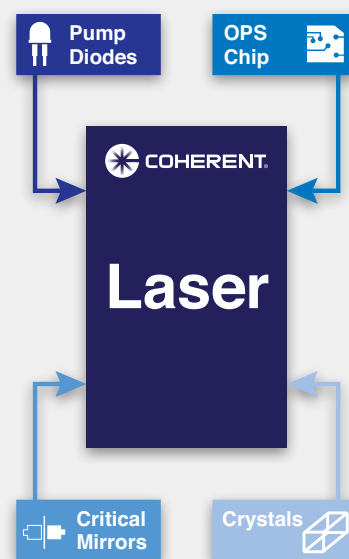


Unmatched Industrial Laser Experience

- Worldwide leadership in industrial lasers – superior reliability, lifetime, breadth of technology
- Advanced manufacturing expertise – contamination control, material qualification

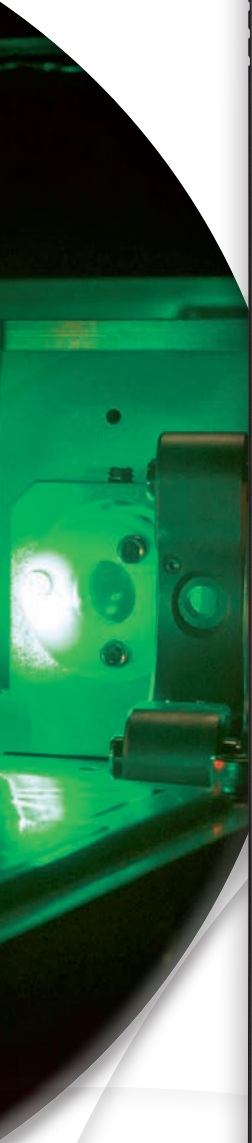
Vertical Integration

- In-house production of diodes, crystals, critical optics – superior supply and quality control



Vertical Integration





Industrial Reliability

Each unique Astrella sub-system is HASS-verified before integration. The complete amplifier is then HASS-verified for unmatched reliability and lifetime.

Sealed Stretcher/Compressor

- Robust, thermally stabilized
- Controlled clean environment
- Proprietary optical design
- Stable pulse width and minimized power degradation over time

Robust Regenerative Amplifier

- STAR (STable Architecture Regenerative amplifier) platform
- Maximum stability, efficiency and beam quality
- Thermally-stabilized baseplate
- Low profile, stable mounts
- Unique, Ti:Sapphire slab-geometry enables simple, water-only cooling

Vitara Oscillator

- The most successful and reliable broadband oscillator on the market
- Laser of choice in the vast majority of high uptime facilities
- Integrated Verdi pump laser for proven reliability
- In-house manufacturing and quality control of critical, negative dispersion optics

Revolution Amplifier Pump

- Built on the strengths of its successful predecessor, the Evolution
- Ample performance margin over design specification



The Coherent Advantage

Reliable Performance. Reliable Support.

Reliable Performance

- All production systems HASS-verified for reliability
 - Available with either <35 fs or <100 fs pulse width
 - Pulse energy specified to >7 mJ at 1 kHz
 - Perfect OPA pump (TOPAS, OPeRA Solo) with coverage from UV to IR

Reliable Support

- Largest and most experienced, factory-trained, global network for rapid, expert scientific support
- Astrella reliability supported by market-leading, value-based service plans offering up to 5 years coverage
- Certified spare parts available from regional warehouses in US, Europe and Asia for faster delivery



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