



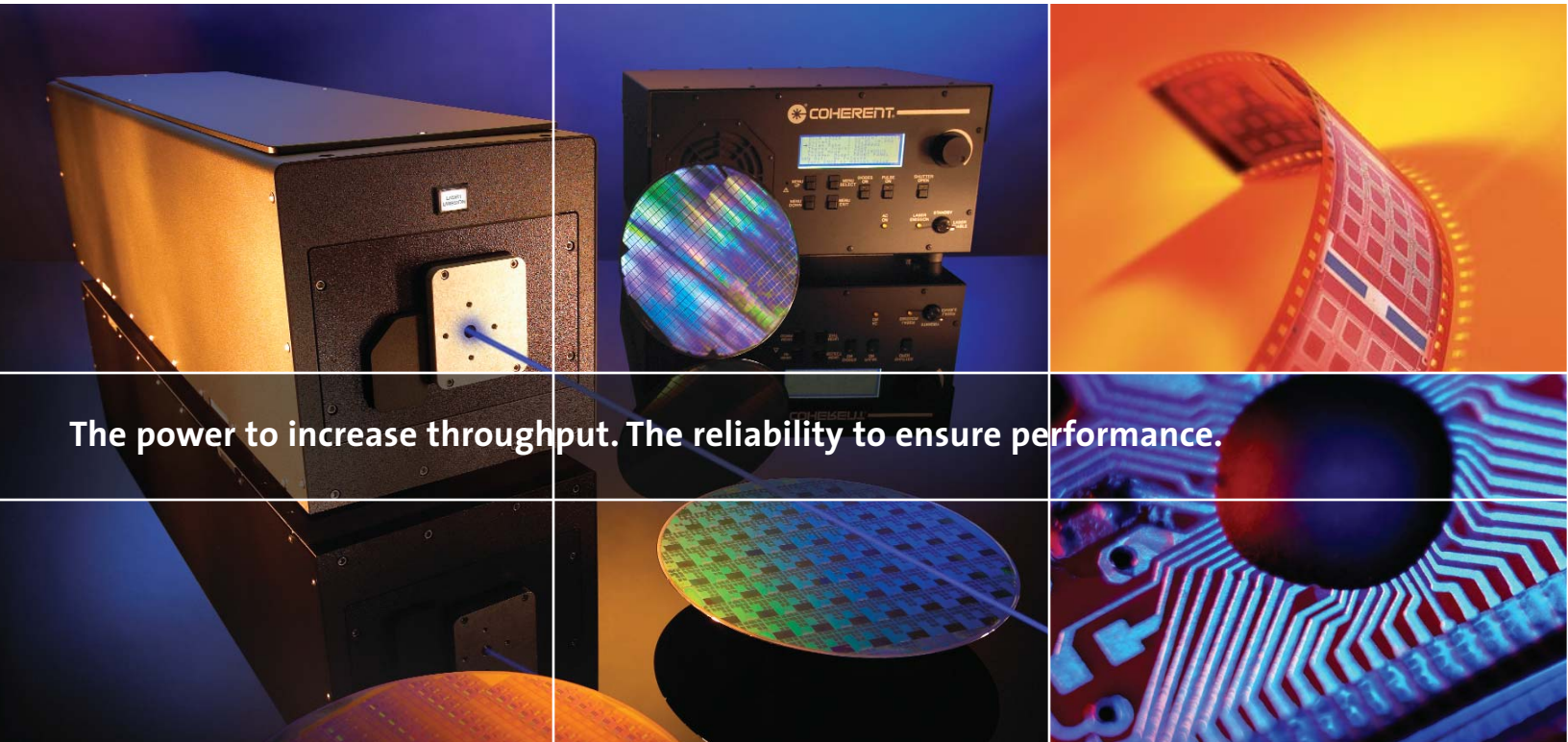
# AVIA

The World's Most Reliable Lasers for Precision Micromachining

Diode-Pumped Solid-State, Q-Switched Lasers

A close-up photograph of a microchip being processed by a laser. The chip is dark and has various components and markings on its surface, including the letters "Y2" and "1B". A bright green laser beam is focused on a specific point on the chip, creating a small, bright spot of light. The background is dark, and the overall lighting is dim, with the green laser light providing the primary illumination.

Superior Reliability & Performance



The power to increase throughput. The reliability to ensure performance.

- **Maximum System Uptime and Availability**
- **Better Performance by Design**
- **Manufactured to Meet Your Requirements**
- **Global Service and Support**

**Meet the AVIA Family**

AVIA™ is a family of diode-pumped, solid-state, Q-switched lasers, available with average powers currently ranging from 1W to over 30W. These lasers deliver high repetition rate and high output power at wavelengths of 266 nm, 355 nm and 532 nm. The output and reliability characteristics of AVIA make them ideal for:

- Micromachining
- Ceramic Processing
- Flex Circuit Machining
- Microvia Drilling in PCBs and Silicon
- FPD/Glass Micromachining
- Silicon and Low-k Dielectric Scribing
- Marking, Engraving and Coding
- Semiconductor Manufacturing
- Solar Cell Manufacturing

**When Reliability is Critical, Turn to AVIA Lasers**

The high cost of production downtime makes reliability the single most important requirement for process equipment in many demanding manufacturing applications.

For machine tools that utilize lasers, this means that the true long-term cost of ownership is far more dependent upon uptime and service characteristics than initial purchase price. Every aspect of the design, manufacturing, and field service of AVIA lasers is specifically targeted to maximize product uptime and availability.

**Reliability by Design**

Beginning with a comprehensive Failure Mode Effect Analysis, we design our systems to meet your 24/7 operation's requirements. Our design then addresses each potential failure mode with the intent of eliminating it.

System performance is maximized through closed loop design, where each critical process within the laser is monitored by a sensor, and then optimized for your specific application and operating conditions.

All Coherent products are designed to be scalable, to meet your requirements both today, and in well into the future. This all



translates into more consistent processing, higher throughput, easier serviceability, and higher machine availability through higher uptime.

### Building in Reliability

By manufacturing key components within the laser, we control the quality of the laser by controlling the quality of its components. Our Continuous Improvement Process enables us to optimize production processes and workflow, helps us to assign the proper resources necessary to implement

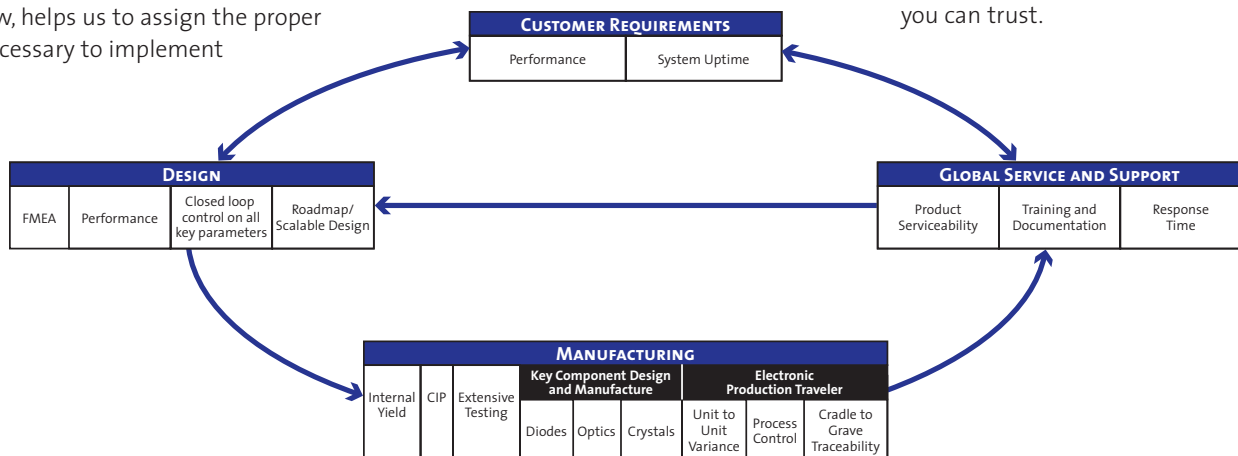
improvements, and provides established metrics for measuring progress. Furthermore, AVIA lasers provide higher operating headroom than the industry standard, ensuring the longest possible operating lifetime.

Our electronic traveler system provides a life-long record of over 800 test parameters for every laser we build. This results in extremely low unit-to-unit variability and a tight process control which enhances process consistency

for you. It also gives us cradle-to-grave product traceability and history for supporting every laser in the field.

### Support You Can Count On

Our global support network of people and parts enables us to respond quickly when you need us. Our products are designed with serviceability in mind, and our training and extensive documentation make you the expert. With over 40 years of experience as the industrial laser leader, Coherent is a name you can trust.



**Coherent as your partner.**

To compete and succeed in today's fast-paced research and manufacturing environments, you need a laser partner who understands your needs. A partner who can provide a wide range of technology solutions, and the support that goes with them.

Since 1966, Coherent has been helping customers by providing complete laser-based solutions for a wide range of commercial and scientific applications.

With a heritage of innovation and an uncompromising position on quality, Coherent is the most forward-thinking and diversified manufacturer of solid-state, gas, excimer and semiconductor lasers in the industry.

For more information, visit us on the Web at [www.Coherent.com](http://www.Coherent.com). Or call 800-527-3786.



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