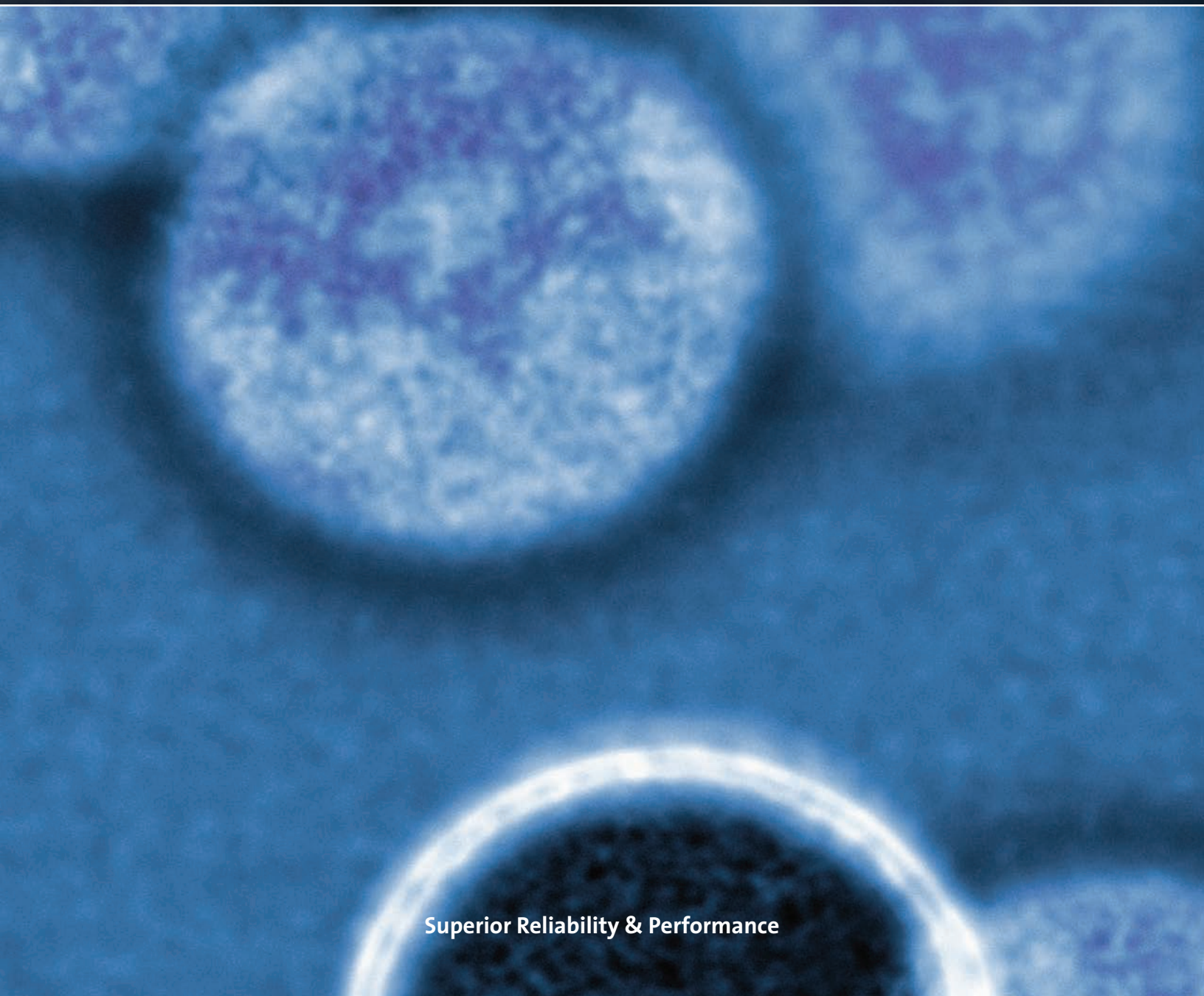
COHERENT

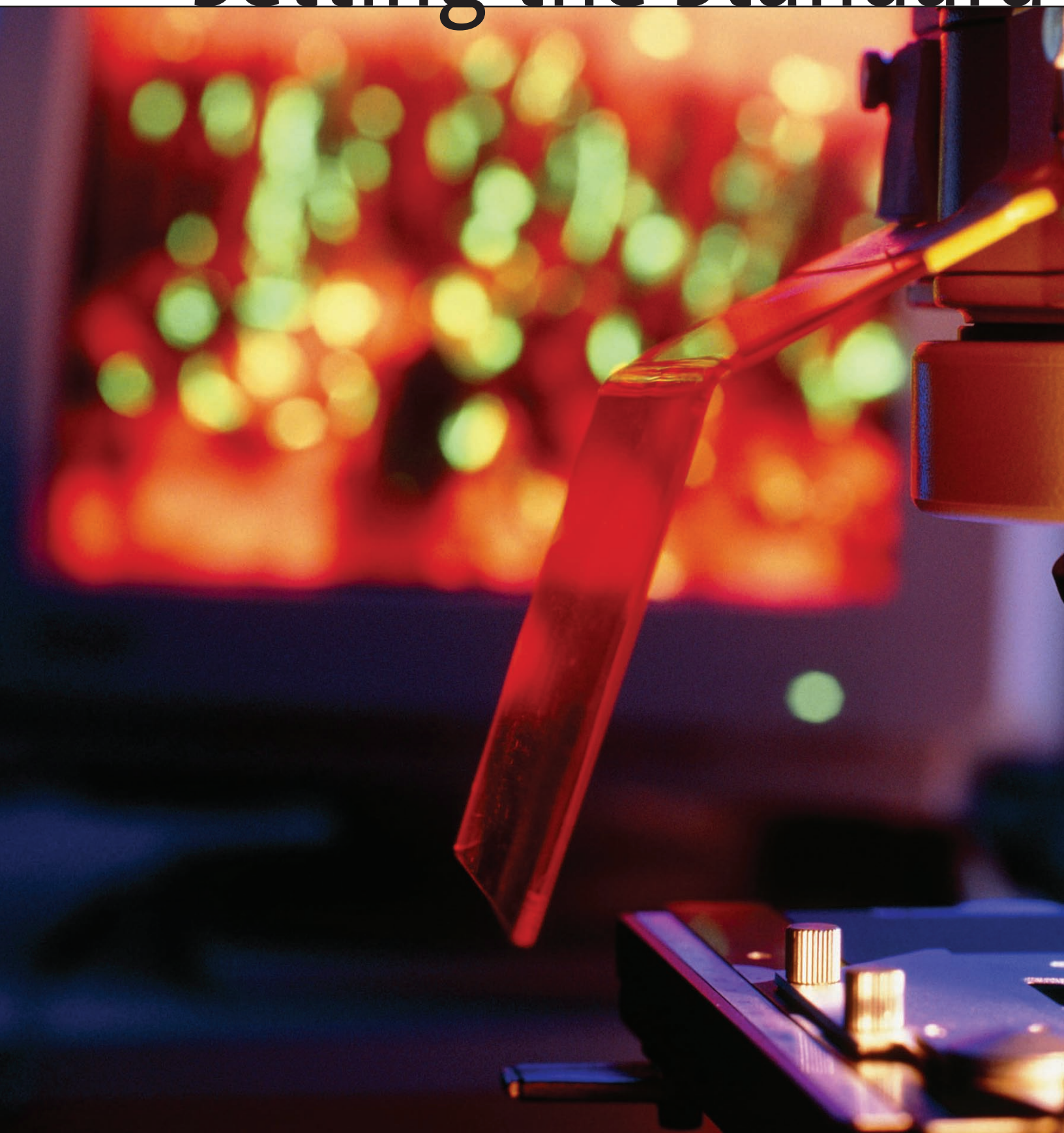
OBIS

Family of Smart Lasers.



Superior Reliability & Performance

Setting the Standard



for Your Application.

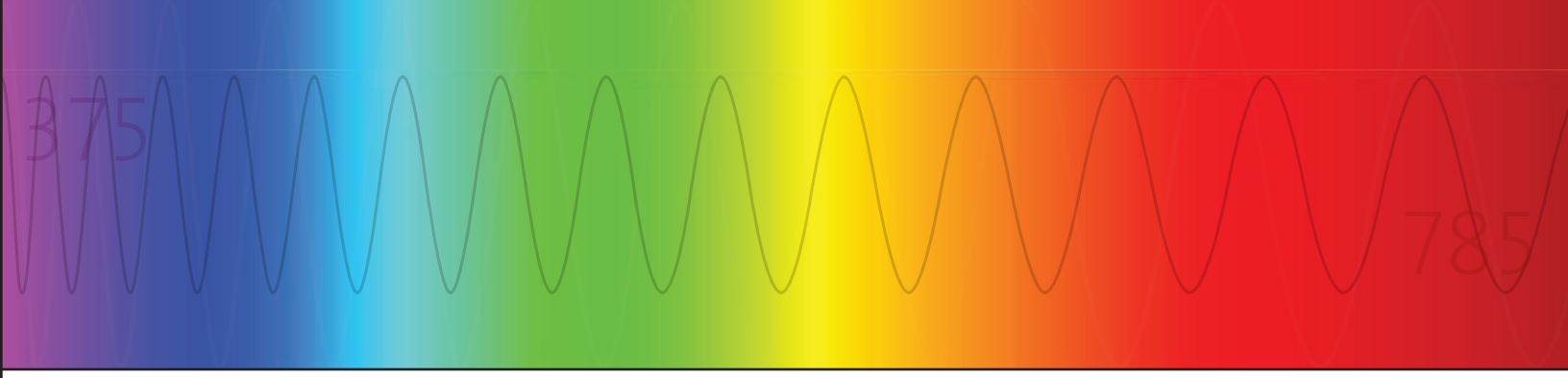
OBIS PHILOSOPHY

Different technologies continue to serve a demand for distinct wavelengths in Life Sciences and other instrumentation applications. Coherent has set the standard in reliability for these applications with its laser diode and optically pumped semiconductor laser based solutions. What was missing, and what was required by researchers, was a smart laser platform – one that utilized available technologies but had the ability to provide wavelengths throughout the spectrum. A laser platform that had intelligence designed in, but with a design that would offer the plug-and-play value much demanded from both OEM and end user applications.

This is OBIS.
A Smart Laser.

Plug-and-play value

OBIS is a breakthrough laser platform offering plug-and-play simplicity that allows for faster integration thereby reducing the cost of integration and time to market. With its smart electronics, integrated controller and compact packaging, OBIS completely eliminates the cost and complexity of separate controllers. OBIS is the smallest – and smartest – laser platform on the market. Simply plug in the DC source and your laser is operating. The choice of different ways to interface with the laser allows the user the ability to choose the smartest way of operation for each given application.



Widest range of wavelengths

The OBIS family includes lasers from the UV (375 nm) to the near IR (785 nm). First, by utilizing Coherent's proprietary Optically Pumped Semiconductor Laser (OPSL) technology. The unique wavelength scalability of OPSLs allows OBIS to tailor wavelengths to application requirements instead of vice versa. With Coherent's OPSL technology, the OBIS solutions are able to meet the center range of visible wavelengths. Second, Coherent's laser diode based solutions cover the edges of the wavelength spectrum. While two different technologies are used within the OBIS solution, all OBIS lasers feature the same beam parameters in packages that allow users to plug-and-play alternate wavelength as their application demands.

Smart electronics

The design of today's high density electronics allows for the significant reduction in size of circuit boards. OBIS takes these smart electronics concepts and uses them to design an ultra small controller board inside the laser head. Providing 12VDC input to the laser head is the only thing needed to start the laser with no further cable connections required. OBIS smart electronics ensures superior low noise optical performance with standard commercial DC supplies. High speed precision light loop control circuits set the performance standards for the OBIS platform.

Smart choice for integration

A smart laser is easy and efficient to integrate. Packaged in an ultra compact housing ensures the high performance OBIS lasers fits seamlessly in today's compact instrument designs. This size is enabled by design innovations such as novel micro-optics and packaging. The ultra compact footprint truly pays off when multiple lasers are necessary for integration into the same instrument. For most applications, a DC connection is all that's needed, further reducing integration issue and size.

Intelligence built in

Each OBIS laser comes with a USB and analog interface for applications that require detailed control of operation parameters and review of system status. The integrated RS485 interface simplifies control of multiple heads. A multicolor LED integrated in the top cover of the housing provides laser status in the most convenient and effortless way.

Reliability designed in

OBIS is based on Coherent's proven OPSL and laser diode technologies and are the most reliable technologies for life sciences applications, with more than 50,000* lasers installed in demanding applications including 24/7 environments. Rigorous testing is part of the design process and is key to the reliability and uptime in OEM and end user applications. Coherent's latest generation of its patented Permalign plays a critical role in the superior reliability and ensures uptime in OEM and end user integrations.

Industrial design and production

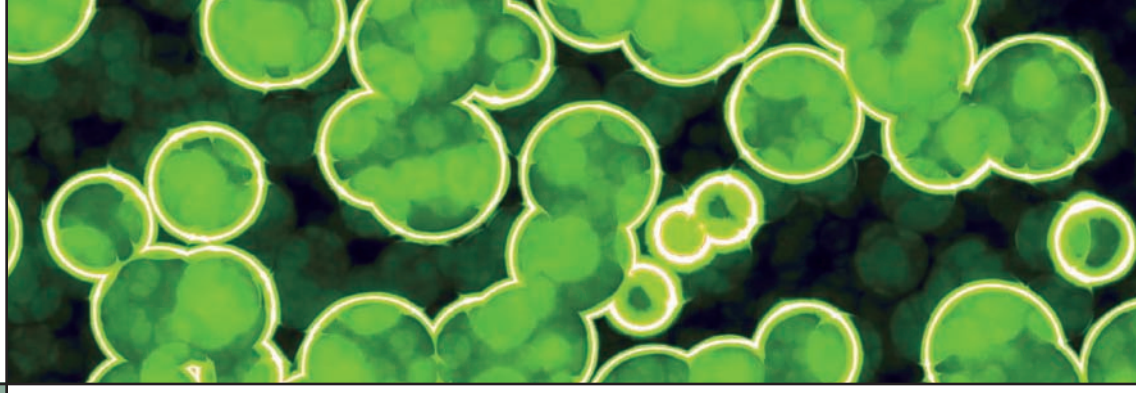
A laser is only as good as the production and design process behind it. This is the thinking behind the state-of-the-art industrial design of the OBIS. Using batch processed manufacturing and miniaturized micro-optics results in consistency in manufacturing. Statistical process control in manufacturing ensures continual performance from unit to unit that OEM applications can rely on.

*OPSL and laser diode products using this technology include Sapphire, Genesis and CUBE.

Applications.

OBIS serves a wide area of applications where, for system builders, its smart design enables a new era of tool development. This includes Life Sciences, environmental monitoring, inspection and machine vision applications. In Life Sciences, OBIS is primarily used for fluorescence excitation of dyes and proteins in applications including flow cytometry, microscopy, DNA sequencing or drug discovery. Its wavelength scalability is key to support new assay developments in applications ranging from research to clinical implementations such as cell counting for antiretroviral HIV therapies.

For inspection, the 375 nm UV light from OBIS enables wafer defect detection in LED production. In the Machine Vision segment, the OBIS 785 nm solution is an eye safe approach.



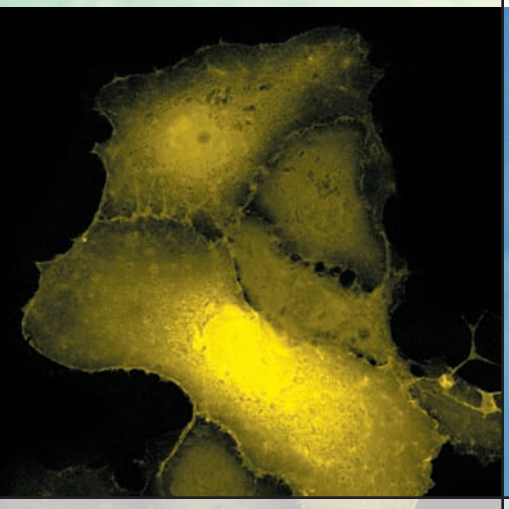
OBIS GROWTH ROADMAP

The concept of plug-and-play simplicity provides value to all OBIS customers. Every OBIS laser is already a ticket into future versions of OBIS. The portfolio of OBIS laser engines will expand in both power and wavelength with the mission to advance applications and meet new demands demonstrating future value for OEM customers.

We're already working on solutions to add value by combining OBIS laser engines with our beam shaping and fiber delivery capabilities and expertise. We are working with OEM customers on platform subsystem solutions that translate the OBIS engine into OBIS subsystem values. Please contact your local Coherent sales representative to learn more on how OBIS can add value to your application from engines to future subsystems.

VISIT THE OBIS LASERS PAGE ON OUR WEBSITE FOR MORE INFORMATION AND THE LATEST NEWS:

www.Coherent.com/OBIS



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. Or call 800-527-3786.

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