

ePulse: Laser Measurement News

The true measurement of laser performance



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Welcome to **ePulse: Laser Measurement News**, a review of new developments in laser analysis, beam diagnostics, and beam profiling. Each issue contains industry news, product information, and technical tips to help you solve challenging laser measurement and spectral analysis requirements. Please forward to interested colleagues.

Tutorials

Power Meters Rise to the Challenge

While the laser industry is steadily advancing -- new wavelengths, higher powers and energies, and new applications -- the basic technology of laser power/energy measurement has not changed in the last 10 years. There are still three basic ways to measure laser power and energy: thermopile detector, photodiode detector, and pyroelectric detector. Read the details at [Power Meters](#).

Characterization of Laser Beam Profiles

There are many applications of lasers in which the beam profile is of critical importance. When important, it is usually necessary to measure to insure that the proper profile exists. For some lasers and applications this may only be necessary during the design or fabrication phase of the laser. In other cases it is necessary to monitor the laser profile continuously during the laser operation. Find out how spurious laser modes influence the beam profile to cause degradation in laser performance and how the profile is measured to enable correction of mode problems. Read the details at [Laser Beam Profiles](#).

Application Note

[850 Watt CO2 laser beam profile changes during the day.](#)

Quasar FAQ's

With the introduction of the first wireless power meter head and display, there have been many questions concerning Ophir-Spiricon's new Quasar. Read the [FAQ's](#).

What's New in Laser Measurement

Industry's First Real Time, High Power CO2 Laser Beam Profiler

The II-VI-CO2-58 Industrial Laser Beam Analyzer is a laser beam profiling system that enables the quantitative measurement and viewing of high power CO2 beams. The system diagnoses faults quickly, in real-time, and corrects issues related to beam stability, alignment, tuning, and optimization. Find out more at [II-VI](#).

New 2008 Catalog

[Download the new 2008 Ophir-Spiricon Laser Measurement Catalog today.](#)

Laser Q&A

How do you sample/attenuate without distorting the beam profile to achieve the required power/energy level at the camera sensor?

Find out how at [Laser Q&A](#).

Fast Ship Program

Ophir-Spiricon's new [Fast Ship program](#) provides one-day shipment of the most popular power/energy, beam profiling, and M2 laser measurement equipment.

eProfiles

Kenneth Ferree, Vice President of Sales, Ophir-Spiricon Inc.

Kenneth Ferree has seen a lot in his days, whether he's angling for Bass, creating an Internet marketing program, or making sure the National Ignition Facility has the right beam profiling equipment in hand as they work to harness 192 giant laser beams onto a target the size of a pin head. Find out more at [eProfiles: Kenneth Ferree](#).

Conferences & Exhibitions

[ICALEO](#)

October 20-24, 2008
Pechanga Resort
Temecula, CA

About Ophir-Spiricon Inc.

Ophir-Spiricon is part of the Ophir Optonics Laser

Compact, High Accuracy, USB 2.0 Industrial Beam Analyzer

The BA150 Industrial Laser Beam Analyzer. The BA150 is a laser beam profiling system that analyzes key laser parameters in order to maintain peak performance of precision material processing lasers. A compact, self-contained unit that fits in almost any glove box type laser system, the BA150 includes a state-of-the-art USB 2.0 silicon CCD camera and advanced beam analysis software. Find out more at [BA150](#).

Pulsar-4: Multi-Channel Smart Head Interface for Laser Meter Measurement

The Pulsar-4 Multi-Channel Smart Head to PC Interface accommodates Ophir's Smart Heads and converts a PC or laptop into a full-featured laser power/energy meter. The USB interface functions as the gateway connection between the PC and the laser/power energy meter, eliminating the need for an external display. It records pulse energies at up to 20,000 Hz for all 4 channels simultaneously, and is designed with an external trigger that measures missing pulses or specific pulses designated by the operator. Find out more at [Pulsar](#).

Highest Accuracy USB CCD Cameras Design for Laser Beam Profiling

The SP503U and SP620U are USB 2.0 Silicon CCD Cameras designed specifically for laser beam measurement applications. They capture and analyze wavelengths from 190nm - 1550nm, both continuous wave (CW) and pulsed mode. The cameras feature the highest dynamic range in the industry, up to 64dB, and a programmable, high-speed electronic shutter. Both also include a photodiode synch to capture scattered laser light at even the most challenging nanosecond pulse rates. Find out more at [USB Cameras](#).

Measurement Group. The Laser Measurement Group provides a complete line of instrumentation including power and energy meters, beam profilers, and spectrum analyzers. Wholly focused on laser measurement, the group's modular, customizable solutions serve manufacturing, medical, military, and research industries throughout the world. Since 1978, an unwavering commitment to forward thinking has kept us "the partner of choice" in optoelectronics.

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