

ePulse: Laser Measurement News

The true measurement of laser performance



ePulse: Laser Measurement News January 2012

Happy New Year! Welcome to **ePulse: Laser Measurement News**, a review of new developments in laser beam measurements, 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 or have them [subscribe](#).



See Us at Photonics West Next Week

Innovative Developments at Photonics West 2012 Include New Android App

Ophir Photonics Group will be on-site at Photonics West in San Francisco, January 24-26, 2012. Booth 1301 at the Moscone Center will feature the latest in beam profiling and laser power/energy measurement systems. Among the new products showcased will be BeamGage 5.7, StarLink, and the first-ever laser meter app for Android smartphones and tablets. [Stop by the booth](#).

Tutorials

Can a Speeding Driver Avoid Paying a Fine by Claiming the Police LIDAR Meter was Incorrect?

Most drivers get caught speeding at some time during their driving experience. A common scenario occurs when a policeman uses a LIDAR speed meter to indicate that a car is over the speed limit. [Can the driver claim that he was within the speed limit, claiming that the LIDAR instrument is not calibrated recently?](#)

Applications

How to Measure the Power of a Bar Code Scanning Laser

A bar code laser beam scans back and forth at a very high frequency so any ordinary photodiode power meter will not measure the power in the beam but rather the average power impinging on it. So how to measure the power of scanning lasers? [Find out more](#).

Technical Tips

Beam Profiling System Documentation

Ophir's beam profiling systems include comprehensive PDF User Guide Manuals. These manuals are provided on the software installation CD and are installed in the folder where the beam profiling software is loaded. [Find out more](#).

Setting up a Thermal Sensor in Energy Mode for the Best Accuracy

Video of the Month

Caring for Your Ophir Sensor

When used with a proper laser optical setup, Ophir Power Meter sensors can be used for many years without the need for repair. This video provides tips to help you get the most life from your sensor, with examples of sensor damage and how to avoid it. [Find out how to protect your laser sensors](#).



From the Blog

Easy Ways to Measure Low Power Beams

Many laser beams with powers well under a watt are commonly used for many applications which include: scientific research, fiber optic communications, LED's, CD and DVD players, laser printers, range finders, and more. What type of measurement sensor should be used for measuring low power light beams? [Get an inside look at how to overcome these challenges](#).

New for 2012 Catalogs: Power Meter & Beam Profiling

Download the latest Ophir-Spiricon Laser Measurement Catalogs today. Tutorials and products in [Power Meters](#) and [Beam Profiling](#).

Laser Puzzle

[Try your hand at this month's Laser Puzzle](#). All entries will receive a 2GB pen drive. The grand prize winner will receive a Kindle with black leather cover

and Repeatability

Start with range selection, using the lowest range that is larger than the pulse energy to be measured. Then take a look at your threshold selection. [Find out more.](#)

Measuring the Peak Power of a Pulsed Laser

When working with pulsed laser sources, laser developers and scientists are often interested in knowing the peak power, the highest power output from the laser. However, most pulsed laser power meters display the total energy of a pulse or alternatively the average power, not the peak power. How can a user measure the peak power of a pulsed laser beam using Ophir laser measurement equipment? [Find out more.](#)

FAQs

Beam Profiling

I've moved the beam profiler system to another computer and cannot find the software installation CD. How do I obtain the software? [Read the FAQ.](#)

Power/Energy Meters

Here are three frequently asked questions about our new BeamTrack thermal sensors.

Can I measure position and size of a pulsed laser using a BeamTrack sensor? [Read the FAQ.](#)

Are BeamTrack sensors backwards compatible with the Nova-II/Vega/Juno devices already in my possession? [Read the FAQ.](#)

For what type of laser spots can we measure position and size with BeamTrack sensors? [Read the FAQ.](#)

Must I use a particular sensor only with the meter it was ordered with? [Read the FAQ.](#)

I'm pushing the Nova II or Vega power button and it won't turn on? [Read the FAQ.](#)

What's New

Why the Need for a Wireless Laser Power and Energy Measurement Interface?

Most laser measurement setups don't require a wireless interface. The power meter is simply connected to the sensor by a cable. However, for certain applications a wireless interface is really useful. For example, one of Ophir's clients who manufactures medical implants uses eight pulsed lasers to perform cutouts on the implants. The production floor is controlled from a central location through a server connected to the lasers. He wanted to measure each laser pulse and store the data for analysis. [Find out more about Wireless Laser Power.](#)



[Many products available next business day in US](#)

BeamTrack 3A-QUAD, High Sensitivity, High Accuracy Laser Power/Energy/Position Sensor

BeamTrack 3A-QUAD is the first high sensitivity thermal detector to combine multiple functions - power, energy, position - in a single, compact laser sensor. The sensor accurately measures power from 100 μ W to 3W and energy from 20 μ J to 2J. In addition, it accurately tracks beam position down to 0.1mm. This provides increased measurement accuracy for high sensitivity applications where it can be difficult to center laser beams on sensors with small apertures and

and a \$50 Kindle gift card. E-mail answers to sales@us.ophiropt.com. Need a hint? E-mail kevin.kirkham@us.ophiropt.com

Here are the [answers to the last issue's puzzle](#). The winner was **Stefan Ludlow, CIBA VISION.**

Trade Shows

Photonics West

January 24-26, 2012
San Francisco, CA
Booth 1301

MD&M West: Medical Design & Manufacturing

February 14-16, 2012
Anaheim, CA
Booth 1991

LIA LAM (Laser Additive Manufacturing Workshop)

February 29 - March 1, 2012
Houston, TX

OSA OFC/NFOEC

March 6-8, 2012
Los Angeles, CA
Booth 1005

Fast Ship Program

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

Free Laser Measurement Equipment

If you're an end user of our laser equipment, let's hear about it and how you use it in your application. You can write the whole article or you can collaborate with our talented writers. In exchange, we can negotiate you receiving one of our latest innovative instruments, detectors, or profiling cameras and software to use in your lab. E-mail kevin.kirkham@us.ophiropt.com In a few nanoseconds, you'll be telling the laser world about your application using our equipment and a femtosecond or two later you'll be logging your data on our equipment like the Nova II, Vega, Quasar or BeamGage.

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[The Ophir Laser Measurement Group](#)

Web

www.ophiropt.com/photonics

About Ophir-Spiricon, LLC

With over 30 years of experience, Ophir Photonics, a Newport Corporation brand, provides a complete line of instrumentation including power and energy meters, beam profilers, spectrum analyzers, and goniometric radiometers. Dedicated to continuous innovation in laser measurement, the company holds a number of patents, including Ultracal™, the baseline correction algorithm that helped establish the ISO 11146-3 standard for beam measurement accuracy. The Photon family of products includes NanoScan scanning-slit technology, which is capable of measuring beam size and position to sub-micron resolution. The company's modular, customizable solutions serve manufacturing, medical, military, and research industries throughout the world.

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