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Try our revolutionary Jaz configured for solar irradiance



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Visit us at  
Laser 2009



# Innovations in Photonics

Spring 2009

## Introduction

Welcome to Ocean News, the platform where you can read about the latest topics and innovations in the field of photonics.

In this newsletter we will give you an overview of the exciting new products we have launched lately. Take for example NeoFox. This optical phase measurement system is especially suited for applications where sensitivity to drift and system stability are important – with formulations available for a variety of oxygen sensing needs.

We will also introduce the new market standard for NIR spectroscopy.

NIRQuest delivers more flexibility than ever before with its additional grating options and advanced electronics.

You'll also meet ColorBUG, an ingenious handheld device for testing colour and illuminance. Because it communicates wirelessly with your iPhone colorBUG eliminates the need for tethering to a PC.

And you will find inside the latest news about Jaz, some nice tips and tricks and other interesting information.

Enjoy your reading!  
**The Ocean Optics Team**

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Go wireless with the new Remora

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Introducing NeoFox, the new oxygen sensor

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New standard in NIR spectroscopy

## Try our revolutionary Jaz

Try Jaz configured for absolute irradiance  
Want to know if Jaz is the right solution for you?  
You can now try Jaz configured for absolute  
irradiance free of charge.

### How it works

Send us an email or return the form on the back  
by email or fax and we will send you the details  
about the system and a rental agreement. Send  
back the rental agreement and we will ship the  
system to you to test for one week. If you like it,  
send us your order. Else, send it back to us.

**It is that easy!**

Contact the sales team for more information  
about this try-before-you-buy promotion at  
[info@oceanoptics.eu](mailto:info@oceanoptics.eu)

**TRY**  
BEFORE YOU BUY



**REMORA**



## Go wireless with Remora

From spectrometer to powerful Wi-Fi™ information server  
Remora is the convenient, low-cost adapter that turns your  
Ocean Optics spectrometer into a robust web and information  
server. Attach Remora to your QE65000, HR2000+ or HR4000  
Spectrometer to capture data wirelessly or over Ethernet.

### Adding Remora is quick and simple

Your Remora comes with a static IP address so that configura-  
tion is a snap. Simply browse to the Remora web interface to  
configure it for your network and control your spectrometer  
through Wi-Fi or Ethernet-enabled devices such as PCs, mobile  
phones, PDAs and more.

### Control basic acquisition parameters via web interface

Remora is an incredibly handy tool for operating your spec-  
trometer remotely – perhaps to poll the spectrometer in your  
lab for measurement results or to change spectrometer setup  
parameters such as integration time and signal averaging.  
What's more, spectrometers equipped with Remora can be  
deployed as a network of devices that collect real-time data  
that is instantly accessible via the Internet.

Go to [www.oceanoptics.eu/remora](http://www.oceanoptics.eu/remora) for more information.

# JAZ

Latest News



## Jaz-Mount

### Secure Jaz with the new Jaz-Mount

As a lot of Jaz customers like to use Jaz looking upwards measuring sunlight, LED lighting etc, it became obvious our Jaz needs to be placed securely on a fixed (and defined) spot. That's why we have developed the Jaz-Mount which allows you to place Jaz on a tripod or other fixture. The Jaz-Mount has 3 standard 1/4"-20 threads, to orientate Jaz in all possible directions.

For more information about this product, please contact our sales team at [info@oceanoptics.eu](mailto:info@oceanoptics.eu)

### From multipurpose to dedicated device

We have released our first custom application for the modular Jaz spectrometer platform: JAZ-A-IRRAD. This application changes Jaz into a dedicated light meter allowing you to measure calibrated absolute irradiance without any need for an external computer. The captured data of the selected light source can be post processed to give the intensity parameter of choice, whether it be Watts/cm<sup>2</sup>, lumen, lux, PAR or any other light intensity parameter.

### Get accurate data fast and hassle free

JAZ-A-IRRAD comes on a SD Card, and Jaz's unique internal software will adapt its user interface, functionality and post processing capabilities creating a robust and foolproof instrument. It allows you to take it into the field, capture quick measurements and return to your lab for analysis. The 3 button wizard makes operation so simple that even non-spectroscopy experts are able to perform fast and accurate measurements without any up-front knowledge.

### This is just the beginning

"This application extends the use of Jaz for solar irradiance in the field or LED analysis on site, like in greenhouses or residential areas where carrying an additional laptop is not very convenient," Marco Snickers of Ocean Optics explains. "This is only the first application which alters Jaz's functionality to perform a dedicated task. There will soon be many more to follow, showing the versatility of our new developed spectroscopy platform. Operating Jaz will be as simple as using an electronic multimeter."

For more information about this product, please contact our sales team at [info@oceanoptics.eu](mailto:info@oceanoptics.eu)

## First Jaz-A application now available





## Tips & Tricks

### Increased sensitivity

#### Using a detector collection lens

There are very easy ways to increase the sensitivity of your spectrometer. One of the easiest is to make sure you have included our detector collection lens in your custom configured spectrometer (product code L2 or L4). This will focus light that enters the spectrometer more effectively onto the detector pixel array.

#### SAG mirrors for the visible range

If you are mostly interested in the visible area, do not forget to configure the SAG mirrors to boost your sensitivity (SAG+UPG).

#### Sensitivity in the UV range

For the UV range we have many ways to increase sensitivity. Choose one of our spectrometers with backthinned detectors (QE65000 or Maya2000Pro) or choose special gratings and mirrors for the UV range. We offer the solution for measuring down to 155 nm.

Ask our engineers for more details and send an email to [info@oceanoptics.eu](mailto:info@oceanoptics.eu)

## New O2 sensing system



#### A new system for all your oxygen sensing needs

Reduce costs, improve stability and make calibration easier with the new NeoFox Phase Measurement system. NeoFox is a fluorescence-based optical sensor system that can be used to monitor oxygen in biological samples, headspace gases, slurries, cosmetics, foods, gases and liquids in natural environments.

#### Great stability and self-calibration feature

NeoFox is a bench top device for measurement of fluorescence lifetime, phase and intensity, and is especially useful for applications where sensitivity to drift and system stability are important. What's more, NeoFox is about half of the cost of our previous phase measurement system and includes a self-calibration feature for improved electronic stability.

Visit our website at [www.oceanoptics.eu/neofox](http://www.oceanoptics.eu/neofox) for more information.



## Coating options for OEMs and product developers

Our optical-sensor coating technologies are available to OEMs and product developers designing new products for chemical-sensing applications. With our oxygen and pH indicator materials, clients can develop and manufacture a variety of custom optical sensor devices including fibre optic probes, cuvettes, Petri dishes, microscope slides and more. Also, RedEye

patches are designed especially with OEMs in mind, where high volume production runs can lower costs and monitor sample conditions more efficiently than existing methods. Additional services include sensor coating development and the licensing of Ocean Optics proprietary oxygen and pH coating technologies. Contact an applications scientist for details.



Contact us now via [info@oceanoptics.eu](mailto:info@oceanoptics.eu) to find out how we can support you and your project.



## New standard in NIR spectroscopy

# NIRQUEST

### Ranging from 850-2500 nm

This new generation of small footprint, near-infrared spectrometers is available in three models that cover various ranges between 850 nm and 2500 nm.

### More grating options

In addition to improved optical bench performance, NIRQuest Spectrometers are available with more grating options than our previous NIR Spectrometers. That allows users to take advantage of the different grating characteristics to maximize experiment setups.

### Less expensive, less complex

NIRQuest is the less expensive, less complex alternative to FT-IR and comparable technologies. It delivers the power of NIR analysis in a small-footprint instrument that is modular, versatile and perfect for a vast range of applications.

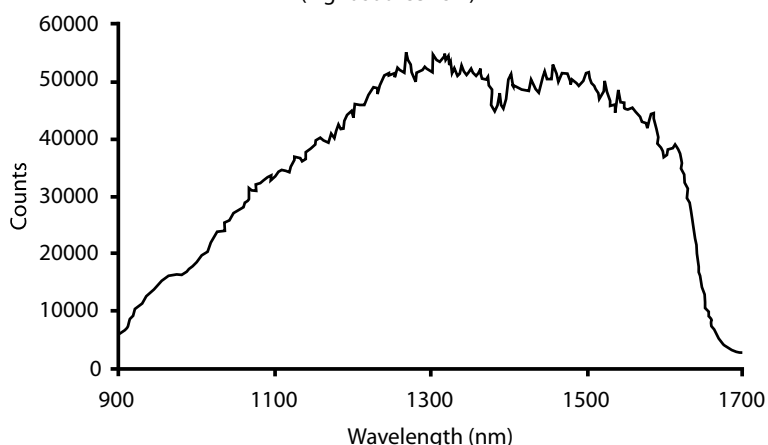
### Wide application range

NIRQuest's modular design delivers more customisation for a wider variety of applications such as medical, pharmaceutical, environmental and commercial process. Use the NIRQuest to analyse moisture content in food and beverage products or to analyse trace metals in wastewater.

For more information go to [www.oceanoptics.eu/nir](http://www.oceanoptics.eu/nir) or contact our sales engineers at [info@oceanoptics.eu](mailto:info@oceanoptics.eu)



NIRQuest512  
(Light source LS 1)



## Multimode laser subsystem

### High power, multimode spectrum stabilized laser subsystem

The spectrum stabilized laser features high output power with narrow spectral bandwidth. This unit's stabilized peak wavelength remains locked regardless of case temperature (-10 to +55 °C).

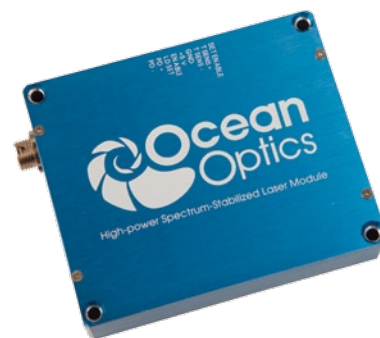
### Ideal for Raman spectroscopy and pump laser applications

Devices can be spectrally tailored to suit application needs and offer side mode suppression ratios (SMSRs) better than 40 dB. This provides an extremely high signal-to-noise performance and makes this source ideal for Raman spectroscopy and pump laser applications.

### System features

The laser is integrated with high performance laser drive and temperature control electronics in a compact, small-footprint package that weighs less than 114 grams.

For more information about the multimode laser subsystem, please contact us at [info@oceanoptics.eu](mailto:info@oceanoptics.eu)



## New Videos Available

### Support using Ocean Optics spectrometers

"Spectroscopy TV" contains a collection of tutorials designed to help and support you with the set-up and use of your spectrometers.

### Radiometric calibration videos

We now offer several new tutorials on radiometric calibration including videos about working with a cosine corrector, your own calibrated system or with an integrating sphere.

### OmniDriver and LabView programming support

You can also find our new videos on how to install OmniDriver on your PC and a tutorial with all the basics for programming in OmniDriver and LabView.

Take a look at our wide offering of videos at [www.oceanoptics.eu/tv](http://www.oceanoptics.eu/tv)

## See the latest at Laser

Visit us at Laser 2009 in Munich

Come see the latest products, the coolest set-ups and inspiring experiments. We will welcome you to our booth in Hall B1. (Booth number B1.466)

See the impressive range of products

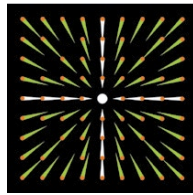
At Laser 2009 you will see all the new products we introduced in this newsletter like NIRQuest, ColorBUG, Remora and the multimode laser.

We'll also show you exciting Jaz set-ups and a nice experiment with the UV sensitive Maya.

Let us know what you would like to see

If you have any specific products that you would like to see, please let us know and we will bring them to the show.

## LASER World of PHOTONICS



Get your free ticket now by sending an email to:  
[laser2009@oceanoptics.eu](mailto:laser2009@oceanoptics.eu)

We are looking forward to meeting you at Laser 2009

## colorBUG

### The new colorBUG

Measure your lighting easily and conveniently

The ColorBug is an ingenious handheld device for testing colour and luminosity in studio, architectural and theatre applications. Perfect for lighting designers, photographers and producers, ColorBug allows you to determine CIE colour values with greater precision than ever before.

Share data with your iPhone or iPod Touch

The ColorBug makes storing and analyzing data a snap. With its wireless capabilities, ColorBug communicates directly to your iPhone or iPod touch -- without the need for a PC or cables. There's simply nothing more convenient or clever for creating the perfect colour and lighting environment.

Go to [www.oceanoptics.eu/colorbug](http://www.oceanoptics.eu/colorbug) for more information or contact one of our sales engineers at [info@oceanoptics.eu](mailto:info@oceanoptics.eu)



## Tips & Tricks

### Strip chart in SpectraSuite

Monitoring changes in your spectrum

When you want to monitor changes in your spectrum as a function of time, SpectraSuite has several options to do so. You can automatically have it save spectra at a regular rate (i.e. ms, seconds, minutes, hours) using the 'save spectra' function.

Real high speed acquisitions

SpectraSuite also has a 'high speed acquisition' mode allowing up to 1000 scans per second. If you want to monitor some particular wavelengths in your spectrum, the strip chart function comes in handy.

Selecting the strip chart

Choose 'strip chart' in the list of wizards and select one of multiple wavelengths. You will now see a graph with data as a function of time. Besides just the spectral data you can also have SpectraSuite calculate an average of integral to be monitored. Very handy with dynamic processes like titration of plasma monitoring. All this data can be saved in a convenient format for analysis.

Ask our engineers for more details and send an email to [info@oceanoptics.eu](mailto:info@oceanoptics.eu)

## Requesting More Information

I would like to receive more information about:

- Jaz try-before-you-buy promotion
- Remora adaptor for wireless operation
- Jaz-Mount
- JAZ-A applications
- NeoFox oxygen sensors
- Increased sensitivity for spectrometers
- Coating options for OEMs
- NIRQuest spectrometer for NIR range
- Multimode laser subsystem
- Tutorial videos / Spectroscopy TV
- Free ticket for Laser Show 2009
- ColorBUG handheld device for light measurements
- Strip chart in SpectraSuite
- Other: \_\_\_\_\_

## My Details

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**Contact Person** \_\_\_\_\_  
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**Country** \_\_\_\_\_  
**Tel** \_\_\_\_\_  
**Email** \_\_\_\_\_

**Fax back to: +31 - 26 319 0505**

## Tradeshows overview

### Photonics Expo 2009

20-23 April 2009 - Moscow (RU)  
Stand 3E-20

### Control 2009

5-8 May 2009 - Stuttgart (DE)  
Hall 1 - Stand 1079

### Achema 2009

11-15 May 2009  
Frankfurt am Main (DE)  
Stand J8-J9

### Sensor + Test 2009

26-28 May 2009 - Nurnberg (DE)  
Stand 12-310

### EuroLED 2009

02-04 June 2009 - Birmingham (UK)  
Stand LED42

### LASER, World of Photonics 2009

15-18 June 2009 - Munich (DE)  
Stand B1.466

### Semicon West

14-16 July 2009  
San Francisco CA (USA)  
North Hall - Stand 6258

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