



# Novelties Magazine

October 2007

## ps & fs safety goggles

NoIR announces a series of newly certified LaserShield laser goggles for protection against ultra fast picosecond and femtosecond lasers and for industrial high power pulses.

These goggles are certified according to stringent EN207 European standards.

### M L5 ratings for ultra-fast pulses:

Filter Name	CE	Wavelength
AXX	M L5	720-830
YG2	M L5	720-1075
YG3	M L5	840-1090
YAD	M L5	315-532 / 730-1064

### L7 ratings for high-power pulses:

Filter Name	CE	Wavelength
RB2	I L7	694
ALX	I L7	720-820
AXX	I L7	720-810
YG2	IR L7	750-1064
YG3	IR L7	950-1070



NoIR laser protection goggles are lightweight polymer based, and friendly to your financial budget!

## Laser cutting table

Universal Laser Systems introduces its Professional Laser Series – a new line of CO<sub>2</sub> laser systems that provide an impressive combination of high power (up to 120 Watts using dual lasers), three platform sizes, and an advanced, materials-based print driver called Laser Interface+.



### Other features of the Professional Laser Series:

- ✓ long optics-life
- ✓ a protected motion system
- ✓ lowest cost of ownership in the industry

It is ideal for high-speed cutting jobs; deep, high-throughput engraving; and fast, permanent marking.

## Synrad's 100,000th laser

On August 28, 2007, Synrad shipped its 100,000th laser. Appropriately, the 10 W laser, bound for Japan, was the first model developed by the company, more than 20 years ago.

Synrad was founded in 1984, pioneering the RF-excited, sealed CO<sub>2</sub> laser. 100,000 lasers, based on our patented "All Metal" tube technology: virtually maintenance free, with exceptionally long operating lifetimes.

Synrad's product line currently includes CO<sub>2</sub> laser models from 10 to 400 W, as well as laser marking heads, laser marking software, and power meters.

### Cutting calculator

Would you like to calculate the required power and estimated cutting speed to cut your materials? Then download the free "laser cutting calculator" at [www.synrad.com/Applications/LaserCutting.exe](http://www.synrad.com/Applications/LaserCutting.exe)



For more information, brochures and/or specifications you can send an e-mail to [info@laser2000.nl](mailto:info@laser2000.nl)

## New Cobolt Fandango™

The first compact solid state solution for 515 nm!

The Cobolt Fandango™ is built on the well-known high quality Cobolt DPSS laser platform and offers an output power of 25mW.

### Features:

- ✓ single-frequency operation,
- ✓ based on the proprietary Cobolt PPKTP™ frequency conversion technology,
- ✓ narrow spectral bandwidth (typically <30 MHz),
- ✓ robust, interferometrically tested platform,
- ✓ low noise (<0.3 % rms),
- ✓ excellent beam quality ( $M^2 < 1.1$ ) over a wide temperature range (10 to 40 °C),
- ✓ high wall plug efficiency; typically consuming less than 25 W of electrical power.



515 nm is the missing link to a compact all solid state replacement of Argon ion lasers for use in fluorescence applications, in particular for the excitation of YFP, Alex 514 and Oregon Green. Cobolt now offers a complete range of high quality DPSS lasers: 491 nm, 515 nm, 532 nm and 561 nm lasers at output powers from 10 to 150 mW.

## New SWL lasers

- ✓ Exceptional wavelength and power stability
- ✓ All solid-state with a tiny footprint
- ✓ Factory set wavelengths 633, 660, 780, 785 nm. Custom wavelengths upon request
- ✓ Rugged, OEM-ready



### Miniature workhorse

The NewFocus SWL lasers offer extremely narrow linewidths on an OEM-ready platform designed for stability and longevity.

The user may choose the output wavelength anywhere within a specified wavelength range and the factory will build the laser at that precise wavelength. Long-term wavelength and power stability will make this laser a miniature work horse.

New Focus has carefully designed the SWL lasers to operate continuously on a single longitudinal mode without mode hops and minimal frequency drift as the heart of any imaging, metrology, or spectroscopic measurements. Powerlevels depend on the wavelength and can be up to 70mW.

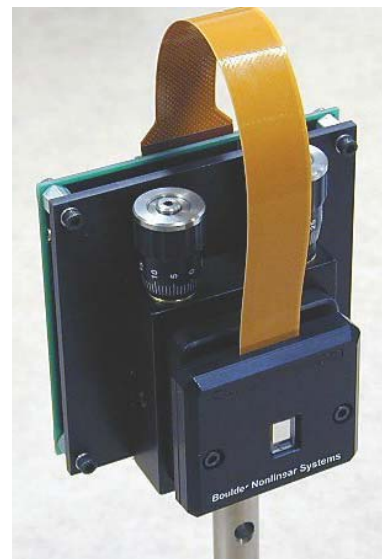
## LC modulators

Boulder Nonlinear Systems manufactures high-speed liquid crystal components including spatial light modulators, polarization rotators, and shutters to OEM partners and researchers.

The picture shows a complete, all-in-one system for individual pixel phase control. This LC-spatial light modulator can be used for computer generated holograms, beam steering, atmospheric correction, and optical tweezers. These XY Phase Series SLMs offers pure phase-only modulation at the highest speeds available on the market.

### Other applications:

- Diffraction Optics
- Optical Correlation
- Wavefront Correction
- Ultrafast pulse shaping
- Optical data processing
- Holographic data storage
- Programmable phase mask
- Image processing and analysis



For more information, brochures and/or specifications you can send an e-mail to [info@laser2000.nl](mailto:info@laser2000.nl)

## Femtosecond fiberlasers with phase stabilization controls

The FFL1560-CONTROL lasers are temperature-stabilized <100-fs laser systems with input controls that can be used to stabilize the repetition rate and carrier envelope offset frequency. Unlike any other family of control lasers on the market today, users can choose from a variety of options, including the low-cost 2-mW, 250-fs version at an unprecedented price of EUR 24,000, up to the ultrahigh-power version with >140 mW of average power and <100 fs pulse durations (>4 nJ per pulse or >45 kW peak power).

**The robust all-fiber designed FFL-1560-CONTROL is ready to use out of the box.**

- By providing the user with;
- ✓ cavity temperature control,
  - ✓ cavity length control through a PZT actuator,
  - ✓ and pump-laser current modulation,
- the FFL1560-CONTROL is ideal for precision phase stabilization in;
- ✓ optical frequency metrology
  - ✓ optical frequency combs
  - ✓ atomic-molecular-optical (AMO) physics
  - ✓ quantum communications

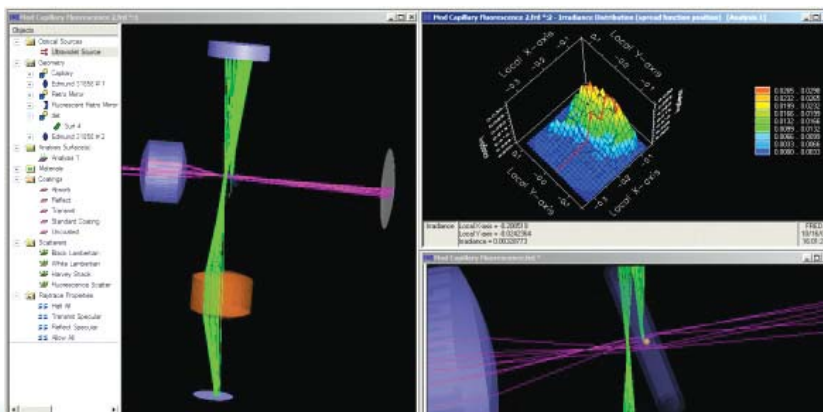


## FRED University Discount Policy

**The FRED policy for universities is that if the license is to be used exclusively for students in the classroom then the license is at no charge.**

The only cost to the University is the cost of a hardware dongle licensing each FRED seat. We do request that the professor submit to us a syllabus of the class he wants to use FRED in, and information on how it will be used. Photon Engineering (PE) will provide as many FRED seats as needed for any educational purpose.

**Universities that wish to use FRED for research work receive a 25% discount off the listed price for FRED.**



## High-speed controller for laser stabilization starting at € 1.500



Precision Photonics Corp. is introducing the fastest servo controller solution on the market. It offers the highest bandwidth available of up to 10 MHz, making the frequency or amplitude stabilization of lasers easy and intuitive.

**The Model LB1005 servo controller is ideal for demanding applications including**

- ✓ atom/ion trapping
- ✓ Bose-Einstein condensation
- ✓ frequency metrology
- ✓ quantum optics

It's flexibility enables the Model LB1005 to cascade with other units for the high-speed control of diode lasers using both piezo-electric transducers and current modulation inputs. The Model LB1005 design is based upon Precision Photonics unique experience in the field of atomic-molecular-optical (AMO) physics.

Of course you can also call us at (+31) 0297-266 191  
or send a fax to (+31) 0297- 266 134

## New programmable radiometer for integrating sphere systems

To meet the need for a versatile system controller, Labsphere recently launched the new SC 6000.

This new system controller allows for up to 100 programmed calibrations and can be used for photometric or radiometric applications. Users are able to create, upgrade or expand a calibration in minutes using a wide variety of interchangeable detector assemblies like Si, Ge, InGaAs.



The SC-6000 also functions as system controller in Labsphere's UniformSources: it reads the feedback detector, controls the lamp powersupplies and provides computer-control.

**Labsphere is a world leader in light metrology instruments and optical coatings. By introducing this new controller and the new LightMtrX software platform, today's systems are meeting today's expectations.**

## Visit us @

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## HRMTime: the ultimate timing module

SensL's HRMTime is the first portable USB high-resolution timing module on the market.

✓ **27ps minimum time bin size**, and  
 ✓ **66ps timing resolution**,  
 make this a flexible and high-performance module, eliminating the need for multiple PCI cards and a dedicated desktop PC.

### High resolution timing

The HRMTime is ideal for high-resolution timing in applications such as

- ✓ Fluorescence Lifetime Imaging
- ✓ Single Molecule Detection
- ✓ Fluorescence Correlation Spectroscopy
- ✓ Optical Diffusion Tomography
- ✓ LIDAR/Range Finding

