



# GMP INFO

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## 1. Ultrashort pulses amplifier: 2 mJ with less than 50 fs !

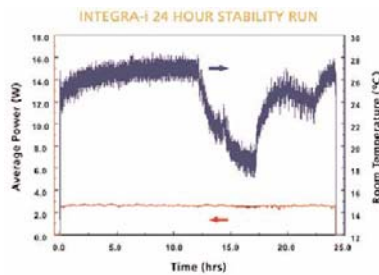
GMP SA is pleased to introduce the new series of Integra ultrafast Ti: Sapphire amplifier systems. The new **Integra series** includes:

**Integra-C** : With a 32 inch x 20 inch footprint, the Integra-C is the smallest *commercial all-in-one solid state amplifier* available. The Integra-C series features the Darwin diode pumped Nd:YLF pump laser, IMRA's Femtolite fiber seed oscillator and up to 2.5 mJ of <130 fs output energy.

**Integra-I** : The Integra-I series feature a choice of diode pumped Darwin or lamp pumped Falcon Nd:YLF pump lasers, IMRA's Femtolite fiber seed oscillator and up to 3.5 mJ of <130 fs output energy in an all-in-one package. *Both the Integra-C and Integra-I series feature +/- 5°C operating temperature ranges* to make them the most stable system

on the commercial market.

**Integra-E** : Featuring a small footprint pump laser / amplifier one box design, the Integra-E series accepts any commercial femtosecond Ti:Sapphire oscillator or fiber



oscillator as a seed source. With a choice of diode or lamp pumped systems, the Integra-E offers *femtosecond output energies up to 3.5 mJ and picosecond outputs up to 3.0 mJ*. The Integra-E is desi-

gned to be a flexible solution to any research challenge.

**Integra USP** : Quantronix's new <50 fs from a stable regen/multipass design that offers up to 2.0 mJ of output energy. The Integra-USP features the same pump laser/amplifier one box design for small footprint and high stability as the Integra-E.

The Integra-I, Integra-E and Integra-USP all feature 1000:1 pre-pulse and post-pulse contrast ratios and the choice of either the Darwin or Falcon series of Nd:YLF pump lasers. The Integra Series alone or coupled with the TOPAS computer controlled OPA offers the ideal solution for any Ultrafast research challenge.



## 2. The first all in one excimer laser !

The EasyStar is a *compact excimer laser* that has an extensive dynamic and static gas life and consumes only small volumes of gas, even with frequent use. *Small gas cylinder*

*bottles* are sufficient to fuel the laser for at least a half year of operation. The result is

the EasyStar: only a little larger than conventional compact excimer lasers, it *includes the gas supply and complies with all major safety standards*.

The fact that the excimer laser is not dependent on an external, stationary gas cabinet is a benefit for system integrators

and lab staff.



### 3. Inlite - The hardened Q-switched Nd:YAG laser



The Inlite series of pulsed Q-switched laser systems provides high levels of performance and reliability for industrial and OEM applications. The Inlite is designed for new and existing users of pulsed lasers allowing easy integration, simple external control and ease of service in a compact package.

The Inlite resonator is designed for the industrial

user. The cast aluminum body structure is designed to minimize misalignment due to changes in temperature or vibration. The optics cavity is sealed to prevent contamination. Both lamp electrodes are accessible during lamp changes, eliminating problems with corrosion and broken lamps. Options and accessories can be added to tailor the laser performance parameters to your application.

#### Key Features

- 1064 nm, 532nm, 355 nm, 266 nm
  - Up to 250 mJ @ 50 Hz
  - Hardened design for reliable operation
  - Modular power supply
  - Easy flashlamp replacement
  - Long term thermal and mechanical stability
- #### Applications
- Remote sensing
  - Mass Spectrometry
  - LIBS
  - LIF

« Tests performed on the 532 nm green laser show a life time of more than 20'000 hours »

### 4. 532 nm, 490 nm : DPSS lasers from JDS Uniphase

DPSS (Diode Pumped Solid State) Lasers are the best alternative to the conventional Argon lasers. Tests carried out on the 532 Nm green laser demonstrate a life time of more than 20'000 hours. That is approximately 10 times the life time of an Ar laser.

Air cooled DPSS Lasers are smaller than the Ar lasers,

have a longer life time, dissipate only very little heat and allow easier integration into complete systems or industrial machines.

JDS Uniphase DPSS Lasers give a power up to 50 mW at 532 nm and 20 mW at 490 nm.

Additionally, JDS Uniphase is working on new lasers

with shorter wavelengths close to the UV range.



### 5. Air cooled Argon Laser : lowest CHF per Watt



GMP provides solutions in light for your demanding photonic projects. Reliant lasers integrate the tube and power supply into a single compact unit. This single package design reduces weight as well as cost. The Reliant laser also utilizes sealed mirror technology. In this manner,

the mirrors are sealed directly on the laser tube eliminating the traditional bulky resonator. The sealed mirror design provides for a 100% maintenance free laser. Laser cleaning and alignment are completely eliminated.

The rugged design and unique features of the Reliant will save you time,

money and hassle every time you perform a show or set up a permanent installation. A Reliant may even save your show! A performance has never been lost due to shipping damage with a Reliant laser. Whether you require high power or full color we have air cooled lasers to fit your needs.

## 6. Do you use a microscope ?

If you have a microscope, then what follows certainly will interest you!

The **TableTop™ A-P** (U.S. Patent No. 5,779,010) is a Lightweight modular system with exceptional low frequency passive vibration isolation

The Benefits are:

**-Exceptional Passive Vibration Isolation**, comparable to our full-size Industry Standard 63-500 Serie Tables

**-Lightweight**, Compact Design (less than 50lbs) is easily portable

**-Modular Design** allows easy, quick upgrade to Active Damping for the most severe applications. (requires only 10 minutes and a screwdriver )



« *The best isolation system for your microscope* »

## 7. Birefringence Measurement System

Birefringence occurs when an optical material in the path of a beam of light causes the beam to be split into two polarization components which travel at different velocities.

Developed by Hinds Instruments in the late 1990s for the technically demanding *lithography industry*, the Exicor product line has evolved into a broad range of modular systems for an

expanding number of applications. A large and rapidly growing installed base of Exicor systems provides metrology level birefringence measurement for optical substrates in a diverse range of leading-edge applications:

- thin films,
- laser crystals,
- photonic optics,
- LCD/Flat Panels and, of course,

**-optical systems for semiconductor equipment.**



## 8. SDL diodes available at JDS Unipase

### Key Features:

- High power individual emitters with single transverse mode and broad-area structures
- Industry-leading brightness levels
- Fiber-coupled devices
- Flexible packaging options from "bare bones" compo-

- nents through "plug-and-play" modules and 910-980 nm
- Various wavelengths available from 798-852 nm
- Unsurpassed reliability based on Telcordia Standards
- 10 mW to over 5 W output powers

### Application:

- Laser pumping ,Material processing
- Thermal exposure, Medical
- Spectral analysis , Illumination
- Printing and imaging , Optical data storage



## 9. Mass spectrometer from Stanford Research System

QMS series gas analyzers offer an efficient, cost-effective solution for a wide range of applications. These mass spectrometers simplify the task of on-line process monitoring, analysis of gas species, leak detection, and troubleshooting.

### On-Line Monitoring

The QMS system can **continuously sample gas** at flow rates of several millilitres per minute. The inlet can be equipped to sample at pressures from 1 bar to 10 mbar. *Data is acquired continuously, as opposed to batch sampling* which is employed by gas chromatographs.

The QMS has a fast response time of less than 0.5 seconds. *Complete spectra can be recorded in seconds*, and individual masses can be measured at rates up to 25 points per second.

### Compact, User-Friendly Design

An advanced quadrupole mass spectrometer design, coupled with state-of-the-art pumping technology, allows the entire system to be *integrated in a small, transportable package*. The sampling inlet valves and pumps can be controlled from the front panel. Operation is easy and does not require a detailed under-

standing of the quadrupole or the pressure reducing inlet. Since the pumps contain no oil or other liquids,



gravity has no effect on them which allows the unit to *function either standing upright or laid on its side*. Capillaries are used as sampling probes and are available in several materials and sizes.

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**GMP : The one stop photonic shop!**

Find us on the Web:

[www.gmp.ch](http://www.gmp.ch)

As early as 1977, Jean-Jacques Goy was among Switzerland's early laser pioneers when he founded GMP SA, designed to be an active interface between manufacturers and users of high-tech systems and instruments. The relations he established with the world's leading manufacturers helped him obtain the exclusivity for their avant-garde systems. GMP soon ranked first in its field on the Swiss market. The Company began to supply the research laboratories of Switzerland's Federal Institutes of Technology, joined in the development of research centers operated by major industrial groups and set out to serve hospitals, clinics and doctor's practices.

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