

## ARGOS High-Power Picosecond Laser

Customized systems based on SESAM® technology

The ARGOS laser system provides cutting-edge performance that supports numerous applications, including semiconductor wafer inspection, metrology, research and development, and nonlinear optics. Built on the proven CHEETAH-X platform, the ARGOS can be customized to support user-defined repetition rates, frequency conversion, and clock synchronization with a phase-locked-loop feedback system.

### Features

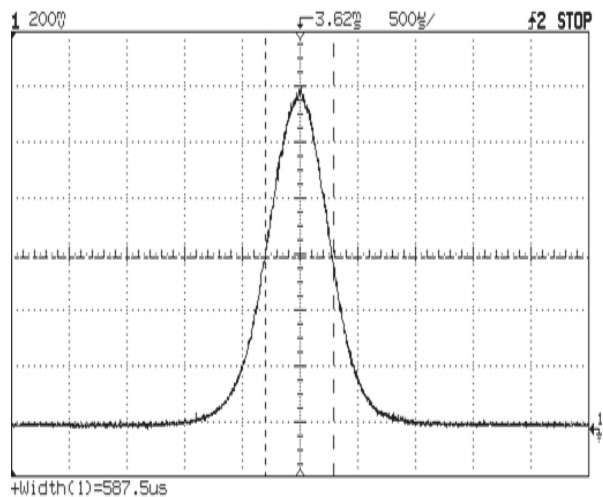
- Passively mode-locked DPSSL
- Closed-loop water cooling
- Turnkey operation
- Sealed laser head
- Low maintenance

### Options

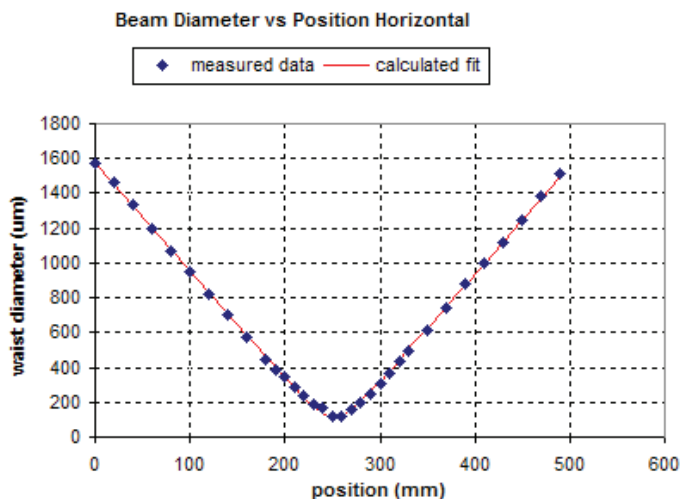
- Extended pulse widths
- Second harmonic generation (SHG)
- Third harmonic generation (THG)
- Remote control
- Clock synchronization

### Applications

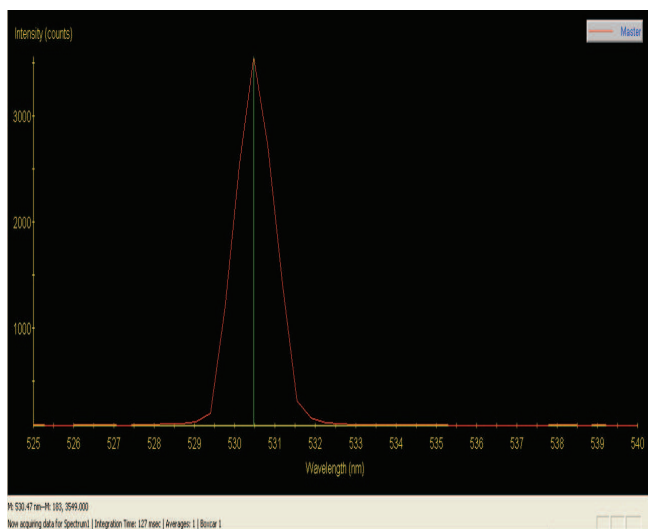
- Seeding amplifier
- High-energy physics
- Semiconductor wafer inspection
- OPO pumping
- Nonlinear optics



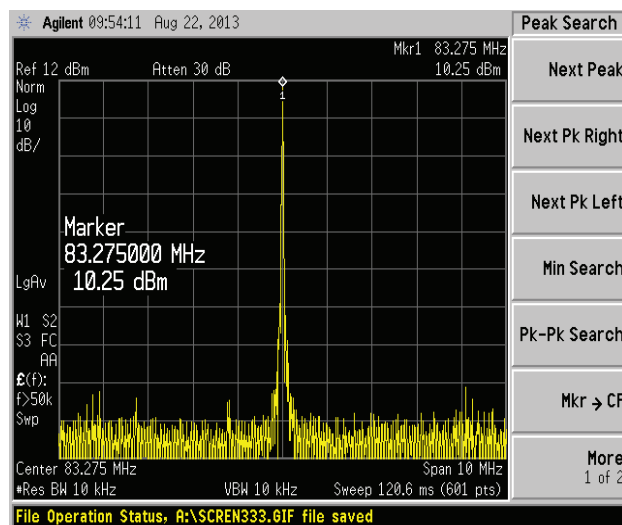
Auto-correlation measured from the IR beam with 11.8 ps pulse width



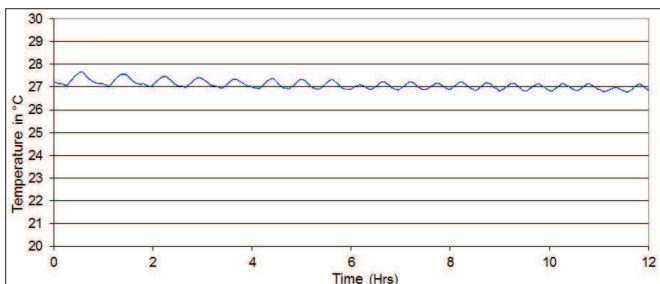
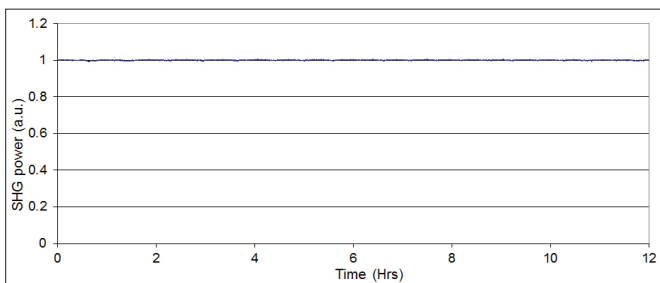
Second harmonic generation beam propagation through focus. Horizontal:  $M^2 < 1.2$



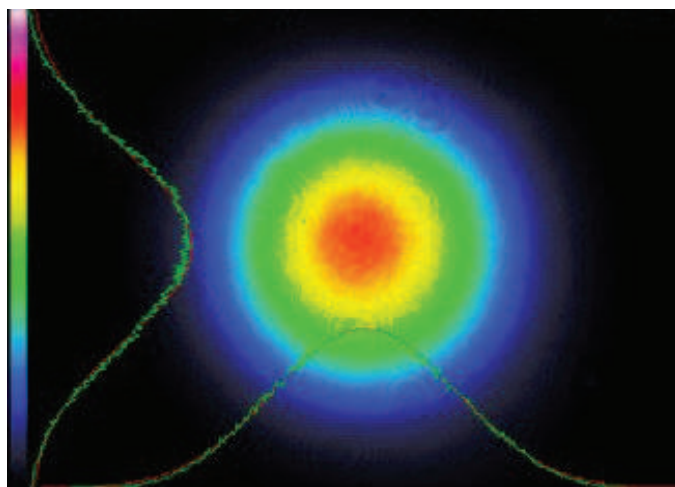
Optical spectrum between 525 and 540 nm wavelengths



Typical pulse train microwave spectrum centered at the laser repetition rate (span: 10 MHz, resolution: 10 kHz, vertical scale in dB)



Average laser output power at 532 nm



Second harmonic generation beam profile

**Specifications**

Parameter	ARGOS Laser Details
Output power	>40W
Repetition rate	50 – 200 MHz
Pulse width	12 ps
Wavelength	1064 nm
Spatial mode	1.3 M <sup>2</sup> (TEM <sub>00</sub> )
Turn-on time	20 min
Pointing stability	50 μrad/°C
Pulse energy stability (>1 kHz)	0.5% rms
Voltage	100 – 240V AC
Frequency	50 – 60 Hz
Input power (single phase)	1500VA

**Laser Safety**



**Ordering Information**

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

**Laser Head**

AR-	<input type="text"/>	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-00
<b>PRF</b>	<b>Code</b>	<b>Pulse Width</b>	<b>Code</b>	<b>NLO</b>	<b>Code</b>	<b>Options</b>	<b>Code</b>					
Specify within the range of 50 – 200 MHz	xxx <sup>1</sup>	Specify within the range of 12 – 200 ps	xxx <sup>2</sup>	Infrared	R	No options	0					
				SHG	G <sup>3</sup>	CLX <sup>4</sup>	C					
				THG	V <sup>3</sup>							

**Accessories**

Description	Product Code
<b>Chiller</b>	
Air-water, US with 110V AC	CH-M-A110
Air-water, European with 220V AC	CH-M-A220
Water-Water, US with 110V AC	CH-M-W110
Water-Water, European with 220V AC	CH-M-W220

**Example of a Complete Order**

AR-050-012-R-C-00 (50 MHz, 12 ps, infrared, CLX)<sup>5</sup>  
 CH-M-A110 (Air-water chiller, US with 110V AC)<sup>6</sup>

Notes:

- Where 050 equals 50 MHz
- Where 012 equals 12 ps
- Requires an additional module
- CLX-1100 phase-locked clock synchronizer to synchronize the repetition rate of a laser system to a reference clock signal
- Includes 2-m umbilical cable
- Includes 2-m chiller hose



**North America  
Worldwide**

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