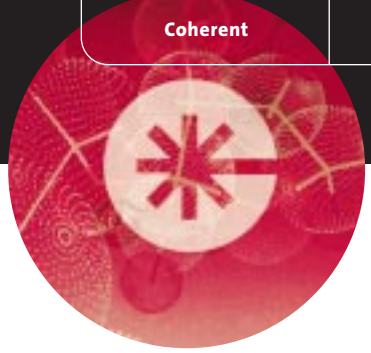


INDIGO-S

Solid-State, Tunable, Ti:Sapphire Laser

Indigo™-S exceeds spatial and temporal coherence, wavelength tunability, and power stability requirements of most spectroscopy applications adding ease, reliability, and long lifetime of solid-state materials.

Indigo-S is a Ti:Sapphire, tunable solid-state laser system with options for SHG, THG and FHG. With tunable output (UV to IR), nanosecond pulses, and solid-state reliability, the Indigo-S is ideal for UV resonance Raman spectroscopy and other high spectral resolution applications.

Advanced Design

Indigo-S consists of a Ti:sapphire oscillator, pumped by our Evolution laser, and a compact, efficient frequency conversion package. The harmonics package has been optimized for conversion efficiency and output power while maintaining a high quality TEM_{00} spatial mode. With narrow-linewidth etalons, Indigo-S provides <1 cm^{-1} linewidth across the entire tuning range. The diode-pumped Nd:YLF Evolution pump laser provides outstanding energy stability (<1% RMS fluctuation), resulting in a stability of <3% RMS in the deep UV.

Harmonic Conversion

There are two options for harmonic conversion:

- Standard Optics: intra-cavity frequency doubling for SHG at 420-460 nm with FHG at 210-230 nm
- 193 Optics: SHG at 386-420 nm, THG at 257-280, and FHG at 193-210 nm

Wavelength Scanning

The Indigo-S Wavelength Scanning Option provides two new automated capabilities: coarse wavelength tuning and fine wavelength scanning. The automated coarse wavelength tuning controls the Ti:sapphire oscillator wavelength and the phase-matching angles of the harmonic conversion crystals. The coarse wavelength tuning controls the wavelength to within 0.25 nm.

Once optimized at the desired wavelength, the fine wavelength tuning function allows the wavelength to scan a range of at least 10 wavenumbers with a minimum step size of 0.1 wavenumbers. The scan step size and dwell time are adjustable.

FEATURES

- ***All solid-state design***
- ***Tunable at SHG, THG, and FHG of Ti:Sapphire gain bandwidth***
- ***<1 cm^{-1} linewidth across tuning range***
- ***Computer control wavelength scanning with 0.1 cm^{-1} step size***
- ***TEM_{00} beam profile***
- ***Stable (<3% RMS) at deep UV wavelengths***
- ***Spectrometer and other diagnostics included***

KEY APPLICATIONS

- ***UV Raman Spectroscopy***
- ***DNA/Nucleic Acids Research***
- ***Heme Proteins Research***

Indigo-S

COHERENT

POSITIVE LIGHT
A Coherent Company

Indigo-S

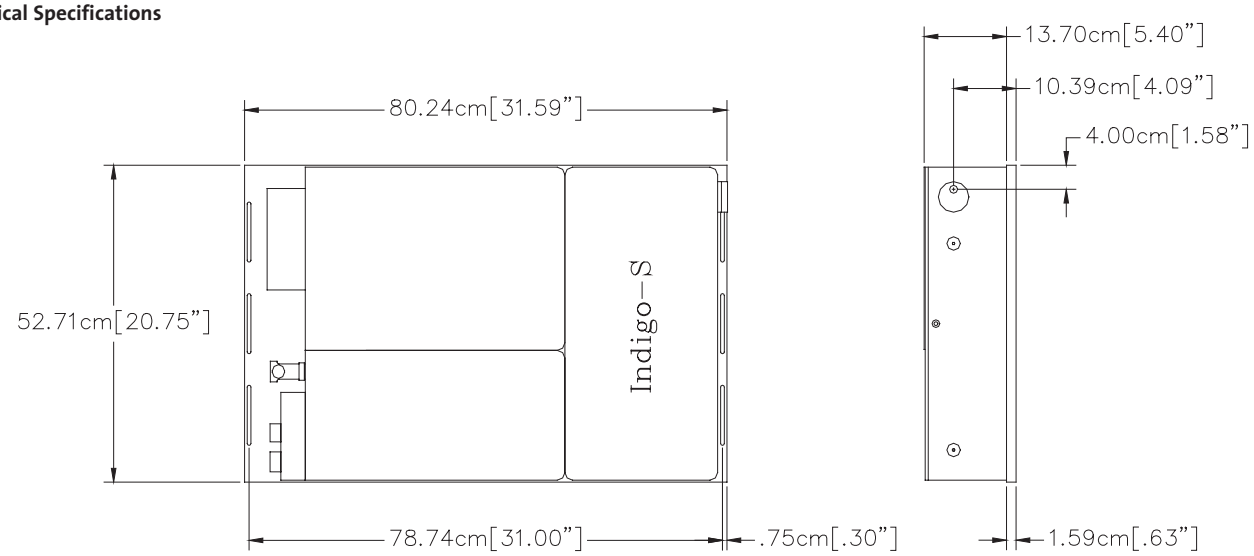
Solid-State, Tunable, Ti:Sapphire Laser

System Specifications

		Indigo-S	
		Standard Optics	**193 nm Optics Set**
Wavelength	Fundamental	840-920 nm	772-840 nm
	SHG	420-460 nm	386-420 nm
	THG	na	257-280 nm
	FHG	210-230 nm	193-210 nm
Power[1]		420 nm=>1 W 210 nm=>10 mW	230 nm=>50 mW 193 nm=>3 mW
Repetition Rate		5 kHz (quasi-cw)	
Single Shot Linewidth		<1 cm^{-1}	
Pulse Width (FWHM)		>20 ns (nominal)	
Spatial Mode		TEM_{00}	
Pointing Stability		± 25 µrad	
Energy Stability (8 hours)		<3% RMS (193-230 nm)	
Power Requirements		110/220 VAC	
Water Requirements		closed-loop chiller is included	

[1] For output power at specific wavelengths, contact your sales representative.

Mechanical Specifications



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

For full details on warranty coverage, please refer to the Service and Support section at www.Coherent.com, or contact your local Sales or Service Representative.

CE

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
IEC 60825-1
COMPLIES WITH 21CFR 1040.10 AND 1040.11

LASER RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
IEC 60825-1
COMPLIES WITH 21CFR 1040.10 AND 1040.11

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