



# INNOVA 90C FRED

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### Output Power Specifications

	SHG <sup>1</sup>		Fundamental <sup>2</sup>	
	Wavelength (nm)	Power (W)	Wavelength (nm)	Power (W)
			Multiline Visible	5.00
	264.3	0.02	528.7	0.35
	257.2	0.10	514.5	2.00
	250.8	0.015	501.7	0.40
	248.2	0.06	496.5	0.60
	244.0	0.10	488.0	1.50
	238.2	0.03	476.5	0.60
	229.0	0.01	457.9	0.35
			Multiline UV <sup>3</sup>	0.4
Beam Parameters <sup>4</sup>	SHG		Fundamental (514.5 nm)	
Beam Diameter (mm)	0.6-0.9 <sup>5</sup>		1.7 <sup>6</sup>	
Beam Divergence <sup>7</sup> (mrad)	0.5-0.85		0.5	
Output Polarization	100:1 horizontal		100:1 vertical	
Power Stability <sup>8</sup>	±1.0%		±0.5%	

<sup>1</sup> At time of purchase, customer must indicate which frequency-doubled wavelength is to be factory-tested and guaranteed. Guaranteed performance at additional wavelengths is available at a supplementary charge to cover optics (where required) and testing.

<sup>2</sup> Fundamental output power is guaranteed for Multiline Visible, 514.5 and 488.0 nm wavelengths. Guaranteed performance at additional wavelengths is available at a supplementary charge to cover optics (where required) and testing.

<sup>3</sup> Additional optics and supplementary charge required for guaranteed performance at Multiline UV.

<sup>4</sup> Beam parameter values are typical.

<sup>5</sup> Beam diameter measured at 1/e<sup>2</sup> points, 1 m from output bezel.

<sup>6</sup> Beam diameter measured at 1/e<sup>2</sup> points at the output coupler.

<sup>7</sup> Full-angle measurement.

<sup>8</sup> Performance in light regulation with PowerTrack™ over a 30-minute period following a one-hour warm-up.

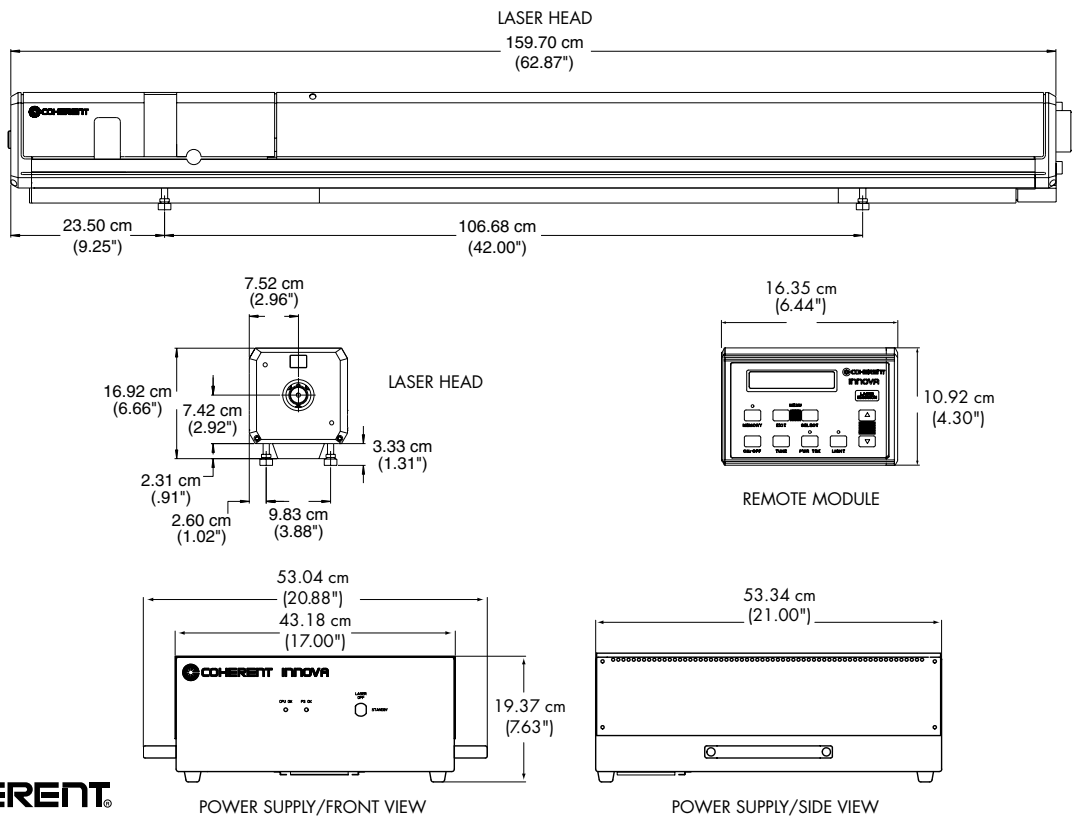
## Specifications

### Utility and Environmental Requirements

Input Power	3-phase with ground
Voltage	208 ±10% vac, 50 or 60 Hz
Maximum Current Draw	60 amp/phase @ 208 vac
Cooling-Water Flow Rate	8.5 liter/min (2.2 gallon/min)
Cooling-Water Pressure	1.41 to 4.23 kg/cm <sup>3</sup> , 20 to 60 psi
Cooling-Water Incoming Temperature	10 to 35°C (50 to 95°F)
Purge	0.5-1.0 SCFH (Standard Cubic Feet per Hour) Scientific Grade N <sub>2</sub> -99.999%
System Weights	
Laser Head	Crated 122 kg (270 lb), Uncrated 54 kg (120 lb)
Power Supply <sup>3</sup>	Crated 67 kg (147 lb), Uncrated 39 kg (86 lb)



The Innova® 90C FRED™ ion laser utilizes intra-cavity frequency doubling in BBO crystals to produce deep-UV, CW light at seven wavelengths in the range 229-264.3 nm. This small-frame ion laser provides output power up to 0.1W and is an ideal basic system for laboratory use.



**LASER DIVISION**

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

Coherent offers a limited warranty for all Innova systems. For full details of this warranty coverage, please refer to the Service and Support section at [www.CoherentInc.com](http://www.CoherentInc.com) or contact your local Sales or Service Representative.



Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

