

# OPerA Solo

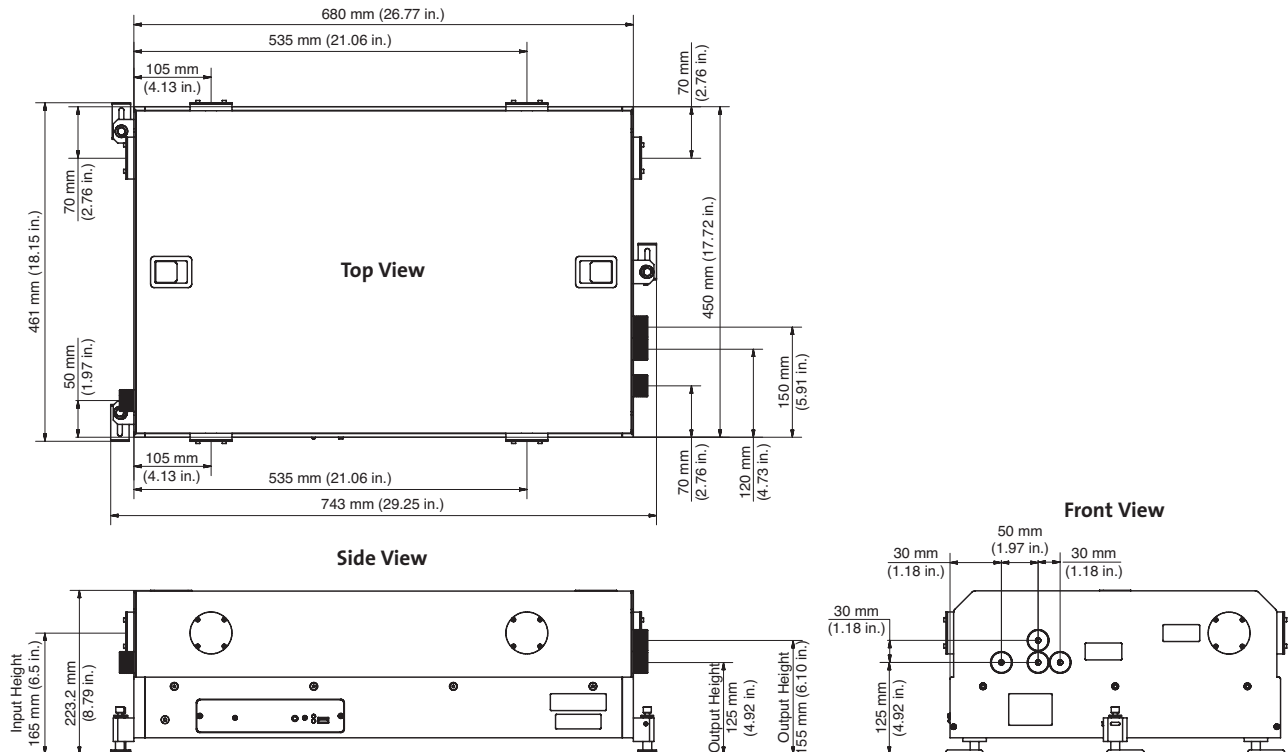
## Ultrafast Optical Parametric Amplifier



### Features

- Fully integrated, 1-box system
- Computer-controlled tuning
- Whitelight-seeded pre-amp for lowest noise
- “Fresh pump” configuration for optimum spatial, temporal and spectral mixing performance
- Models for <math><130\text{ fs}</math> and <math><40\text{ fs}</math>
- Standard integrated options for 240 to 20,000 nm
- Compatible with Legend™, Legend Elite™ and Libra™ amplifiers
- Multiple OPAs can be pumped with one Ti:Sapphire

### Mechanical Specifications



**Superior Reliability & Performance**

# OPerA™ Solo

## Ultrafast Optical Parametric Amplifier

System Specifications <sup>1,2</sup>	Beam	Wavelength Range	Pulse Energy		Polarization	
OPerA Solo <sup>4</sup>	Signal	1140 to 1600 nm	<40 fs pump	<130 fs pump	V	
	Idler	1600 to 2600 nm	220 μJ (S + I)		H	
Options <sup>3</sup>	SH Package	SHI	800 to 1150 nm		V	
		SHS	580 to 800 nm	>30 μJ	>50 μJ	V
	SF Package	SFI	533 to 580 nm	>30 μJ	>50 μJ	V
		SFS	470 to 533 nm	>40 μJ	>70 μJ	V
	FH Package	FHI	400 to 480 nm	>5 μJ	>10 μJ	H
		FHS	285 to 400 nm			H
	SHSF Package	SH (SFI)	266 to 295 nm	>3 μJ	>6 μJ	H
		SH (SFS)	240 to 266 nm			H
	NDFG Package	NDFG1	2.6 to 11 μm <sup>5</sup>	>2 μJ @ 4 μm	>8 μJ @ 4 μm	H
					>1.5 μJ @ 10 μm	
		NDFG2	5 to 20 μm <sup>6</sup>	>1 μJ @ 5 μm	>4 μJ @ 5 μm	H
					>0.3 μJ @ 15 μm	

<sup>1</sup> All specifications are based on pumping with 1 mJ from Legend/Legend Elite-F, Legend/Legend Elite USP or Libra at 1 kHz (contact factory for other pump systems).

<sup>2</sup> Energy scales linearly with pump in range 0.2 mJ to 4 mJ for 100 fs pump and 0.2 mJ to 3 mJ for <40 fs pump.

<sup>3</sup> Energies given at peak of tuning curves. SH/SF/FH/SHSF wavelength extension packages listed include all mixing crystals listed in preceding options (e.g., SHSF Package includes crystals, etc., to tune from 240 to 1140 nm). Contact factory for tuning down to 190 nm.

<sup>4</sup> Signal pulse width is (0.7 to 1.0) x pump for ~100 fs pump duration, (1 to 1.2) x pump for ~40 sec. pump duration.

<sup>5</sup> NDFG1 tuning range is 2.6 μm to 9 μm for 40 fs pump. NDFG1 pulse width is (1 to 1.5) x pump for 100 fs pump and (1.5 to 2) x pump for 40 fs pump.

<sup>6</sup> NDFG2 tuning range is 5 μm to 15 μm for 40 fs pump. NDFG2 pulse width is (1 to 2) x pump for 100 fs pump.

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

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

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



[www.Coherent.com](http://www.Coherent.com)

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