

FEATURES

- 25, 50 or 100 joules at 527 nm
- Up to 0.1 Hz repetition rate
- Unmatched beam profile
- 1 or 2 beams
- Easy maintenance
- Single box compact design

INDUSTRIAL APPLICATIONS

- Laser shock peening

SCIENTIFIC APPLICATIONS

- Ideal pump lasers for compact PW and multi PW systems

ATLAS

Flashlamp-Pumped Glass Phosphate Laser Series

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ATLAS

Flashlamp-pumped glass phosphate laser series

25 J to 100 J of green light in a single beam with a Top Hat smooth profile

ATLAS series breaks through the beam profile and compactness issues of conventional glass phosphate lasers to stand out as the reference pump laser to build the most compact PW and multi-PW Ti:Sa femtosecond lasers. Indeed, ATLAS series concentrates the solutions to offer the highest energy available in a single beam and the best spatial beam profile.

With Second Harmonic Generation (SHG) efficiency as high as 70% and an optimized number of amplifiers to reach up to 100 joules of green light, ATLAS family is the most efficient and compact solution for PW systems.

This optimized number of amplifiers has many advantages: besides being compact and extremely reliable, ATLAS lasers demonstrate very limited beam distortion and reduced maintenance. Full supervision by software offers remote control of the laser emission.

Physical characteristics (Size*: H x W x L)

Electronic cabinets

ATLAS 25	182 (71.7) x 56 (22) x 78 (30.7)	1 unit
ATLAS 50	124 (48.8) x 56 (22) x 78 (30.7)	2 units
ATLAS 100	182 (71.7) x 56 (22) x 78 (30.7)	2 units

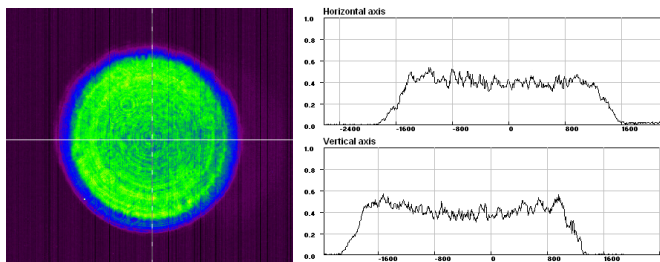
Cooling unit

ATLAS 25, 50, 100	60 (23.6) x 44.5 (17.5) x 83 (32.7)
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Laser head

ATLAS 25,50	66 (26) x 103 (40.5) x 268 (105.6)
ATLAS 100	66 (26) x 138 (54.3) x 268 (105.6)

*Dimensions are given in cm (in)



Typical Atlas 100 beam profile at 527 nm

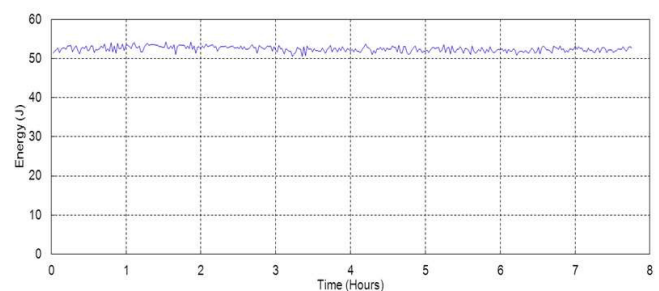
Specifications

Version	ATLAS 25	ATLAS 50	ATLAS 100
Wavelength (nm)	527	527	527
Repetition rate (Hz)	0.1	0,017	0,017
Energy per pulse (J)	>25 or >2x12.5	>50	>100 or >2x50
Pulse to pulse energy stability (% rms)	< 1.5	< 1.5	< 1.5
Pulse duration FWHM (ns)	< 30	< 30	< 30
Time jitter (ns rms)	< 1	< 1	< 1
Polarization	Vertical	Vertical	Vertical
Beam diameter (mm)	~ 22	~ 45	~ 45
Divergence (mrad)	< 2	< 1	< 1
Beam pointing stability (μrad)	< 100	< 100	< 100
Spatial beam profile (near field)	Top hat	Top hat	Top hat
Power Consumption (kW)	4.5	3.3	4.1

Utilities and environment requirements

Voltage	208 – 230 VAC +/-5% single φ	
Frequency	50 – 60 Hz	
Water	Flow	> 15 L/min > 4 gal /min
	Static pressure	3-5 bars 43.5-72 psi
Temperature	10-20°C	
Operating systems	Windows 98, 2000, NT, XP	

Long term stability of ATLAS 50 over 7 hours



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