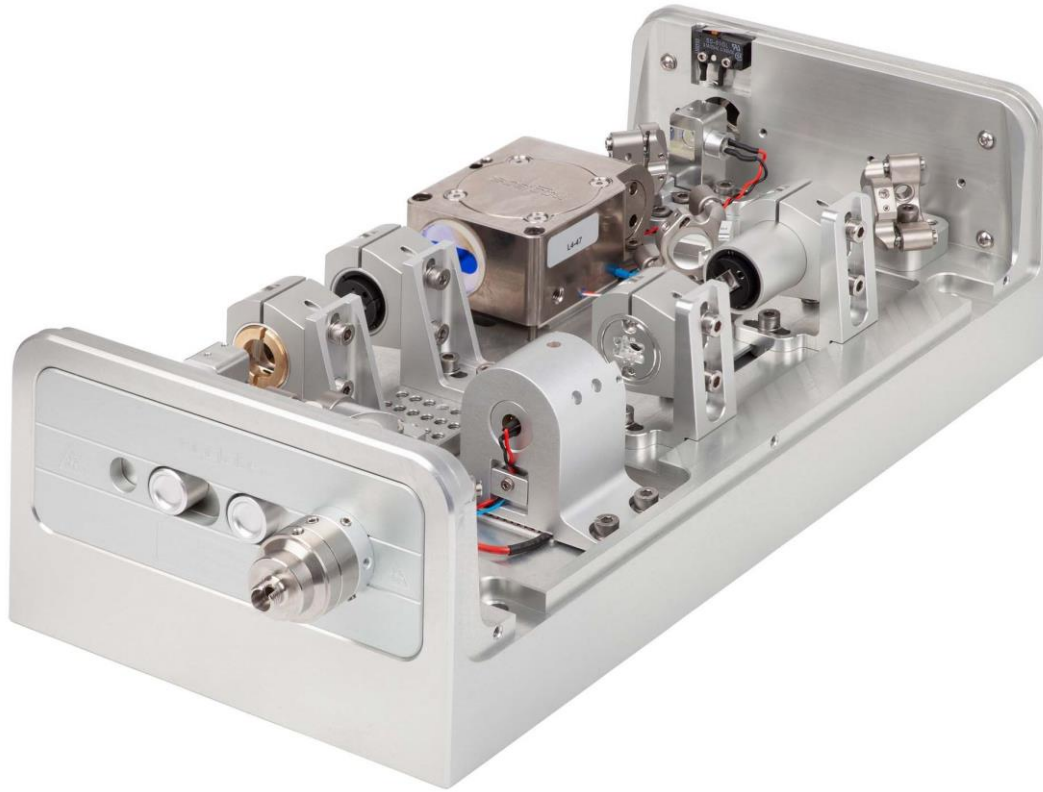


ILA Injection-Locked Amplified Laser system



The MOGLabs ILA injection-locked amplified laser system is a new approach to high power narrow linewidth tunable lasers. Higher power, up to 1W, is available at critical wavelengths without the need for complex and expensive frequency doubling cavities.

The ILA uses new MOGLabs technology for stable injection locking of Fabry-Perot (FP) laser diodes. Injection locking has traditionally been plagued by extreme sensitivity to environmental drift: very small changes in temperature, alignment, or current can cause the amplifier diode to drift out of lock. We have developed an auto-tracking system that continually monitors the laser and makes tiny adjustments to the amplifier diode to maintain lock.

The versatile platform offers many configurations; please contact MOGLabs for further information on this new cost-effective alternative.

Key wavelengths

- 370 nm/100mW (Yb+)
- 399nm/400mW (Yb)
- 461nm/1000mW (Sr)
- 509nm/200mW (Cs Rydberg)
- 657nm/300mW (Ca clock)
- 689nm/110mW (Sr MOT)
- 698nm/110mW (Sr clock)
- Many others; please enquire

Power measured after isolator; includes seed

Features

- Digital controller for amplifier
- Low-cost amplifier diode replacement
- Stable intuitive flexure alignment
- Fibre options for seed and amplified beams

Injection-locked amplified laser

Specifications ILA

Wavelength/frequency

Wavelength	370nm – 530nm, dependent on diode availability
Gain bandwidth	5nm - 15nm, wavelength dependent
Power	100mW to 1W, wavelength dependent
ASE suppression	>45dB

Optical

Beam diameter (1/e ²)	Typically 1.8 x 3.0 mm, wavelength dependent
Beam quality	M ² from 1.0 to 1.2
Beam divergence	<1.5 mrad
Polarisation	Linear 100:1

Thermal

TEC	Seed and amplifier: $\pm 14V$ 3.3A Q = 34W standard
Sensor	NTC 10k Ω
Cooling	Quick-fit water cooling, ϕ 6mm

Electronics

Protection	Relay, reverse diode, photodiode cutout
Indicator	Laser ON/OFF (LED)
Connectors	Seed: DVI-D DL; amplifier DE9 + DE15

Dimensions

Dimensions	300 x 155 x 93mm (LxWxH)
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