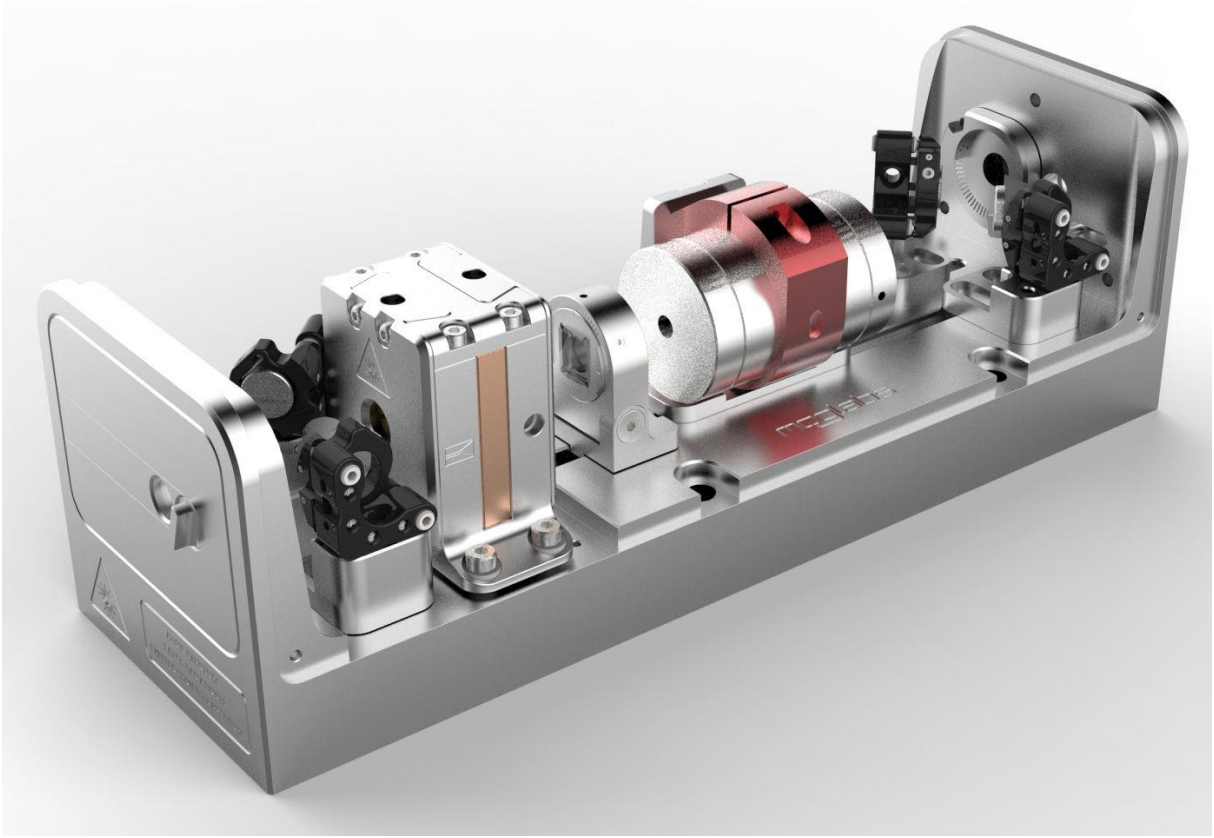
MOA(L) Optical Amplifier



The MOGLabs Optical Amplifier is a high-power extension for single-frequency external cavity diode lasers.

Laser power is increased by up to 5W, while maintaining the tunability and linewidth of the injection seed laser.

Replacement of the amplifier diode and alignment are easily accomplished by the end-user. Options include 35 or 70dB of output isolation and 35dB on the input (wavelength dependent), and fibre coupling of input or output or both. Wavelength options extend from 650nm to 1140nm, and power from 250mW to 5000mW.

Also available in the MOA larger chassis size for more input isolator options, or as a cateye laser seeded amplifier MSA.

Features

- Wavelength 650nm – 1140nm
- Output power up to 5W
- Optional input and output Faraday isolators
- Optional input and output fibre coupling
- Simple customer TA diode replacement
- Stable flexure alignment

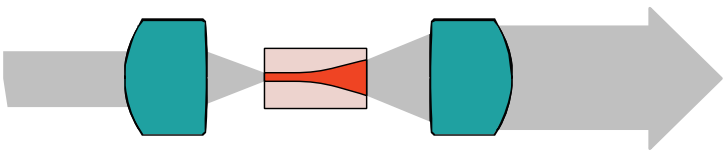
Applications

- Laser cooling and trapping
- Bose-Einstein condensation
- Quantum optics: squeezed light
- Electromagnetic transparency and slow light
- Time and frequency standards
- Laser spectroscopy
- Physics teaching labs

Optical Amplifier/Seeded Amplifier

Specifications MOA(L)

Wavelength/frequency	
Wavelength	650m – 1140nm
Gain bandwidth	10nm to 30nm, wavelength dependent
Power	250mW, 500mW, 1W, 2W, 3W, 4W, 5W options, wavelength dependent
Gain	Up to 23dB (200x)
Seed input power	10mW to 60mW, depending on amplifier diode
ASE suppression	>45dB
Optical	
Beam diameter ($1/e^2$)	Typically 1.8 x 3.0 mm, wavelength dependent
Beam quality	M^2 from 1.1 to 1.7
Beam divergence	<1.5 mrad (650 – 670nm: <2.5 mrad)
Polarisation	Linear 100:1
Thermal	
TEC	±14V 3.3A *Q* = 34W standard
Sensor	NTC 10kΩ
Cooling	Quick-fit water cooling, ϕ 6mm
Electronics	
Protection	Relay, reverse diode, photodiode cutout
Indicator	Laser ON/OFF (LED)
Connectors	DE9 (temperature control) and DE15 (current control)
Dimensions	
Dimensions	290 x 95 x 93mm (LxWxH)



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