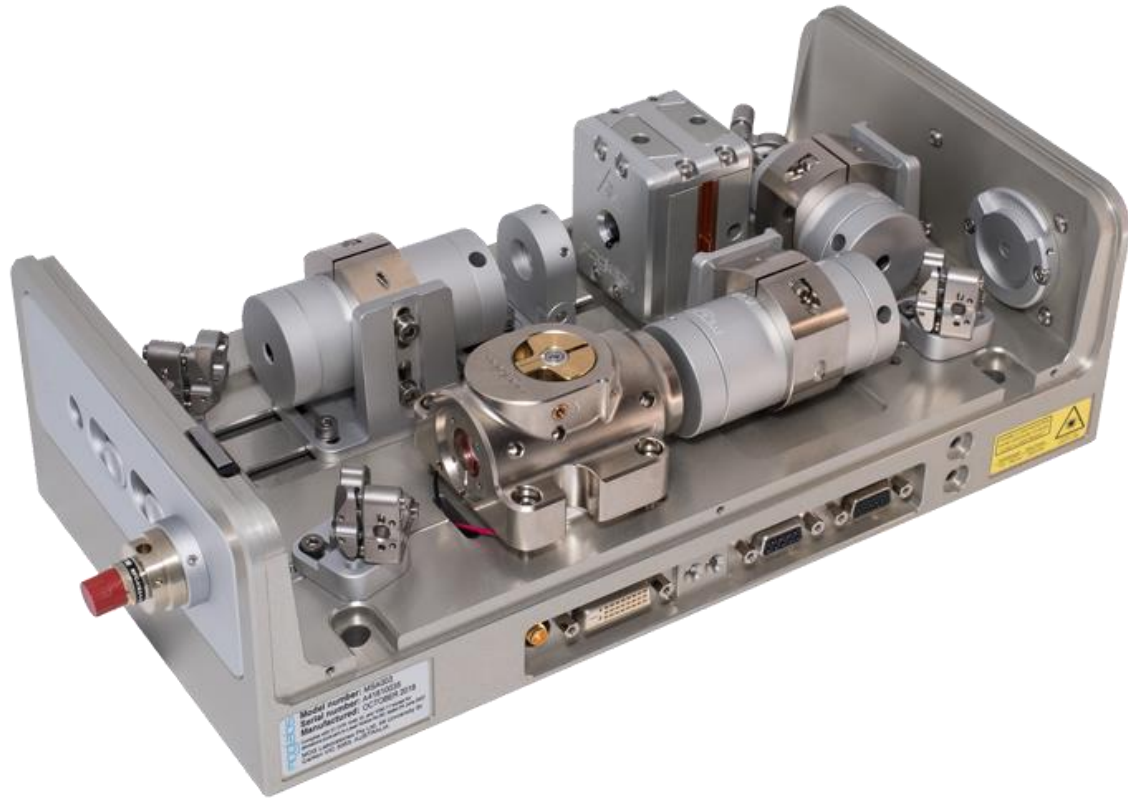




MOA/MSA Optical Amplifier/Seeded Amplifier



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

Laser power is increased by up to 4W, 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 input isolation and 35dB on the output, and fibre coupling of input or output or both. Wavelength options extend from 630nm to 1064nm, and power from 250mW to 3000mW.

Also available as cateye laser seeded amplifier MSA as shown.

Features

- Wavelength 630nm – 1064nm
- Output power up to 3W
- 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/MSA

Wavelength/frequency

Wavelength	630nm – 1064nm
Gain bandwidth	10nm to 30nm, wavelength dependent
Power	250mW, 500mW, 1W, 2W, 3W and 4W options, wavelength dependent
Gain	Up to 23dB (200x)
Seed input power	10mW to 30mW, 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 (630 – 670nm: <2.5 mrad)
Polarisation	Linear 100:1

Thermal

TEC	$\pm 14V$ 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	DE9 (temperature control) and DE15 (current control)

Dimensions

Dimensions	300 x 155 x 93mm (LxWxH)
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