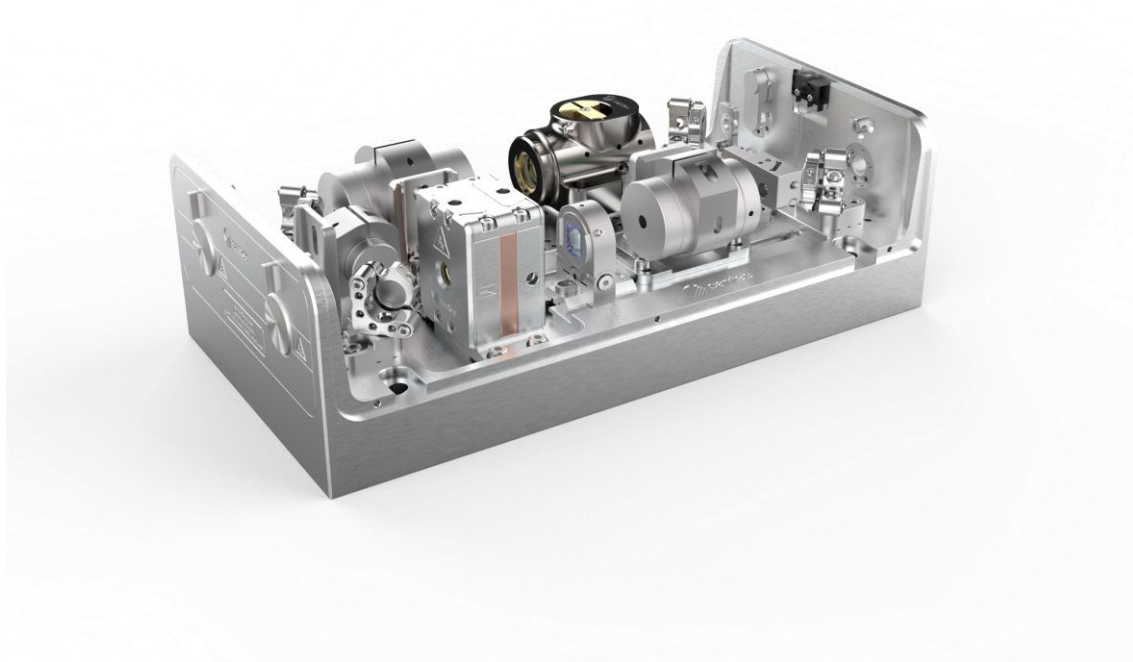




MOA/MSA Optical Amplifier/Seeded Amplifier



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

Laser power is increased by up to 5 W, 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 dB or 70 dB of input isolation and 35dB on the output, and fibre coupling of input or output or both.

Wavelength options extend from 650 nm to 1140 nm, and power from 250 mW to 5000 mW. Also available as cateye laser seeded amplifier MSA as shown.

Features

- Wavelength 650 nm to 1140 nm
- Output power up to 5 W
- 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	650nm – 1140nm
Gain bandwidth	10nm to 30nm, wavelength dependent
Power	250mW, 500mW, 1W, 2W, 3W, 4W and 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

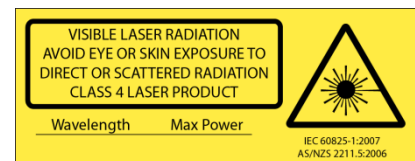
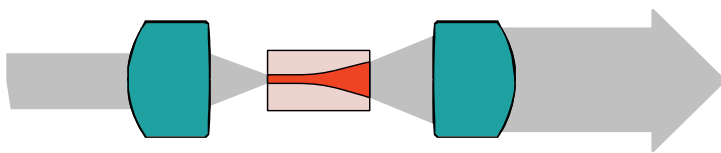
TEC	±14V 3.3A Q = 34W standard
Sensor	NTC 10kΩ
Cooling	Quick-fit water cooling, φ 6mm

Electronics

Protection	Relay, reverse diode, photodiode cutout
Indicator	Laser ON/OFF (LED)
Connectors	DE9 (temperature control) and DE15 (current control)

Dimensions

Dimensions	300 x 155 x 93mm (LxWxH)
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Santec Japan Corporation
Tel: +81-568-79-3536

Santec Europe Ltd.
Tel: +44-20-3176-1550

Santec USA Corporation
Toll-Free: +1-800-726-8321

Santec (Shanghai) Corporation Limited
Tel: +86-21-58361261