AZUR LIGHT SYSTEMS

FIBER LASERS & Solutions
Visible - Up to 10W

532

515

488

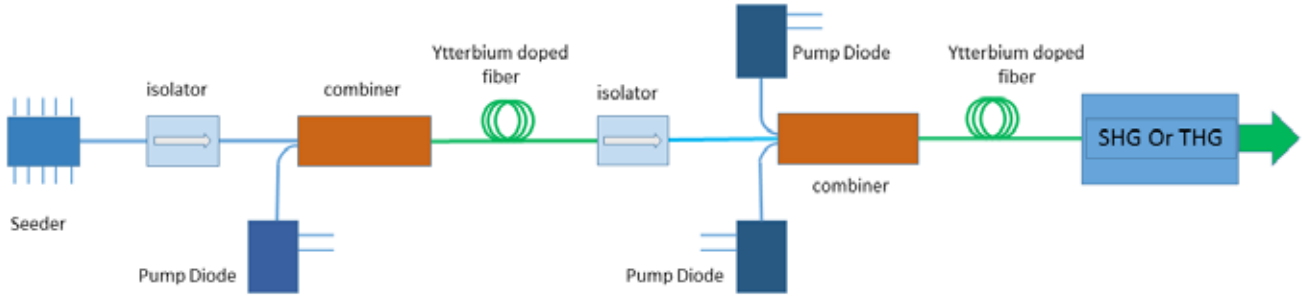
ALS VIS CW series

High power Oscillator
Pulsed laser pumping
Control - measurement
Ar Laser replacement
Laser Doppler velocimetry
High resolution interferometry
Super Resolution microscopy
Advanced spectroscopy
Holography

When specifications & actual performances matter

ALS VIS CW series

ALL Fiber based MOPA Technology



ALS Superior laser technology key features

TEMoo mode
Long coherence length
M^2<1.1
Single frequency version
Single mode
Ultra-low noise
Excellent pointing stability
Ultra stable output power
High polarization ratio and stability
Coolerless laser head
Compact design
Maintenance free - long life
Low power consumption
OEM versions available

Versatility & Modularity

> 2W @ 507,4nm CW setup: Together with a highly recognized research team, Azur Light Systems has designed a custom high power laser at this specific wavelength

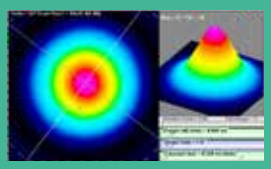
507,4nm is then doubled **to generate a laser beam @ 253.7nm,** corresponding to a Hg transition band allowing to trap Hg atoms.

Azur Light Systems capability provides advanced solutions in **Atom physics research. Power stability, low noise, frequency locking as well as pointing stability and beam profile performances** are the key features.

Azur Light Systems (ALS)

develops, manufactures and sells worldwide fiber laser technology at new wavelengths for scientific, industrial and bio-medical applications. Representing a veritable breakthrough in the laser market, and offering many advantages in terms of stability, robustness and ease of integration, this innovative technology offers significant performance advantages over other solid state laser technologies.

Our **single frequency single mode visible lasers** offer unique performance in terms of low noise and high power, combined with the inherent efficiency and stability of fiber lasers.



With a RIN of less than -120 dBc/Hz (100Hz - 10MHz) at 50W output power, ALS infrared lasers are perfectly suited for many applications requiring very low noise sources such as metrology, optical trapping, cooling of atoms or optical pumping.

TYPICAL RIN DATA

SPECIFICATIONS

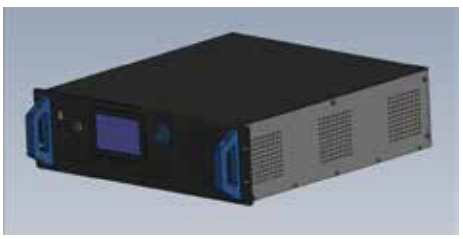
VIS Fiber Lasers with internal seeder		Unit
Wavelengths (1)	488 515 or 532	nm
Output power	0,5, 1,2, … 0,5, 1,2, …, 10	W
Output power Tunability	1 to 100 (10 to 100 recommended)	%
Beam quality	M^2 < 1.1	-
Beam diameter « free space »	1.5 (other upon request)	mm
Beam divergence	< 0.3	mrad (FW@1/e^2)
Spatial mode	TEMoo	-
Spectral width - single frequency (2) - narrow bandwidth	 < 200 < 100	 kHz pm
Power stability	< ± 0.2 (short term) < ± 0.3 (over 8 hours)	% %
Noise [100Hz - 10MHz]: - single frequency - narrow bandwidth	 < 0.05 < 0.2	 % rms
Frequency stability (3)	< 0.1	pm
Output polarization	Linear > 100:1	-
Pointing stability	< ± 0.5	µrad/°C
Output (4)	Free space laser head	-
Laser control	Multi-turn potentiometer, Touch screen, Analog voltage	-
Supply requirements	90-240V/50-60Hz	-
Electrical power consumption	200<…<500	W
Cooling	Air cooled	-

(1) Other wavelengths available on request.
(2) Linewidth reduction down to 10kHz available as an option with an external seeder rack.
(3) For single frequency version only. Measured over 8 hours and temperature variation < 3°C.
(4) Optional output: Fiber coupling / multiple output / beam splitting

Dimensions	
Laser Rack	480 x 460 x 130 mm
Laser Head	275 x 120 x 50 mm

About 2 meters cable length between rack and the beam output from the laser head

Coolerless laser head
19'' 3U air cooled power unit



Customized optical beam output on demand	- Beam splitting: 1:3 or more, free space or fibered - Beam shaping - Advanced optical setup

SPECIFICATIONS

Simultaneous Dual Wavelength Single beam High Power Lasers OCEAN series				Unit
Wavelengths (1)	515 & 532	488 & 532	488 & 515	nm
Output power one beam	0.5+0.5, 1+1, 2+2,10+10...	0.5+0.5, 1+1, 2+2....		W
Output power Tunability	1 to 100 (10 to 100 recommended)			%
Beam quality	M^2 < 1.1			-
Beam diameter « free space »	1.5 (other upon request)			mm
Beam divergence	< 0.3			mrad (FW@1/e^2)
Spatial mode	TEMoo			-
Spectral width - single frequency (2) - narrow bandwidth	 < 200 < 100			 kHz pm
Power stability	< ± 0.2 (short term) < ± 0.3 (over 8 hours)			% %
Noise [100Hz - 10MHz]: - single frequency	< 0.05			% rms
Frequency stability (3)	< 0.1			pm
Output polarization	Polarized > 100:1			-
Pointing stability	< ± 0.5			µrad/°C
Output (4)	Free space laser head			-
Laser control	Multi-turn potentiometer, Touch screen, Analog voltage			-
Supply requirements	90-240V/50-60Hz			-
Electrical power consumption	200<...<500			W
Cooling	Air cooled			-

(1) Other wavelengths available on request.
(2) Linewidth reduction down to 10kHz available as an option with an external seeder rack.
(3) For single frequency version only. Measured over 8 hours and temperature variation < 3°C.
(4) Optional output: Fiber coupling / multiple output / beam splitting

For specific wavelengths, higher output powers or OEM designs, contact us.

Azur Light Systems company is continuously investing in advanced fiber laser technology development. We are proud of our products and the customer satisfaction endorsed by the most recognized research labs and companies throughout the world. Our Exclusive partners in North America, Japan, China and Germany are locally providing the most efficient support to our customers

www.azurlight-systems.com

Azur Light Systems
Cité de la Photonique
11 Avenue de Canteranne
33600 PESSAC - France

Contact and enquiries
sales@azurlight-systems.com
Tel: +33 (0)5 47 74 55 90
Fax: +33 (0)5 47 74 55 99