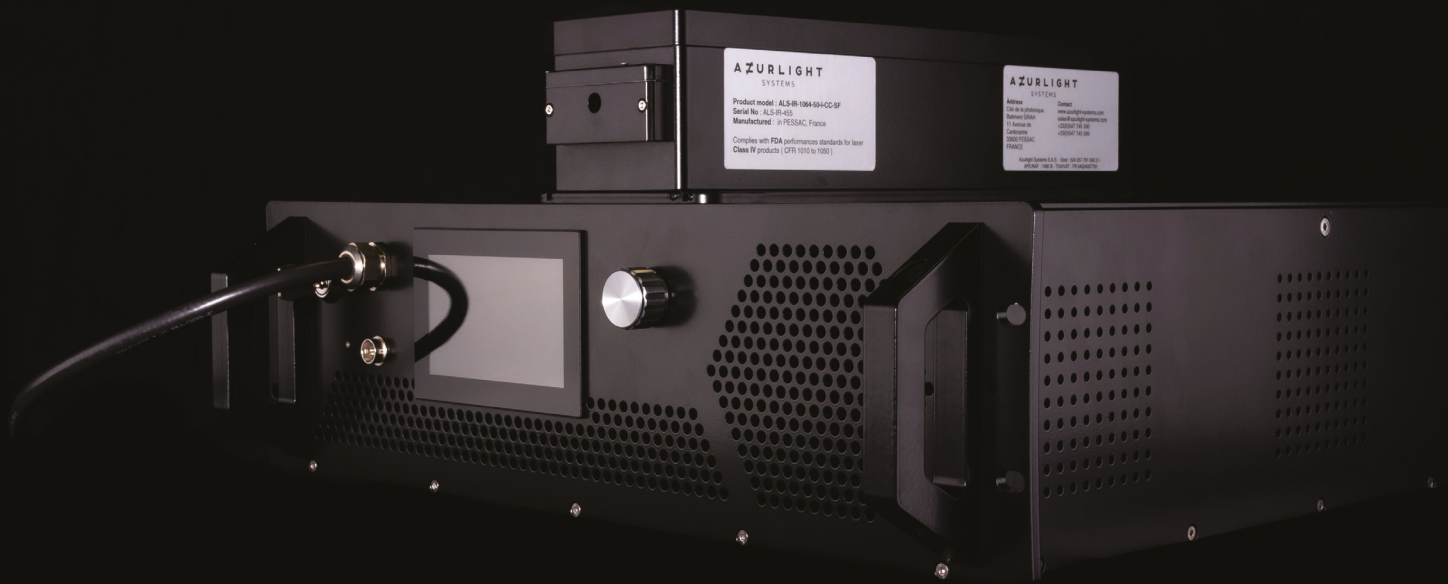


# AZURLIGHT

## SYSTEMS



EXPERIENCE THE  
**EXTREME**  
CW FIBER LASERS & AMPLIFIERS

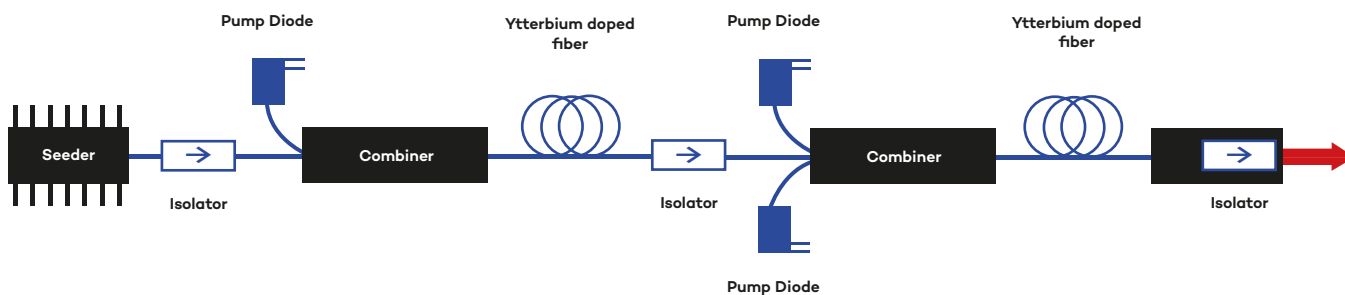
**Infrared series**

976 nm - 1030 nm - 1064 nm

Azurlight Systems designs and manufactures high performances fiber lasers and amplifiers for industrial and scientific applications. Its innovative and patented technology represents a real breakthrough on the laser market especially over other solid-state technologies. It offers many advantages in terms of stability, robustness and ease of integration and is the laser of choice for your application.

One of our core values is the technical proximity with our client. We intend to provide deep understanding of our products performances, architecture and potential customization to the application. Our staff is available to openly discuss this.

## MOPA Technology



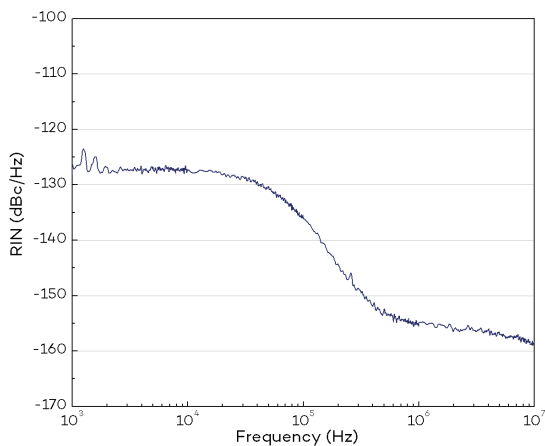
## Features

- Up to 130 W
- Single frequency
- Single mode
- Ultra-low noise
- Maintenance free - long life

## Applications

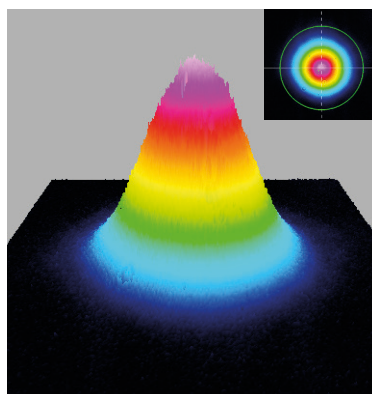
- Atomic & Molecular Physics
- High-Performances Instrumentation
- Interferometry
- High-Brightness Laser Pumping

## Performances



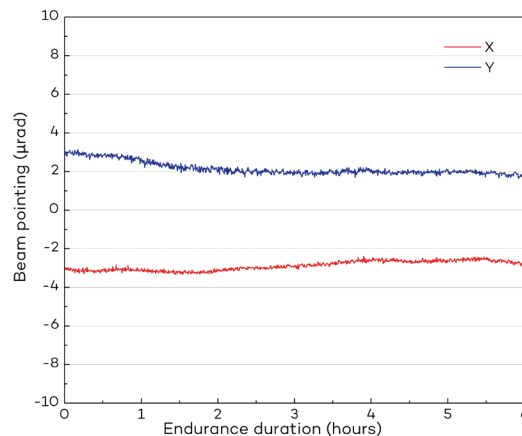
### RELATIVE INTENSITY NOISE

Typical RIN for 130 W constant current mode of operation. RMS (100 Hz – 10 MHz) : 0.015%



### SINGLE MODE

Excellent beam quality by design



### BEAM POINTING STABILITY

By design, beam pointing is stable (several weeks without adjustment)

Our lasers offer unique performances in terms of low noise and high power, combined with the efficiency and stability of fiber lasers. As such they are the precision tools of choice for researchers in fields such as optical trapping, atomic cooling. Our industrial customers validate our solution for advanced applications such as interferometry in terms of performance, and especially pointing stability.

## Optical Specifications

Wavelength <sup>1</sup>	976 nm	1030 nm or 1064 nm	
Output power	Up to 10 W	10, 20, 50 W	Up to 130 W
Single frequency <sup>2</sup> linewidth	< 50 kHz		
Narrowband linewidth	< 100 pm		
Input connection (amp. only)	FC/APC		
Input power (amp. only)	10 - 100 mW		
Spatial mode	TEM00		
Beam quality	M <sup>2</sup> < 1.1		M <sup>2</sup> < 1.2
Beam diameter « free space »	1 ± 0.2 nm		1.3 ± 0.2 nm
Short term power stability	< ± 0.3%		
Long term power stability (8 hours)	< ± 0.5%		
Noise [100Hz - 10MHz]	< 0.2% RMS	< 0.05% RMS	
Pointing stability	< ± 0.5 μrad/°C		
Output polarization <sup>3</sup>	Vertically polarized > 300: 1		
Output power tunability	1 to 100% (10 to 100 recommended)		
Laser control	Multi-turn potentiometer, Touch screen, Analog voltage		

## General Specifications

Power	< 10 W	< 50 W	< 130 W
Rack dimension	19"3U (460x440x130 mm)		19"6U (460x440x260 mm)
Rack cooling	Air		Water
Optical head dimension	 150x115x45 mm	 330x115x80 mm	 400x265x105 mm
Optical head cooling	Coolerless		Water
Umbilical cable length	1,35 m		2 m
Supply requirements	90-240 V/50-60 Hz		90-240 V/50-60 Hz
Electrical power consumption	200 W < ... < 300 W		200 W < ... < 400 W

<sup>1</sup> Other wavelengths available on request

<sup>2</sup> Typically, < 30 kHz for single frequency version, linewidth reduction down to 3 kHz available as an option with an external seeder rack

<sup>3</sup> Optional output : PM980/H1060/LMA/Collimated fiber/ Multiple output beam splitting depending on the output power

## Options

- Azurlight Systems offers 3 types of architectures :  
internal seeder, various external seeders, amplifiers only
- Customized optical output available depending on power level :  
beam splitting : 1:3 or more, free space or fibered
- Advanced optical setup
- Combined IR/visible laser dual output head, by recycling unconverted IR radiation from a frequency doubling head



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