

# Ampheia™ Series

Ultra-Low Noise | Single Frequency | Fiber Laser Systems



## Applications

Quantum Research  
Optical Trapping and Tweezers  
Laser pumping  
Particle Analysis  
Optical Metrology  
Semiconductor Inspection  
Holography

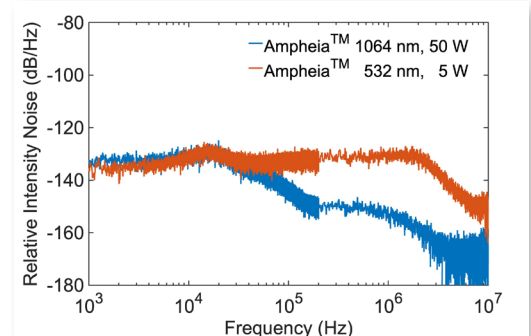
- Up to 50 W at 1064 nm and up to 5 W at 532 nm
- Continuous wave, single-frequency emission
- Ultra-low relative intensity noise and perfect beam quality
- Single-stage fiber amplifier with integrated seed laser
- Optical signal to noise ratio (OSNR > 70 dB)
- Robust and maintenance free

The Ampheia™ Series is a family of high-power fiber laser systems, delivering ultra-low relative intensity noise (RIN) and single-frequency operation with up to 50 W of power at 1064 nm and 5 W at 532 nm in a perfect beam.

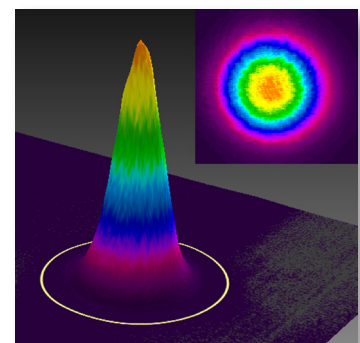
Ampheia™ Series fiber laser systems (- LS) are fiber amplifiers delivered with an integrated seed laser and beam delivery head. A complete laser system that is affordable, with outstanding laser performance.

Based on established manufacturing processes, the Ampheia™ Series of fiber amplifiers and laser systems guarantee a high level of reliability, ideal for stand-alone use in research labs or integration into a commercial system. The Ampheia™ Series addresses applications ranging from atom trapping in quantum applications to laser pumping, particle analysis, and semiconductor inspection.

Typical Relative Intensity Noise (RIN)



Typical TEM<sub>00</sub> Beam Profile



HÜBNER Photonics



## Optical Specifications

\* The beam diameter may vary with output power and can only be guaranteed at nominal power.

Standard power supply	36 VDC, 10 A
Voltage acceptance range	30 - 40 V
System power consumption	300 W
Maximum heat dissipation of laser head	5 W
Ambient temperature, operation	18 - 30 °C
Laser head heat sink thermal impedance (at max ambient temperature)	< 2 K/W
Ambient temperature, storage	-10 -> +60 °C
Humidity	0- 60 % RH non-condensing
Intended use environment	Laboratory (indoor)

A1-WWW-XXXX-PPW-2000

↑                    ↑                    ↑                    ↑

Wavelength                    Power                    Configuration:

1000 = CE / CDRH  
2000 = OEM  
XXXX = Customization

Included modules

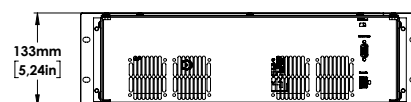
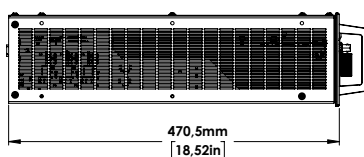
Communication	USB and RS-232
Standard Baudrate	115200



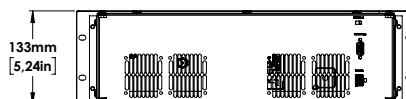
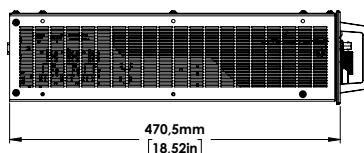
Wvl (nm)	Max.Pwr (W)
532	20
1064	200

## Mechanical Specifications

Ampheia™ 1064 nm - Fiber Amplifier 19" rack box dimensions:



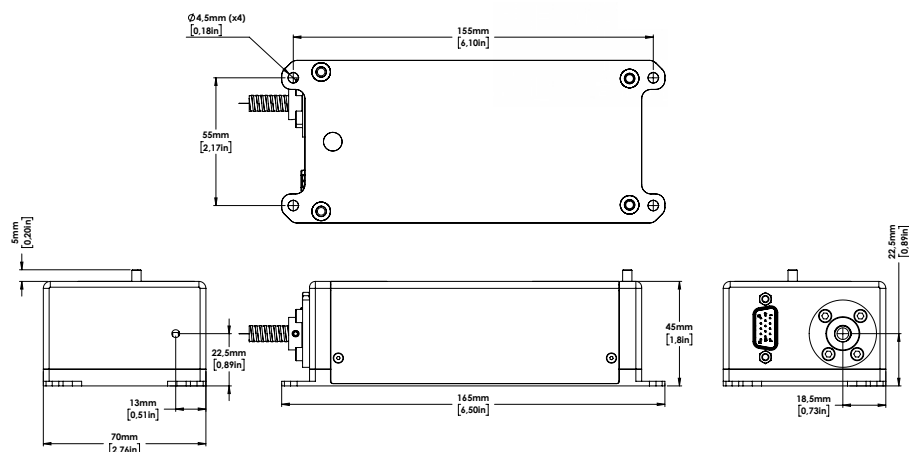
Ampheia™ 532 nm - Fiber Amplifier 19" rack box dimensions:



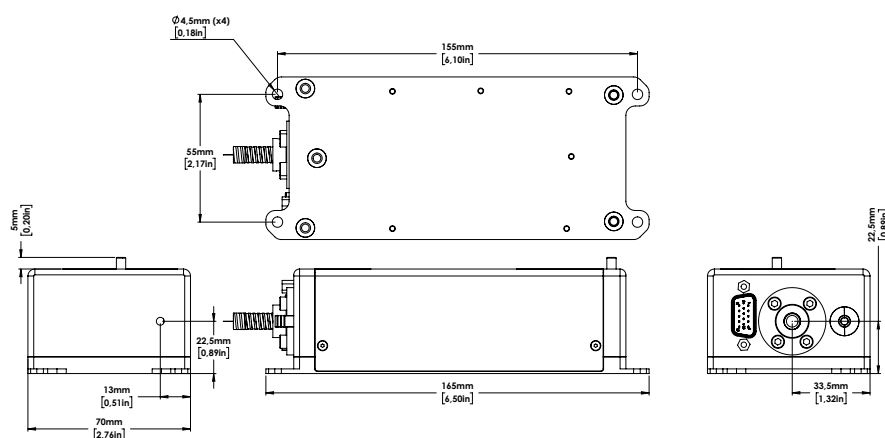
# Ampheia™ Series

## Mechanical Specifications

### Ampheia™ 1064 nm : Delivery head dimensions



### Ampheia™ 532 nm : Delivery head dimensions



## Our Locations

**Cobolt AB**, a part of HÜBNER Photonics  
(Sales in Norway, Sweden, Finland and Denmark)  
Solna, Sweden  
Phone: +46 8 545 912 30  
Fax: +46 8 545 912 31  
E-mail: [info.se@hubner-photonics.com](mailto:info.se@hubner-photonics.com)

**HÜBNER Photonics GmbH**  
(Sales in Germany, Switzerland and Austria)  
Kassel, Germany  
Phone: +49 561 994 060-0  
Fax: +49 561 994 060-13  
E-mail: [info.de@hubner-photonics.com](mailto:info.de@hubner-photonics.com)

**HÜBNER Photonics Inc.**  
(Sales in USA, Canada and Mexico)  
San Jose, California, USA  
Phone: +1 (408) 708 4351  
Fax: +1 (408) 490 2774  
E-mail: [info.usa@hubner-photonics.com](mailto:info.usa@hubner-photonics.com)

**HA Photonics Pty Ltd**  
(Sales in UK and Ireland)  
London  
United Kingdom  
Phone: +44 7359 440 871  
E-mail: [info.uk@hubner-photonics.com](mailto:info.uk@hubner-photonics.com)

**VALO Innovations**, a part of HÜBNER Photonics  
(VALO Sales and Service)  
Hannover, Germany  
Phone: +49 511 260 390 70  
E-mail: [info.valo@hubner-photonics.com](mailto:info.valo@hubner-photonics.com)

[Find local sales representatives at hubner-photonics.com](http://hubner-photonics.com)