CVFA series

FREQUENCY CONVERTED FIBER AMPLIFIER FOR SCIENTIFIC APPLICATIONS

KEOPSYS BY LUMIBIRD

EYLSA + ELBA-M

Frequency doubled or tripled conversion,
Single frequency option, ...

The CVFA series are frequency converted fiber amplifiers designed for CW operation at 5XX and 7XXnm and deliver up to 1W of saturated output power.

CVFA are based on MOPFA design using an external seeder and several fiber amplifiers stages. Fiber amplifiers are isolated both at input and output. The signal is frequency converted using periodically poled crystals integrated in a highly reliable dust free single pass frequency conversion module. Models are available with narrow linedwidth seed source amplification option (<10MHz).

These products are available in user-friendly turnkey benchtop instruments or in modules. They integrate all the laser safety features required for a safe and reliable use. These amplifiers embeds a loss of input detection to turn off the amplifier stages in case of external seeder failure.

Key features

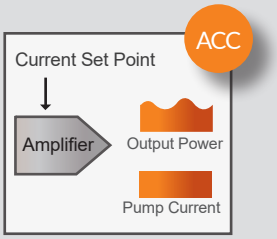
- Frequency doubled or tripled conversion
- Single frequency option
- 1W out of single mode fiber
- Very low phase noise and RIN degradation
- Excellent OSNR
- Diffraction limited output
- Linear polarization
- Maintenance free
- Turn-key operation

What applications

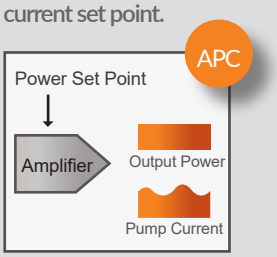
- Quantum optics such as Bose-Einstein condensate
- Optical tweezing
- Atomic laser interferometry
- Formation of cold molecules
- Metrology

Modes of operation

The devices offer several modes of operation :



ACC (Automatic Current Control) mode is standard for all devices. The amplifier is controlled from diodes current set point.



APC (Automatic Power Control) mode allows controlling the amplifier at a fixed output power set point. The device maintains a constant optical output power monitored with a photodiode. The current is adjusted automatically.

For ordering information and custom solutions, please contact us : websales@keopsys.com

Non contractual photos

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Optical Specifications @ 25 °C	CVFA
Mode of operation	CW
Output power	Up to 1W single frequency
Operating wavelength capability	Range 530 to 560, 767 to 790 nm / Standard wavelengths: 516,6 ; 778,15 ; 780,24 nm
Required input power	Standard >= 5 mW
Narrow linewidth option (<10MHz)	Yes
Input / output isolation	Integrated input isolation / Output isolation not required
Polarization	Linear (20dB PER for free-space version and 17dB for single mode fiber output version)
Output monitoring	Integrated
Beam quality, M^2	< 1.2
Output termination	FC/APC or free-space version

The CVFA is available as turn-key benchtop.

RELIABILITY

The Lumibird range of fiber amplifiers are manufactured with tested components and are submitted to several inspections during the manufacturing process under a rigorous quality management certified in accordance with the ISO 9001:2015 standard. Our all-in-fiber systems offer maintenance-free operation. Countless units are continuously running in demanding environments with no failure.

GUARANTEE

Our fiber systems are under 1 full year parts and labor warranty.
We offer a warranty extension of 1 or 2 years. Please contact us.

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RoHS REACH COMPLIANT CE

LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
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