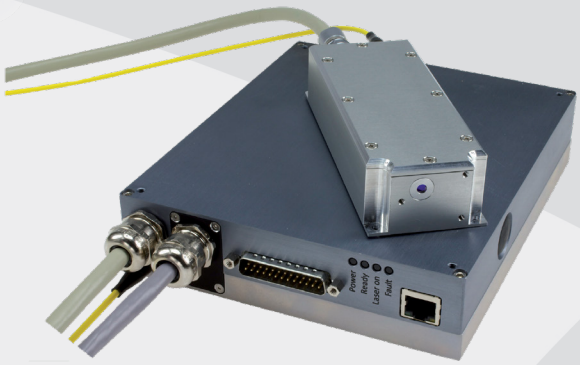
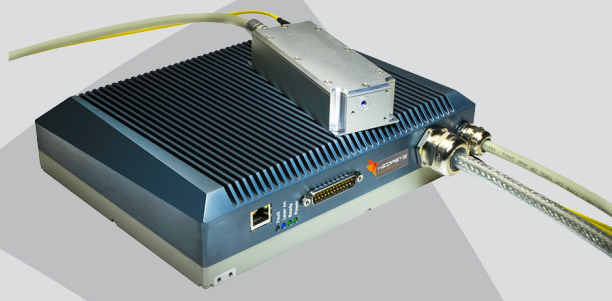
CVFL-GIGA 5xx

CW Visible Fiber Laser with gigahertz linewidth

KEOPSYS BY LUMIBIRD

ELBA-C & ELBA-M





MAIN FEATURES

- Output power up to 3 W
- 520, 532, 546, 560 and 577 standard wavelengths
- 20 GHz linewidth
- Linear polarization
- Short modulated pulse option
- Models that operate with a limited number of longitudinal modes
- Diffraction limited output ($M^2 < 1.1$)
- Robust and reliable

MAIN APPLICATIONS

- **SUPER-RESOLUTION MICROSCOPY**
- **DNA SEQUENCING**
- **MEDICAL APPLICATIONS (OPHTHALMOLOGY AND DERMATOLOGY)**
- **LASER SHOWS**
- **LASER DOPPLER VELOCIMETRY**

The Lumibird CVFL-GIGA are frequency converted Ytterbium doped fiber lasers emitting at a fixed wavelength with models from 520 nm up to 577 nm.

The design is composed by an all-fiber laser cavity emitting in the IR range and a frequency conversion module for visible light generation to visible laser. The frequency conversion module is a single-pass periodically poled crystal integrated in a dust free mechanical package. This frequency conversion module is very compact and can be placed up to 3 meters away from the laser box. No active cooling is required for the module.

These fiber lasers represent a very reliable, robust and stable solution compared to other DPSS technologies.

www.keopsys.com

Many options and configurations are available. Please contact Lumibird to find the best match for your needs and compatibility between options.

CVFL-GIGA 5xx

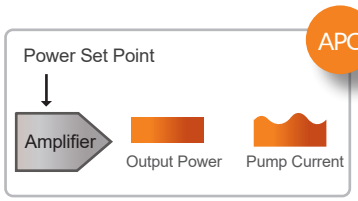
CW Visible Fiber Laser with gigahertz linewidth

KEOPSYS BY LUMIBIRD

SPECIFICATIONS

	CVFL-GIGA 5xx
Mode of operation	CW
Output power (W)	up to 3
Operating wavelength (nm)	520 / 532 / 546 / 560 / 577
Wavelength stability over 1 hour, +/- 1 °C (pm)	< 10
Linewidth (GHz)	typ. 20
Polarization	Linear (PER > 20 dB)
Output power monitoring	Integrated
Output power stability over 1 hour (% rms)	< 2
Output termination	Free-space collimated beam
Beam quality, M^2	< 1.2

Mode of operation



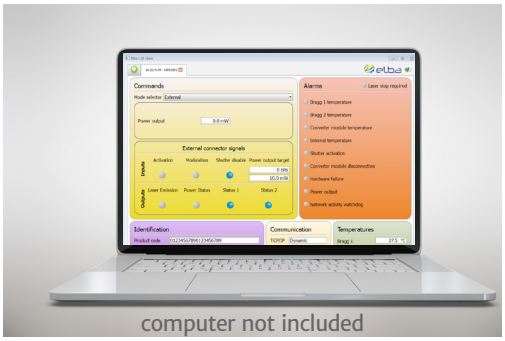
APC (Automatic Power Control)

EASY TO INTEGRATE !

Control box

· Control box and cables delivered with the module for easy evaluation. Available as an option

· Heat dissipation kit also available as an option



computer not included

Remote control

- TTL control
- Ethernet port and command set provided for easy integration
- GUI provided

Reliability

All our fiber lasers and fiber amplifiers are manufactured according to our ISO certified quality management system, which places the needs and values of customers and partners at the heart of our organization. Throughout the manufacturing process, our components and systems are subjected to rigorous tests and inspections, which guarantees their robustness and reliability in the most demanding environments. Countless units operate continuously without maintenance around the world. The ISO 9001 certificates can be downloaded from our website.

ISO 9001:2015

LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

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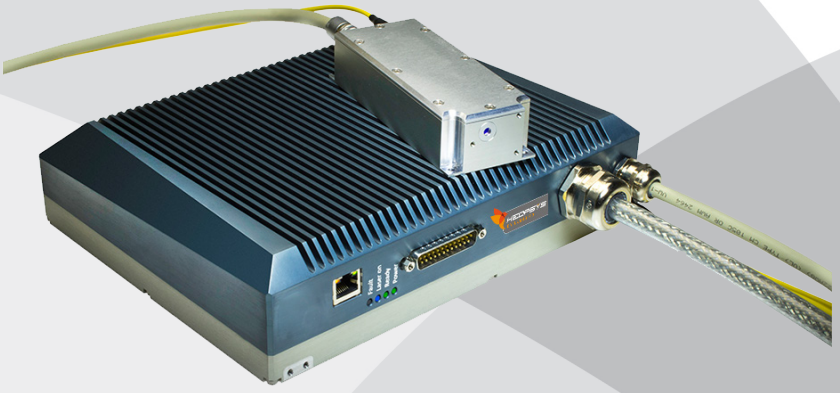
CE RoHS REACH

CVFL-GIGA 6xx & 7xx

CW Visible Fiber Laser with gigahertz linewidth

KEOPSYS BY LUMIBIRD

ELBA-M



MAIN FEATURES

- Output power up to 3 W
- 642, 660 and 780 standard wavelengths
- 20 GHz linewidth
- Linear polarization
- Short modulated pulse option
- Diffraction limited output ($M^2 < 1.1$)
- Robust and reliable

MAIN APPLICATIONS

- **SUPER-RESOLUTION MICROSCOPY**
- **DNA SEQUENCING**
- **MEDICAL APPLICATIONS (OPHTHALMOLOGY AND DERMATOLOGY)**
- **LASER SHOWS**
- **PETAWATT LASER LINE ALIGNMENT**
- **LASER DOPPLER VELOCIMETRY**

The Lumibird CVFL-GIGA are frequency converted Ytterbium and Erbium-Ytterbium doped fiber lasers at a fixed wavelength with models from 635 to 665 nm and 767 to 790 nm.

The design is composed by an all-fiber laser cavity emitting in the IR range and a frequency conversion module for visible light generation. The frequency conversion module is a single-pass periodically poled crystal integrated in a dust free mechanical package. This frequency conversion module is very compact and can be placed up to 3 meters away from the laser box. No active cooling is required for the module.

These fiber lasers represent a very reliable, robust and stable solution compared to other DPSS technologies.
The CVFL-GIGA is a perfect solution for industrial and medical applications.

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CVFL-GIGA 6xx & 7xx

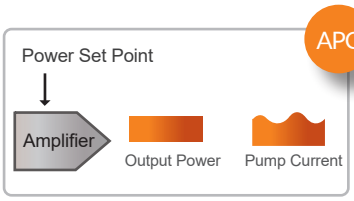
CW Visible Fiber Laser with gigahertz linewidth

KEOPSYS BY LUMIBIRD

SPECIFICATIONS

	CVFL-GIGA 6xx & 7xx
Mode of operation	CW
Output power (W)	up to 2
Operating wavelength (nm)	642 / 660 / 780
Wavelength stability over 1 hour, +/- 1 °C (pm)	< 10
Linewidth (GHz)	20
Polarization	Linear (PER > 20 dB)
Output power monitoring	Integrated
Output power stability over 1 hour (% rms)	< 2
Output termination	Free-space collimated beam
Beam quality, M^2	< 1.1

Mode of operation



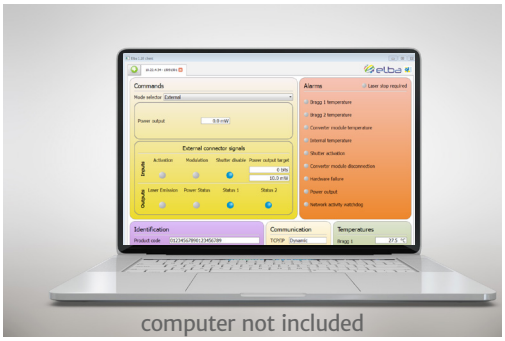
APC (Automatic Power Control)

EASY TO INTEGRATE !

Control box

· Control box and cables delivered with the module for easy evaluation. Available as an option

· Heat dissipation kit also available as an option



computer not included

Remote control

- TTL control
- Ethernet port and command set provided for easy integration
- GUI provided

Reliability

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CE RoHS REACH

CVFL-KILO

CW Visible Fiber Laser with kilohertz linewidth

B340/B341

MAIN FEATURES

- Rubidium, Potassium, Ytterbium, CaF,.. cooling lines
- Single frequency fiber laser
- Up to 3 W out of single mode fiber
- Diffraction limited output ($M^2 < 1.1$)
- Excellent SMSR
- Linear polarization
- Very low phase noise and RIN
- Wavelength tunability
- Laser frequency modulation
- Turn-key operation

MAIN APPLICATIONS

- **ATOM COOLING AND QUANTUM OPTICS**
- **FORMATION OF COLD MOLECULES**
- **ENTANGLED PHOTON GENERATION**
- **OPTICAL TWEEZING**
- **METROLOGY**

The high performance design of the CVFL-KILO lasers is based on a high stability laser diode which is amplified by fiber amplifier stages and then frequency converted to visible range.

For the most demanding applications, the CVFL-KILO lasers can be thermally and current tuned to be locked on an absorption line. They include a monitoring output and an optional mid-stage access. The CVFL-KILO high performance design uses embedded air-cooling and provides exceptional high wall plug efficiency.
The high reliability of CVFL-KILO's integrated components ensures a long lifetime without any maintenance or preventive service (no realignment, no need to clean optics,...).

The lasers might be controlled via the front panel display or remotely via serial USB and Ethernet ports.

www.keopsys.com

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CVFL-KILO

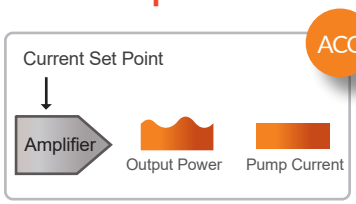
CW Visible Fiber Laser with kilohertz linewidth

KEOPSYS BY LUMIBIRD

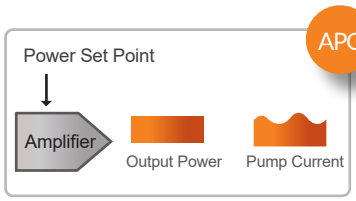
SPECIFICATIONS

	CVFL-KILO
Mode of operation	CW
Output power (W)	3
Operating wavelength (nm)	532 / 767 / 780
Wavelength stability over 1 hour, +/- 1 °C (MHz)	+/- 150 or +/- 250 (depending on wavelength)
Linewidth (kHz)	60 typ. (instantaneous, Lorentzian model) < 150 (frequency noise integration over 1 ms)
Wavelength thermal tuning range, WT option (GHz)	7 or 8 (depending on wavelength)
Laser frequency modulation range, FM option (GHz)	1
Polarization	Linear, PER > 20 dB (free-space output) or PER > 17 dB (fibered output)
Seed tap (option)	Seeder monitoring, output monitoring or mid-stage access depending on model
Control mode	ACC, APC
Output termination	FC/APC or free-space
Beam quality, M^2	< 1.1

Mode of operation



ACC (Automatic Current Control)



APC (Automatic Power Control)

EASY TO USE !

Front panel control

· User-friendly benchtop with dial and front panel display for easy control and monitoring of the product

computer not included

Remote control

- USB port and command set provided
- Web server, Telnet, SSH protocols

Reliability

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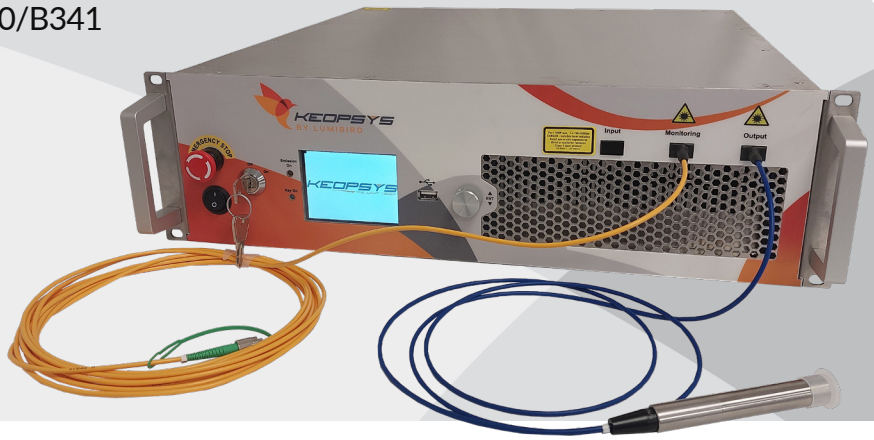
CE RoHS REACH

CVFL-MEGA

CW Visible Fiber Laser with megahertz linewidth

B340/B341



MAIN FEATURES

- Available as standard at 532 and 780 nm
- Up to 3 W out of single mode fiber
- Low phase noise and RIN
- Excellent SMSR
- Wavelength tunability option
- Laser frequency modulation option
- Diffraction limited output ($M^2 < 1.1$)
- Linear polarization
- Turn-key operation

MAIN APPLICATIONS

- **QUANTUM OPTICS SUCH AS BOSE-EINSTEIN CONDENSATE**
- **OPTICAL TWEEZING**
- **ATOMIC LASER INTERFEROMETRY**
- **RAMAN SPECTROSCOPY**
- **METROLOGY**

CVFL-MEGA series are single mode lasers in a turn-key, ease-of-use platform.

CVFL-MEGA use MHz seeder which is amplified through several fiber amplifier stages. The output is then converted to a visible wavelength to address several applications such as optical tweezing, interferometry or Raman spectroscopy.

The lasers can be thermally and current tuned in order to lock their wavelength on an absorption line. These lasers are renowned for their robustness, reliability and maintenance free operation.

The laser might be controlled via the front panel display or remotely via serial USB and Ethernet ports.

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CVFL-MEGA

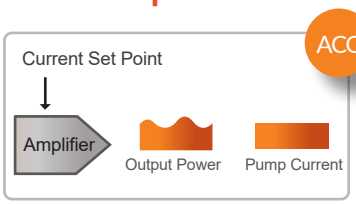
CW Visible Fiber Laser with megahertz linewidth

KEOPSYS BY LUMIBIRD

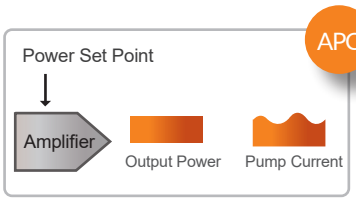
SPECIFICATIONS

	CVFL-MEGA
Mode of operation	CW
Output power (W)	up to 3
Operating wavelength (nm)	532 / 780
Wavelength stability over 1 hour, +/- 1 °C (MHz)	+/- 200 or +/- 300 (depending on wavelength)
Linewidth (MHz)	< 10
Wavelength thermal tuning range, WT option (GHz)	100 (depending on wavelength)
Laser frequency modulation range, FM option (GHz)	10 (depending on wavelength)
Polarization	Linear, PER > 20 dB (free-space output) or PER > 17 dB (fibered output)
Seed tap (option)	Seeder monitoring, output monitoring or mid-stage access depending on model
Control mode	ACC, APC
Output termination	FC/APC or free-space depending on model
Beam quality, M^2	< 1.1

Mode of operation



ACC (Automatic Current Control)



APC (Automatic Power Control)

EASY TO USE !

Front panel control

User-friendly benchtop with dial and front panel display for easy control and monitoring of the product.

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Remote control

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Reliability

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