

# CVFL-GIGA 6xx and 7xx series

VISIBLE FIBER LASERS FOR BIOTECHNOLOGY  
AND SUPER-RESOLUTION MICROSCOPY APPLICATIONS



## ● ELBA-M



Output power up to 3 W,  
642, 660 and 780 standard wavelengths,  
...

The Lumibird CVFL-GIGA are frequency converted Ytterbium and Erbium-Ytterbium doped fiber lasers designed to provide fixed wavelength outputs 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 which converts IR laser 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 might be placed up to 3 meters ahead from the laser box. No active cooling is required for the module.

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

The CVFL-GIGA is a reliable, robust, and stable solution for industrial and medical applications.

## Key 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
- Robust and reliable
- Turn-key system

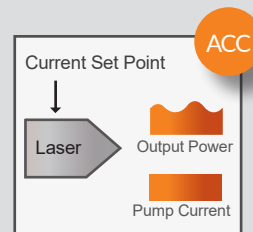
## What applications

- Super-resolution microscopy
- DNA sequencing
- Medical application (ophthalmology and dermatology)
- Laser shows
- Petawatt laser line alignment

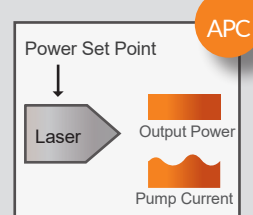


## Modes of operation

The devices offer several modes of operation :



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



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

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Optical Specifications @ 25 °C	CVFL-GIGA 6xx and 7xx
Mode of operation	CW
Output power	Up to 2 W
Operating wavelength	From 635 to 665nm and 767 to 790nm / Standard 642, 660 and 780nm
Wavelength stability over 1 hour, +/-1 °C	< 10 pm
Spectral linewidth	20 GHz
Power stability (rms) over 1 hour	< 2 %
Polarization	Linear (PER > 20 dB)
Output monitoring	Integrated
Beam quality, M <sup>2</sup>	< 1.2
Output termination	Free-space collimated beam

The CVFL-GIGA 6xx and 7xx is available as turn-key benchtop.  
A control box and a mounted heatsink set are optionally available.

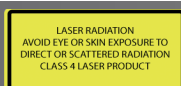
## RELIABILITY

The Lumibird range of fiber lasers 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.

For ordering information and custom solutions, please contact us : [websales@keopsys.com](mailto:websales@keopsys.com)



Lumibird undertakes a continuous and intensive product development program to ensure that its products perform to then highest technical standards. As a result, the specifications in this document are subject to change without notice.

Lumibird has locations across the globe that are available to provide support for any product, service or inquiry.  
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