

CYFL-GIGA

CONTINUOUS WAVE YTTERBIUM FIBER LASER



1.0 μm



B 301

B 206



Output power up to 20 W,
1083 nm standard wavelength,
...

CYFL-GIGA series are Ytterbium-doped fiber lasers emitting at 1083 nm. These lasers are specially designed for helium pumping applications. Optical imaging for medical applications, study of the helium spin in the nuclear field, absorption spectroscopy and nuclear physics are among the large list of applications with this fiber laser.

Designed in cooperation with an University research team, this patented ytterbium fiber laser is stable, robust and easy to use.

The CYFL-GIGA series can deliver a high output power, up to 20 watts.

Standard operating wavelength is 1083 nm, but other wavelengths can be requested on a custom basis. The series includes polarization maintaining models.

One particular property is the linewidth of 1 or 2GHz, filled with a large number of single longitudinal modes. This allows consequently to achieve high pumping efficiency of gas atomic transition.

The Ytterbium fiber laser does not need maintenance thanks to a complete fiber design. On request, Lumibird provides free support for installation.

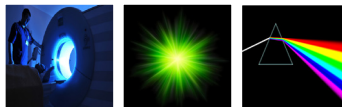
The CYFL-GIGA series are available in benchtops which offer the possibility to monitor the laser via the front panel or remotely via serial port. Both models offer robustness and reliability.

Key features

- Output power up to 20 W
- 1083 nm standard wavelength
- 2 GHz linewidth
- Wavelength tuning up to 100 GHz (optional)
- Laser frequency modulation (optional)
- Random or linear polarization
- Excellent SMSR
- Diffraction limited output
- Robust and reliable
- Turn-key system

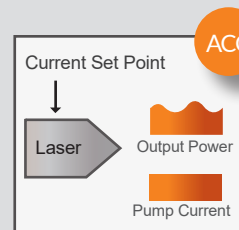
What applications

- Medical imaging
- Nuclear physics
- Helium pumping for medical lung imaging
- Absorption spectroscopy
- Wavelength conversion

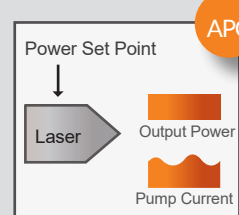


Modes of operation

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 | CYFL-GIGA |
|---|---|
| | |
| Mode of operation | CW |
| Output power | From 2 to 20 W |
| Operating wavelength ¹ | 1083 nm |
| Wavelength stability over 1 hour, +/-1 °C | 10 pm |
| Wavelength thermal tuning range | Option |
| Laser frequency modulation range | Option |
| Laser frequency modulation bandwidth | DC to 1 kHz (input analog voltage 0 to +4 V) |
| Spectral linewidth | 2 GHz max |
| Power stability (rms) over 1 hour | <2 % |
| Polarization | Random or Linear (17 dB) |
| Seed Tap | Option |
| Output monitoring | Option (Internal photodiode and automatic power control mode) |
| Beam quality, M ² | < 1.1 |
| Output termination | FC/APC, E2PS or Collimated |

1 : Standard wavelength, others are available on request

The CYFL-GIGA is available as turn-key benchtop.

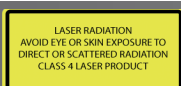
RELIABILITY

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.

For ordering information and custom solutions, please contact us : 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.
Visit www.lumibird.com to connect with any of our global sites.

