

# CYFL-MEGA SERIES

## CONTINUOUS WAVE YTTERBIUM FIBER LASER

1  $\mu\text{m}$  MEGALITE FIBER LASERS FOR SENSING AND SHG



### KEY FEATURES

- Narrow linewidth of a few tens of MHz
- Single longitudinal mode
- 1064 nm standard operating wavelength
- Output power up to 20 W
- Low amplitude noise
- Diffraction limited output
- Random or linear polarization
- Maintenance free

### APPLICATIONS



- Sensing
- Second harmonic generation
- Optical component testing

### Description

**CYFL-MEGA** are Ytterbium fiber doped lasers providing a single mode operation. Thanks to the Keopsys patented design, they deliver a linewidth of few MHz up to 20 W of output power.

These lasers perform a low relative intensity noise and a high optical power stability. The output laser beam is diffraction limited, either in random or in linear polarization version.

Available in benchtop or in module suitable for integration, CYFL-MEGA is an entirely fibered device meaning no alignment of optical part and maintenance free.

Key applications for these sources include sensing and second harmonic generation in order to generate visible light. They also find important use in optical passive component testing at high output power.

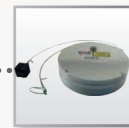
Standard operating wavelength is 1064 nm, although other wavelengths can be requested on a custom basis.

### 4 Platforms

M 405



M 404



B 206



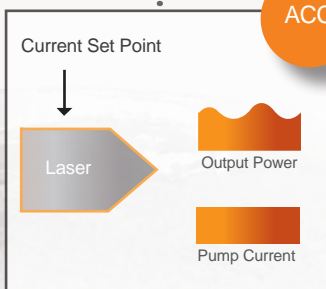
B 301



### Modes of operation

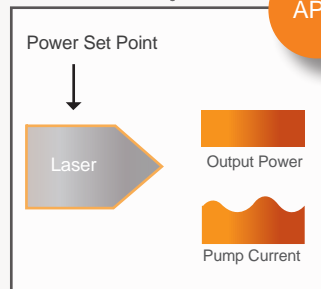
The devices offer several modes of operation :

ACC



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

APC



APC (Automatic Power Control) mode allows to control 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-MEGA   |
|--|---|
| Mode of operation                          | CW  |
| Output power                               | From 1 to 20 W  |
| Standard operating wavelength              | 1064 nm   |
| Wavelength stability over 1 hour, +/- 1 °C | 10pm  |
| 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                         | 4 MHz Typ, 20 MHz Max   |
| Optical S/N ratio                          | >50 dB (+/-1 nm from central wavelength, 0.07 nm resolution)  |
| Polarization                               | Random or Linear  |
| Seed Tap                                   | Option  |
| Output monitoring                          | Option (Internal photodiode and automatic power control mode) |
| Beam quality, M <sup>2</sup>               | < 1.1   |
| Output termination                         | FC/APC, E2PS or Collimated                                    |

The CYFL-MEGA series lasers are available as benchtop or as OEM module.

### RELIABILITY

The Keopsys 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 9001:2008 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 guarantee. 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)



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



📍 2 rue Paul Sabatier, 22300 LANNION, FRANCE

☎ +33(0)2 9605 0800

🖨 +33(0)2 9605 0801

✉ [websales@keopsys.com](mailto:websales@keopsys.com)

🌐 [www.keopsys.com](http://www.keopsys.com)

### KEOPSYS Offices

📍 1541 Alta Drive, Suite205, Whitehall, PA 18052, USA

📍 Mühlhäuser Str. 1A 99986 Vogtei, Germany

📍 323 Guo Ding Road, Bld 3 - 3F, 200 433 Shanghai - China