

# CYFA-PB

CW YTTERBIUM FIBER AMPLIFIER  
WITH INTEGRATED PREAMPLIFIER



1.0  $\mu\text{m}$

B 301

M 405

B 130

B 203



Up to 42 dBm of saturated output power  
Preamplifier built-in for low input power,  
...

The CYFA-PB series (Continuous Ytterbium-doped fiber amplifier) are designed for continuous wave operations in the 1.0  $\mu\text{m}$  range. The amplifiers deliver up to 42dBm of saturated output power and are available in random or linear polarization.

Many various scientific applications can be achieved with these Ytterbium fiber amplifiers, such as material characterization, nanotechnologies, quantum optics or nonlinear optics for the visible light generation.

Their design is highly robust and are also designed to amplify narrow linewidth signals (<100kHz).

Several optical amplification bandwidths are available from 1029 nm to 1114 nm.

The devices are able to operate with signal down to 0dBm, thanks to several stages of amplification.

They also deliver high optical signal to noise ratio (OSNR) at the output.

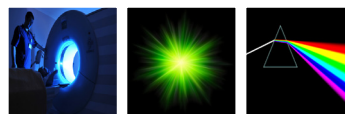
The CYFA-PB series are available in benchtops or compact OEM modules. The benchtop platforms offer the possibility to monitor the amplifier via the front panel or remotely via serial port. Both models offer robustness and reliability.

## Key features

- Up to 42 dBm of saturated output power
- Preamplifier built-in for low input power
- Polarization-maintaining (optional)
- Wide choice of optical bandwidth
- Narrow linewidth
- Turnkey benchtop or OEM module versions available
- Low power consumption
- High reliability

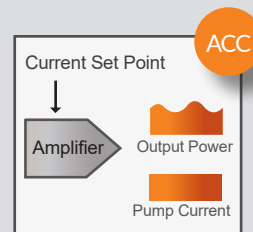
## What applications

- Helium pumping
- Sensing
- Optical component testing
- Non-linear optics in the visible (green to orange)
- Material characterization

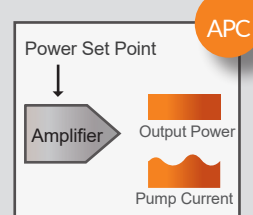


## Modes of operation

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.

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## Optical Specifications

@ 25 °C

	CYFA-PB
Mode of operation	CW
Wavelength range <sup>1</sup>	1029-1035 nm (BW01), 1036-1045 nm (BW02), 1046-1059 nm (BW03), 1060-1075 nm (BW04), 1076-1090 (BW05), 1110-1114 nm (BW06), Custom (BW00)
Polarization	Random (SM) or linear (PM with PER>17 dB)
Output power (0 dBm input for BW1, +5 dBm input for BW2)	From 30 to 42 dBm
Input power range	0 to +15 dBm (BW1) +5 to +20 dBm (BW2)
APC Tunability	10 to 100 %
Narrow linewidth (<100 kHz) amplification	Option
Input / output termination	FC/APC or collimated <sup>2</sup>

1 : other wavelength ranges available upon request upto 1120 nm

2 : ask for diameter beam

The CYFA-PB is available as turn-key benchtop or as OEM module.

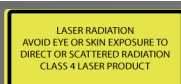
### RELIABILITY

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](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. Visit [www.lumibird.com](http://www.lumibird.com) to connect with any of our global sites.

