PEFA-LP-C (PEFA-EOLA)

Pulsed Erbium Fiber Amplifier
1.5 µm long pulse

KEOPSYS BY LUMIBIRD

M102

PE1D

PE23D

MAIN FEATURES

- Eye-safe 1.5 µm operating wavelength
- Energy per pulse up to 220 µJ
- Peak power up to 600 W
- Pulse duration from 200 to 800 ns
- Pulse repetition frequency from 10 kHz to 20 kHz
- Polarization maintaining
- Fourier transform limited linewidth operation
- Diffraction limited or $M^2 < 1.5$
- Wide operating temperature range from -35 °C to +65 °C

MAIN APPLICATIONS

- AEROSOL DETECTION
- WIND MONITORING
- 2D/3D WIND PROFILER
- WEATHER MONITORING
- POLLUTION MONITORING
- WIND HAZARD AND WAKE VORTICES MONITORING
- WIND FARM OPTIMIZATION

The PEFA-LP-C-PM (PEFA-EOLA) series is a range of 1.5 µm pulsed fiber amplifiers specially designed for Doppler heterodyne LiDAR systems, delivering Fourier transform limited pulses with high energy and high peak power.

Shorter pulse duration with high peak power are well suited to high spatial resolution middle range systems whereas longer pulses with high energy are well suited for long range applications.
Thanks to innovative optical designs, the amplifiers can emit up to 220 µJ energy and up to 600 W peak power with a linear polarization and an excellent output beam quality. An output circulator can be implemented to collect the back scattered light for heterodyne measurements. PEFA-LP-C-PM series is ideal for various wind measurement applications such as windfarm optimization and wind hazard and wake vortices monitoring.
High pulse repetition frequency (up to 20 kHz) allows speckle averaging and higher measurements rate.
The rugged modules can work in the most stringent environments 24h/24 and operate continuously under vibrations, shocks and strong temperature variations. The module incorporate a microcontroller for internal controls, alarms, and RS232 communication, making the amplifier widely compatible.

www.keopsys.com

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

PEFA-LP-C (PEFA-EOLA)

Pulsed Erbium Fiber Amplifier
1.5 µm long pulse

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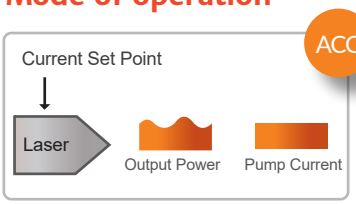
SPECIFICATIONS

	PEFA-EOLA
Mode of operation	Pulsed
Operating wavelength (nm)	1543, 1548.5 or 1550.1
Average output power (W)	Up to 2.2
Average input power (µW)	16
Energy per pulse (µJ)	Up to 220
Peak power (W)	Up to 600
Pulse repetition frequency (kHz)	10 or 20 (depending on model)
Pulse duration (ns)	From 200 to 800
Polarization	Linear (PER > 20 or 17 dB depending on the model)
Output circulator option	Yes
Input/output termination	FC/APC

Mode of operation

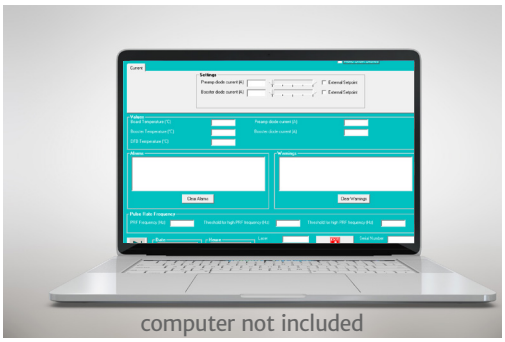


ACC (Automatic Current Control)

EASY TO INTEGRATE !

Control box

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



computer not included

Remote control

- RS232 interface
- Serial command set provided for easy integration
- GUI available

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

www.keopsys.com

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CE RoHS REACH

PEFA-SP-C

Pulsed Erbium Fiber Amplifier
1.5 µm short pulse

B130

M102

M304

MAIN FEATURES

- Picosecond pulse amplification
- Pulse distortion free up to 1 KW
- Average power up to 33 dBm
- Operating wavength from 1535 to 1565 nm
- Pulse repetition frequency from 10 MHz to 100 GHz
- Polarization maintaining fiber
- User-friendly benchtop or compact OEM module

MAIN APPLICATIONS

- **HIGH PEAK POWER GENERATION**
- **NON-LINEAR OPTICS**
- **HIGH SPEED TRANSMISSION SYSTEMS**
- **SUPER-CONTINUUM AND PULSE COMPRESSION**

The PEFA-SP-C series is a range of 1.5 µm pulsed fiber amplifiers specially designed to amplify picosecond sources up to 1 kW without pulse distortion.

The all-in-fiber design offers an amplification with a low noise figure and a low dispersion over the C-band from 1535 to 1565 nm. Solutions are available with an average power up to 33 dBm and with polarization maintaining fiber. The PEFA-SP-C amplifiers are commonly used for applications such as high peak power generation, non-linear optics, high speed transmission systems and supercontinuum generation.

The PEFA-SP-C series is available in turn-key 1U rack or module. The 1U rack offers the possibility to control the amplifier via the front panel or remotly via serial USB and Ethernet ports. The module incorporates a microcontroller for internal controls, alarms, and RS232 communication, making the amplifier widely compatible.

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PEFA-SP-C

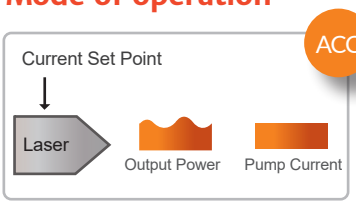
Pulsed Erbium Fiber Amplifier
1.5 µm short pulse

KEOPSYS BY LUMIBIRD

SPECIFICATIONS

	PEFA-SP-C
Mode of operation	Pulsed
Wavelength range (nm)	1535-1565 or 1545-1565 (depending on models)
Average output power at 0 dBm input in CW (dBm)	From 23 to 33
Average input power (µW)	-15 to +5
Peak power (kW)	Up to 1 (for distorsion-free pulse)
Pulse repetition frequency (GHz)	0.01 to 100
Pulse duration (ps)	0.3 to 10
Typical dispersion (fs/nm)	35
Polarization	Linear (PER > 20 dB)
Control Mode	ACC
Fiber type	PANDA
Input/output termination	FC/APC

Mode of operation



ACC (Automatic Current Control)

EASY TO CONTROL !

Benchtop

Control box for modules

computer not included

Control of device

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

· Modules with optional control box and cables for easy evaluation

Remote control

- USB port for benchtop
- Command set provided
- GUI available for modules and as an option for benchtops
- Web server, Telnet, SSH protocols for benchtop

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.

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