

CEFA-C-HG

CW ERBIUM FIBER AMPLIFIER C-BAND HIGH GAIN



1.5 μm

B 130



M 201



High small signal gain up to 50 dB
Low noise figure, ...

The CEFA-C-HG series are Erbium Fiber Amplifiers designed for amplification on the C-Band of very weak optical signals, down to -50 dBm.

A near quantum-limited noise figure and a small gain up to 50 dB are achieved through a specific Lumibird patented optical design.

Quantum cryptography, optical metrology, tests and measurements or low sensitivity transmission systems are among all applications of this high gain amplifier.

The optical design guarantees a very low noise figure and a limited amplified spontaneous emission in profit of a high optical to signal to noise ratio.(OSNR)

The series includes polarization maintaining models.

The CEFA-C-HG 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 USB and Ethernet ports. Both models offer robustness and reliability.

Key features

- High sensitivity with very low input power (- 50 dBm)
- High small signal gain up to 50 dB
- Near quantum-limited noise figure
- Polarization-maintaining (optional)
- Benchtop or OEM module versions available

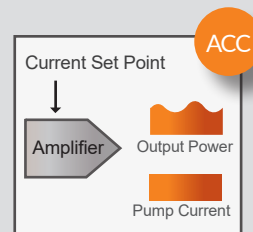
What applications

- High sensitivity optical preamplification
- Quantum cryptography
- Optical metrology
- Optical remote sensing
- Test and measurement

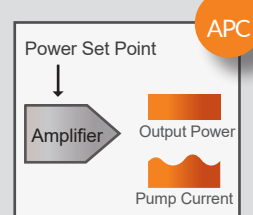


Modes of operation

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	CEFA-C-HG	
	CW	
Mode of operation	CW	
Polarization	Random (SM) or linear (PM with PER>20 dB)	
Output power (-6 dBm input)	15 dBm	20 dBm
Wavelength range	1529-1562 nm	
Input power range*	-50 dBm to 0 dBm	
Small signal gain (-40 dBm, 1530 nm input)	>40 dB	>50 dB
Noise figure (-40 dBm, 1550 nm input)	< 4 dB for SM, < 5 dB for PM	
Control mode	ACC, APC	
APC Tunability	10 to 100 %	
Power stability (rms over 1 hr)	<1 %	
Input / Output termination	FC/APC, SC/APC, FC/UPC, SC/UPC	

The CEFA-C-HG is available as turn-key benchtop or as OEM module.

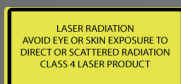
RELIABILITY

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



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.

