

CEFA-C-HG SERIES

CW ERBIUM FIBER AMPLIFIER C-BAND HIGH GAIN



FEATURES

- High sensitivity with very low input power (- 50dBm)
- High small signal gain up to 50dB
- Near quantum-limited noise figure
- Polarization-maintaining available
- Choice of turnkey benchtop or module

APPLICATIONS



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

Description

The **CEFA-C-HG** series Erbium doped fiber amplifiers are designed to amplify very weak optical signals.

Amplified spontaneous emission is limited in profit to the output signal-to-noise ratio. A near quantum limited noise figure and a small-signal gain greater than 50 dB are achieved at low input power (-50 dBm).

Polarization-maintaining models are available with very good polarization extinction ratio.

These amplifiers are proposed in turnkey benchtop instruments or in modules.

2 Platforms

B 201



M 201



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Optical Specifications

@ 25°C

	Model	
	CHG40	CHG50
Mode of operation	CW	
Polarization	Random (SM) or linear (PM with PER>20dB)	
Output power (-6dBm input)	15dBm	20dBm
Wavelength range	1529-1562 nm	
Input power range*	-50dBm to 0dBm	
Small signal gain (-40dBm, 1530nm input)	>40dB	>50dB
Noise figure (-40dBm, 1550nm input)	< 4dB for SM, < 5dB for PM	
Input monitoring	No	
Output monitoring	Yes	
Control mode	ACC, APC	
APC Tunability	10 to 100%	
Power stability (rms over 1hr)	<1%	
Optical port fiber type	SMF28 or PANDA	
Input / Output termination	FC/APC, SC/APC, FC/UPC, SC/UPC	
Power consumption**	<6W	<10W
Associated platform	B201, M201	

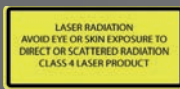
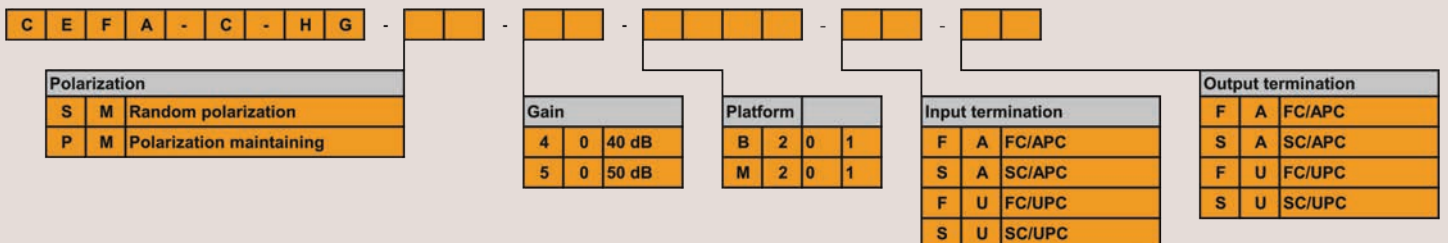
Platform Specifications

	Platform type	
	B201	M201
Voltage	84 to 264 VAC, 47-63 Hz	5 VDC
Control Interface	Front panel and RS232	RS232
Optical interface	3mm PVC, 1m	900 µm PVC, 1m
Warm-up time	< 5min	
Dimensions	448x446x88 mm (2U, 19")	150x120x25 mm
Weight	< 15 kg	< 500 g
Operating case temperature	+15°C to +35°C	-20°C to +65°C
Storage temperature	-20°C to +55°C	-40°C to +85°C

* From -40dBm to 0dBm, output optical SNR is >10dB (resolution 0.07nm)

** Power consumption for modules

Ordering information



All products comply with IEC 60825-1 and FDA (21 CFR Subchapter J) laser safety standards.

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