

CEFA-C-PB-HP SERIES

CW ERBIUM FIBER AMPLIFIER C-BAND HIGH POWER



KEY FEATURES

- Up to 42 dBm of saturated output power
- Low noise figure
- Preamplifier for low power input
- Polarization-maintaining (optional)
- Narrow linewidth amplification (<100 kHz)
- Benchtop or OEM module versions available
- Very compact OEM module (up to 30 dBm) available
- Low power consumption
- High reliability

APPLICATIONS



- Optical component testing
- Free space communication
- FTTH/CATV networks
- Remote sensing (LIDAR)
- Test and measurement
- Microwave optics
- Non-linear optics

Description

CEFA-C-PB-HP series are Erbium doped fiber amplifiers designed for single channel amplification. These C-band amplifiers deliver up to 42 dBm of saturate output power.

The serie includes polarization-maintaining OEM models and narrow linewidth amplification options.

Keopsys develops different platforms :

- User-friendly turnkey benchtop instruments, directly monitoring from front face.
- Very compacts modules, in particular the MSA module platform (M102) with up to 30 dBm output power.
- Both benchtops and OEM modules can be controlled with a PC via RS232 using our B2V2 software.

Built with several stages of amplification, these devices can be operated at low input power down to -20 dBm. They also offer excellent optical noise figure and high optical signal to noise ratio at the output.

Their wide range of operations make these amplifiers suitable for many different applications.

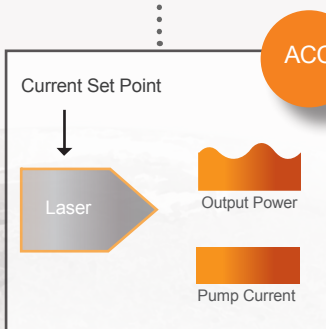
Crédit photo plateforme M102, B130 : Wyecs Prod

6 Platforms



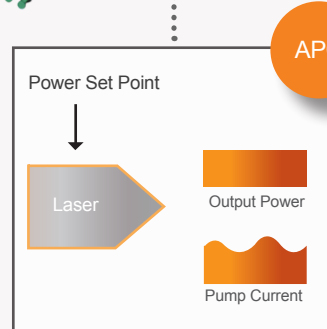
Modes of operation

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

		CEFA-C-PB-HP					
Mode of operation	CW						
Polarization	Random (SM) or linear (PM with PER>20 dB)			Random (SM) or linear (PM with PER>17 dB)			
Output power (-6 dBm input)	25 dBm	27 dBm	30 dBm	33 dBm	37 dBm	40 dBm	42 dBm
Wavelength range	1540-1565 nm			1545-1565 nm			
Input power range	-20 to 0 dBm						
Noise figure (-6 dBm, 1550 nm input)	<5 dB for SM, <5.5 dB for PM		<5.5 dB for SM, 6 dB for PM		<6.5 dB for SM, 7.5 dB for PM		
Control mode	ACC, APC			ACC, APC (option)			
APC Tunability	10 to 100 %						
Narrow linewidth (<100 kHz) amplification	Included			Option			
Optical port fiber type	SMF28 or PANDA						
Input / output termination	FC/APC, SC/APC FC/SPC, SC/SPC		FC/APC, SC/APC, E2PS, C1				

The CEFA-C-PB-HP is available as benchtop or as OEM module.

RELIABILITY

The Keopsys 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 9001:2008 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.

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Optical Specifications

@ 25 °C

	CEFA-C-PB-HP						
	CPB25	CPB27	CPB30	CPB33	CPB37	CPB40	CPB42
Mode of operation	CW						
Polarization	Random (SM) or linear (PM with PER>20 dB)				Random (SM) or linear (PM with PER>17 dB)		
Output power (-6 dBm input)	25 dBm	27 dBm	30 dBm	33 dBm	37 dBm	40 dBm	42 dBm
Wavelength range	1540-1565 nm				1545-1565 nm		
Input power range	-20 to 0 dBm						
Noise figure (-6 dBm, 1550 nm input)	<5 dB for SM, <5.5 dB for PM		<5.5 dB for SM, 6 dB for PM		<6.5 dB for SM, 7.5 dB for PM		
Input monitoring	Yes						
Output monitoring	Included				Option		
Control mode	ACC, APC				ACC, APC (option)		
APC Tunability	10 to 100 %					15 to 100 %	25 to 100 %
Power stability (rms over 1 hr)	<1 %				<2 %		
Narrow linewidth (<100 kHz) amplification	Included			Option			
Optical port fiber type	SMF28 or PANDA						
Input / output termination	FC/APC, SC/APC FC/SPC, SC/SPC		FC/APC, SC/APC, E2PS, C1				
Power consumption*	15 W	20 W	30 W	50 W	100 W	150 W	200 W
Associated platform	B130, M102, M301			B130, M301	B203, M403		B301

Platform Specifications

Platform type

	B130	B203	B301	M102	M301	M403
	Voltage	84 to 264 VAC, 47-63 Hz			5 to 12 VDC	21 to 24 VDC
Control Interface	Front panel, USB, RS232, RJ45	Front panel and RS232		RS232		
Optical interface	3 mm PVC, 1 m (rugged anti pool pigtail fixing)	3 mm PVC, 1 m		900 μm PVC, 1 m	3 mm PVC, 1 m	
Warm-up time	< 5 min					
Dimensions	443x315x44 mm	448x446x88 mm 2U 19"	448x446x133 mm 3U 19"	90x70x12 mm	230x130x26 mm	200x50mm
Weight	< 8 kg	< 15 kg		< 200 g	< 1200 g	<1800g
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		

* Power consumption for modules

Option : Interface and cables to drive the modules

Ordering information

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Polarization		Output power		Signal linewidth		Platform		Input termination		Output termination	
S	M	2	5	N	L	B	1	F	A	F	A
Random polarization		2	7	N	L	B	2	S	A	S	A
P	M	3	0	N	L	B	3	F	S	F	S
Polarization maintaining		3	3			M	1	F	S	S	S
		3	3			M	3	S	S	E	2
		3	7			M	4	E	2	C	1
		4	0							Collimator 1	
		4	2								