

CTFA-PB SERIES

CW THULIUM FIBER AMPLIFIER



KEY FEATURES

- Up to 40 dBm of saturated output power
- Broad bandwidth from 1900 to 2050 nm
- Choice of wavelength range
- Eye-safe operation
- Pre-amplifier built-in for good OSNR
- Polarization-maintaining (optional)
- Choice between turnkey benchtop or OEM module
- Diffraction limited output beam
- High reliability

Description

CTFA-PB-HP series Thulium doped fiber amplifiers are designed for eye-safe operation between 1900 and 2050 nm, up to 40 dBm of saturated output power.

Built with a pre-amplifier, the Keopsys CTFA-PB-HP products achieve an excellent output optical signal to noise ratio. The use of single mode fibers insure a very good beam quality ($M^2 < 1.1$).

The CTFA are available in random or polarization maintaining models.

The all fiber Keopsys technology offer the CTFA-PB-HP to be robust, reliable and maintenance free.

These amplifiers come in user-friendly turnkey benchtop instruments or in modules.

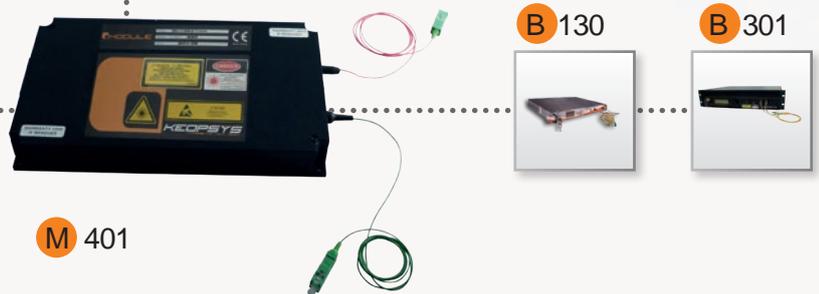
APPLICATIONS



- Remote sensing (LIDAR)
- Gas sensing
- Optical component testing
- Test and measurement
- Research & development

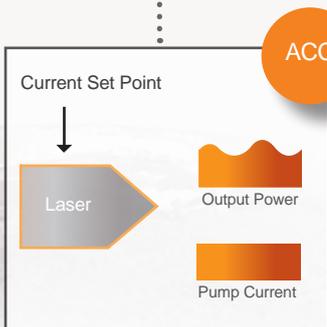
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3 Platforms

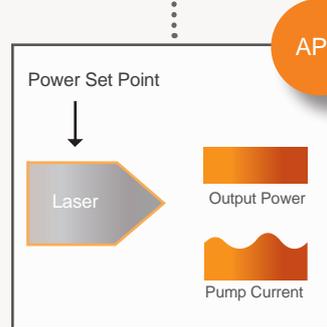


Modes of operation

The devices offer several modes of operation :



ACC (Automatic Current Control) mode is standard for all devices. The laser is controlled from diodes current set point.



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.

CTFA-PB SERIES

CW THULIUM FIBER AMPLIFIER

Optical Specifications

@ 25 °C

	CTFA-PB
Mode of operation	CW
Polarization	Random (SM) or linear (PM with PER>17 dB)
Output power (0 dBm input)	From 17 to 40 dBm
Wavelength range	1900 to 1930 nm (BW1), 1930 to 1960 nm (BW2), 1960 to 2000 nm (BW3), 2004nm +/-4 nm (BW4), 2040 +/-5 nm (BW5), 2050 +/-1 nm (BW6)
Input power range	0 to +10 dBm or 0 to +15 dBm
Input / output monitoring	Yes
Control mode	ACC / APC
APC tunability	30-100 %
Optical port fiber type	SMF28 or PANDA
Input / output termination	FC/APC, SC/APC, FC/SPC, SC/SPC

The CTFA series amplifiers are 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.

CTFA-PB SERIES

CW THULIUM FIBER AMPLIFIER

Optical Specifications

@ 25 °C

	CTFA-PB							
	PB17	PB20	PB23	PB27	PB30	PB33	PB37	PB40
Mode of operation	CW							
Polarization	Random (SM) or linear (PM with PER>17 dB)							
Output power (0 dBm input)	17 dBm	20 dBm	23 dBm	27 dBm	30 dBm	33 dBm	37 dBm	40 dBm
Wavelength range**	1900 to 1930 nm (BW1), 1930 to 1960 nm (BW2), 1960 to 2000 nm (BW3), 2004 nm +/- 4 nm (BW4), 2040 +/- 5 nm (BW5), 2050 +/- 1 nm (BW6)						2004 +/- 4 nm (BW4), 2040 +/- 5 nm (BW5)	
Input power range	0 to +10 dBm				0 to +15 dBm			
Input / output monitoring	Yes							
Control mode	ACC / APC							
APC tunability	30-100 %							
Power stability (rms over 1 hr)	<2 %							
Optical port fiber type	SMF28 or PANDA							
Input / output termination	FC/APC, SC/APC, FC/SPC, SC/SPC							
Power consumption*	25 W	30 W	35 W	40 W	50 W	70 W	-	-
Associated platform	B130, M401			B130, M401			B301	

Platform Specifications

Platform type

	Platform type		
	B130	B301	M401
Voltage	84 to 264 VAC, 47-63 Hz		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
Warm-up time	< 5 min		
Dimensions	443x315x44 mmv	448x446x133 mm, 3U	240 x 170 x 25 mm
Weight	< 8 kg	< 20 kg	< 1.8 kg
Operating case temperature	+15 °C to +35 °C		0 °C to +55 °C
Storage temperature	-20 °C to +55 °C		-40 °C to +85 °C

* Power consumption for modules

** Other wavelength ranges on custom request

Ordering information

CTFA - PB - [] - [] - [] - [] - [] - []

Polarization		Output power				Platform				Input termination			Output termination			
S	M	1	7	17	dBm	B	1	3	0	F	A	FC/APC	F	A	FC/APC	
P	M	2	0	20	dBm	B	3	0	1	S	A	SC/APC	S	A	SC/APC	
		2	3	23	dBm	M	4	0	1	F	S	FC/SPC	F	S	FC/SPC	
		2	7	27	dBm					F	S	FC/SPC	S	S	SC/SPC	
		3	0	30	dBm					S	S	SC/SPC				
		3	3	33	dBm											
		3	7	37	dBm											
		4	0	40	dBm											
						Operating wavelength										
						B	W	1	1900-1930							
						B	W	2	1930-1960							
						B	W	3	1960-2000							
						B	W	4	2004 +/- 4nm							
						B	W	5	2040 +/- 2nm							
						B	W	6	2050 +/- 1nm							