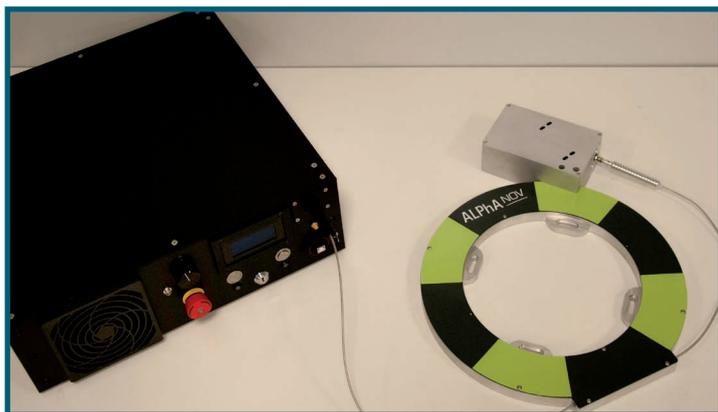


Turn-key 100W-class PCF amplifier unit

Based on its expertise in laser design and photonic crystal fiber interfacing, ALPhANOV developed a technology to build turn-key 100-Watt-class monolithic laser amplifiers with superior stability.



Technical specifications:

Optical performance	
Operational wavelength	1030-1064nm
Operational regime	Pulsed / single-frequency
Pulse repetition rate	50MHz typ.
Input signal power	2-4W
Output power	>100W
Output peak power	0.5 MW typ.
Output pulse energy	1mJ
Amplifier gain	17-20dB (*)
Output beam quality	$M^2 < 1.2$
PER	>15dB
Output power tuning	5-100%
Output free space beam size (1/e ²)	2-4mm
Output long term power stability (hrs)	<2%
Stability	1000hrs

(*) ALPhANOV recommends a gain of 17-20dB or less. A tap coupler with a detection circuit is implemented to prevent self Q-switching.

This technology relies on a Yb-doped microstructured fiber architecture. It can be tailored to meet specific requirements in terms of power, temporal regime and other functionalities.

Optical interfaces	
Input interface	High power FC/APC connector, bare fiber
Output interface	End-cap, SMA connector, collimator and/or isolator

Pump specification	
Number of diode ports	2 or 6 (on-demand)
Pump diodes	Up to 60W, CW or pulsed Rise/fall times >10μs

Electrical & mechanical specifications	
AC input	220V
Computer control interface	USB
Diode driver control	Analog
Cooling	Water

Special requests:

- Pre-amplifying on-demand
- Specific fiber amplifier developments on-demand
- Possibility to build a complete laser architecture with oscillator and SHG/THG module