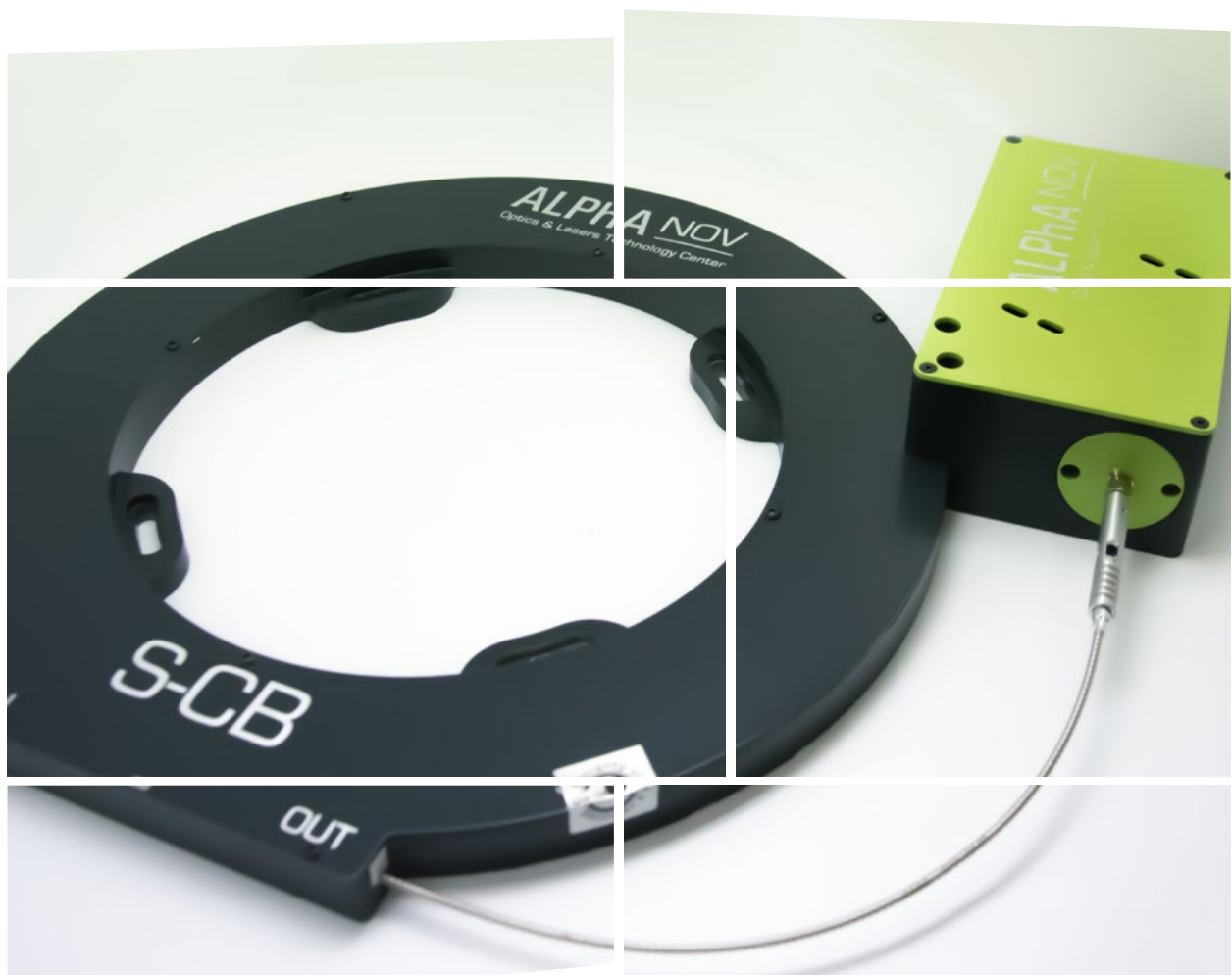


S-CB

High-power special fiber amplifier



ALPhA **NOV**

Optics & Lasers Technology Center

S-CB

High-power special fiber amplifier

Based on its expertise in laser design and state-of-the-art fiber interfacing, ALPhANOV can build custom turn-key multi-100-Watt monolithic laser amplifiers with superior stability.



200 W-class booster version.



Compact 30 W Amplifier version.

Optical performances

- Operational wavelength: 1030 - 1064 nm
- Operational regime: pulse / single-frequency
- Pulse repetition rate : 50 MHz typ.
- Input signal power: 2 - 4 W (17 - 20 dB)
- Output power: 30 - 200 W (booster version)
- Output peak power: up to 0.5 MW
- Output pulse energy: up to 1 mJ
- Output beam quality: $M^2 < 1.2$
- PER: > 15 dB
- Output power tuning: 5 - 100 %
- Output free space beam size ($1/e^2$): 1.5 - 2.5 mm
- Isolation: > 30 dB
- Output long term power stability (hrs): < 2 %
- Stability: 1000 hrs

Optical interfaces

- Input interface: high power FC/APC connector, bare fiber
- Output interface: isolated/collimated beam

Pump specification

- Number of diode ports: 2 or 6 (on-demand)
- Pump diodes: up to 60 W, CW or pulsed
- Rise/fall times > 10 μ s

Our amplifiers rely on Yb-doped microstructured fiber architectures. It can be tailored to meet specific requirements in terms of power, temporal regime and other functionalities.

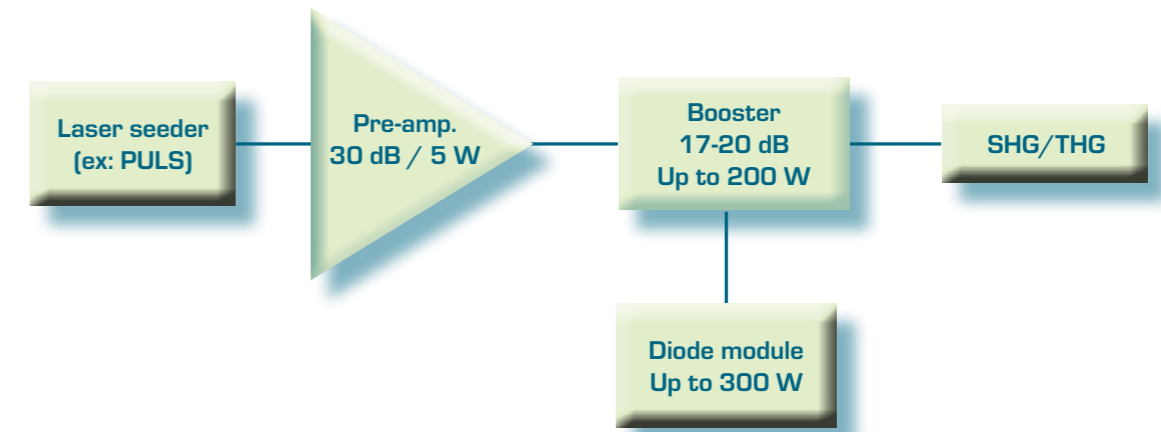
Specific fiber amplifier developments on-demand

Technical Specifications



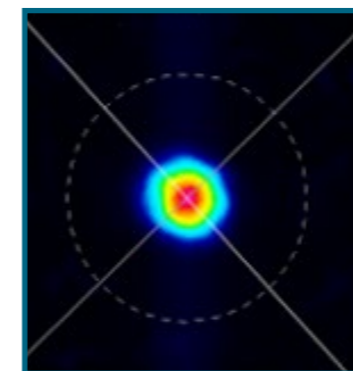
Options

- Option 1: Seeder on request (see our PULS product line)
- Option 2: Fiber-based preamplifier - 30 dB/5 W output power
- Option 3: Up to 300 W - diode modules for pumping (fully secured/thermalized compact pumping module)
- Option 4: SHG-THG module, up on request

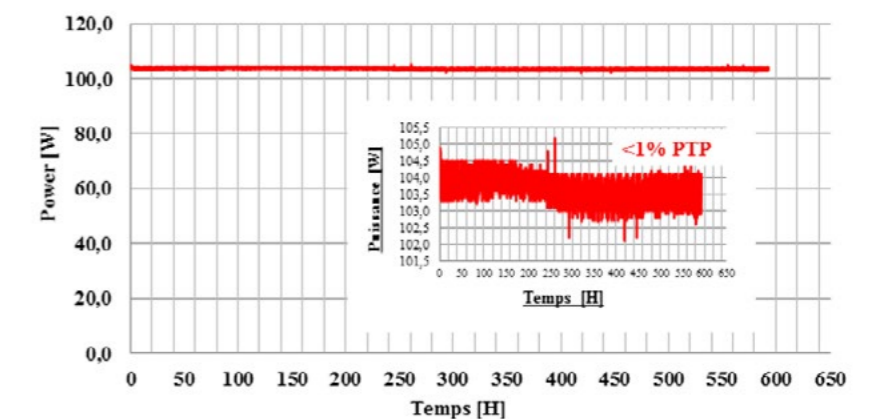


Stability

Beam quality after 25 days burn in, @ 100 W, 100 kW Peak Power



Beam profile after the burn in



Laser stability over 3 weeks of continuous burn in at 100 W/100 kW Peak Power

The logo for ALPhA NOV features the word 'ALPhA' in a dark blue, sans-serif font, followed by 'NOV' in a light green, sans-serif font. A thin blue horizontal line is positioned beneath the 'NOV' text.

ALPhA NOV

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