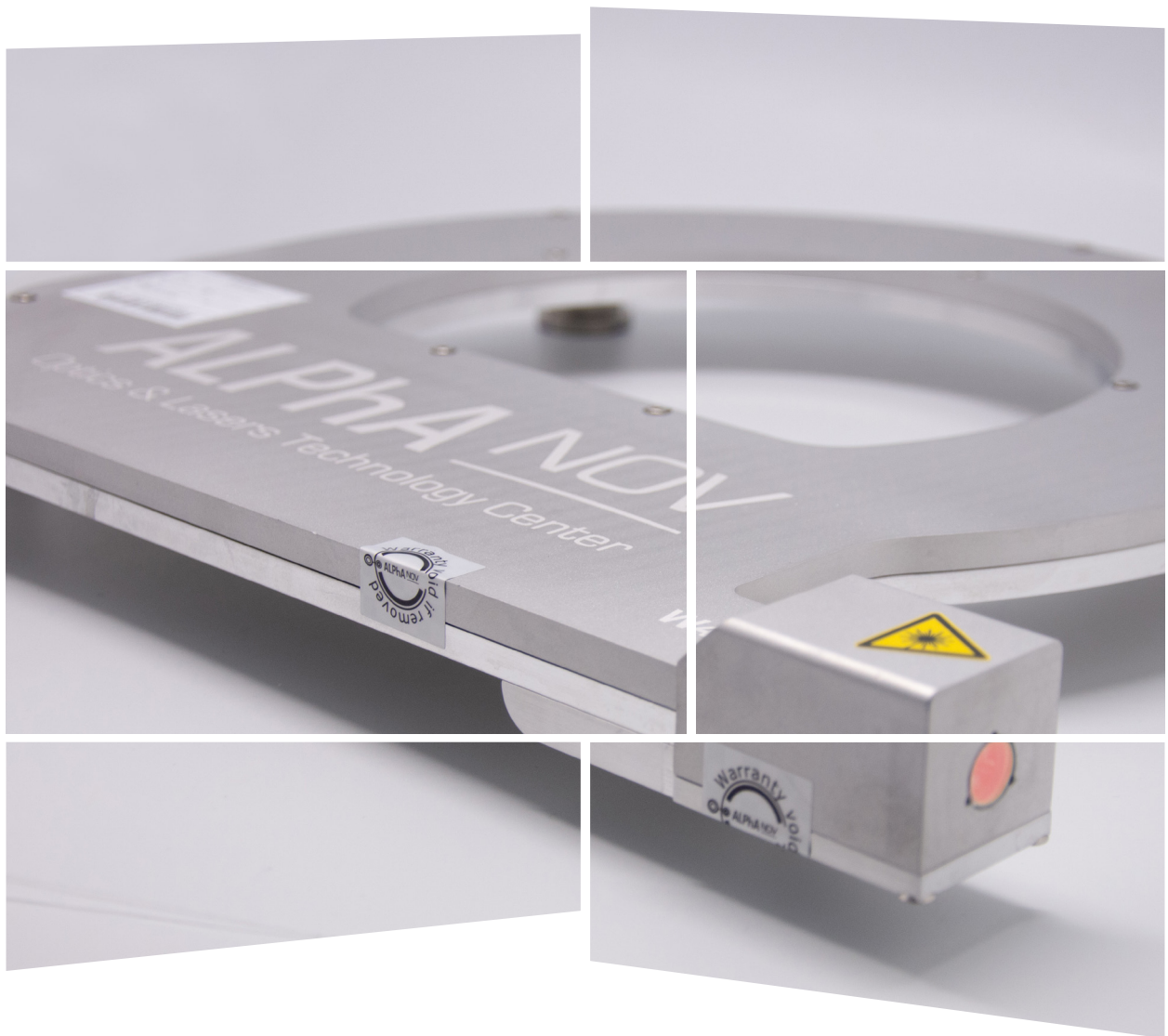


S-FA-HP

High-power special fiber amplifiers



ALPhA **NOV**

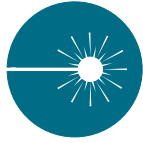
Optics & Lasers Technology Center

S-FA-HP

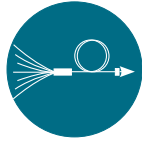
High-power special fiber amplifiers



ENHANCED STABILITY



HIGH POWER



CO-FORWARD

- With strong expertise in laser design and by using state-of-the-art fibers, ALPhANOV can build monolithic YDFAs based on co-forward pumping, with superior stability and performances optimized for your operating regime.
- The S-FA-HP is our compact OEM version. Passively cooled, it is design to reach average power up to 30 W.
- Pumping modules can be delivered as an option.

AMPLIFIER PARAMETERS

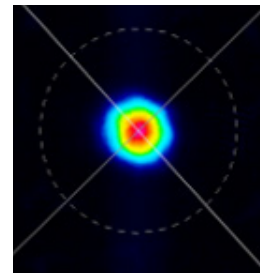
Pumping scheme	Co-Forward
Pump combiner	2+1 >1 (diodes are not included)
Gain fiber	Tailored to your regime (Several fiber technologies can be implemented)
Input fiber	12 μm core PM single mode fiber (connectorized or bare fiber)
Pump fibers	2 ports; 105/125,NA0.22 @976 nm
Mode field adaptor	Down to 0.6-1dB loss
Cooling	Air
Output beam	Collimated (1.5 - 2.5 mm) Wavelength separator (for pump removal)

TYPICAL PERFORMANCES (*)

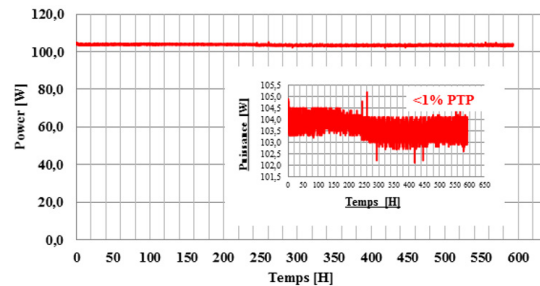
Operational wavelength	1030 - 1060 nm
Operating regime	CW or pulsed
Beam Quality	$M^2 < 1.2$
Output power (rated)	Up to 30 W
Max gain	< 17 dB
Output energy	Up to 200 μJ
Output Peak Power	Up to 400 kW
Slope efficiency	70% typ.
PER	> 15 dB
Long term stability	< 2% over 1000 hrs

(*) the feasibility of these typical performance is always discussed depending on the operating regime

STABILITY

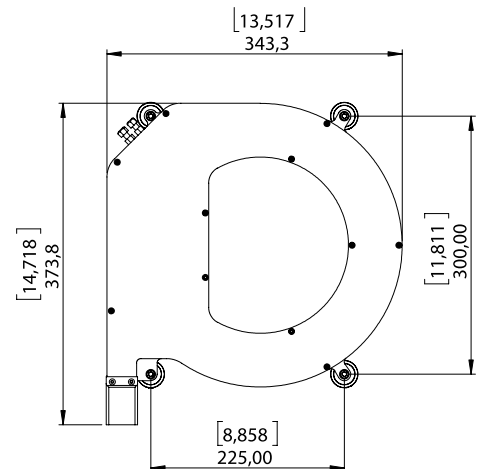


Beam quality after 25 days burn in, @ 100 W, 100 kW peak power



Laser stability over 3 weeks of continuous burn in at 100 W/100 kW peak power

MECHANICAL



The footprint can vary as an homothety of the radius of curvature of the fiber