

Titan

Ultra-compact high energy pulsed Nd:YAG laser

High Energy YAG laser

The Titan serie is the family of High Energy and compact Nd:YAG lasers manufactured by Amplitude.

Thanks to our efficient pumping chambers, the Titan serie provides the highest ratio Joule per m² on the market.

It is a laser of choice for compact table-top applications and also for integration in small Laser peening set-up.

Their minimum footprint makes the Titan serie an ideal candidate to pump large 100s TW and PW Ti:Sa lasers up to 5 Hz while preserving space in your laboratory or facility. Tens of Titans have been successfully installed through the world in space-constrained environment.

Moreover, Titans deliver top-hat beam profile and stable output energy to ensure homogeneous and repeatable illumination of your application. For the most demanding applications we can also propose the implementation of a Diffractive Optical Element (DOE) to reach a perfect top-hat beam profile.



Applications

Industry:

- > Laser peening

Science:

- > Ti:Sapphire pumping for TW and PW Laser Systems
- > LIDT test

Key Features

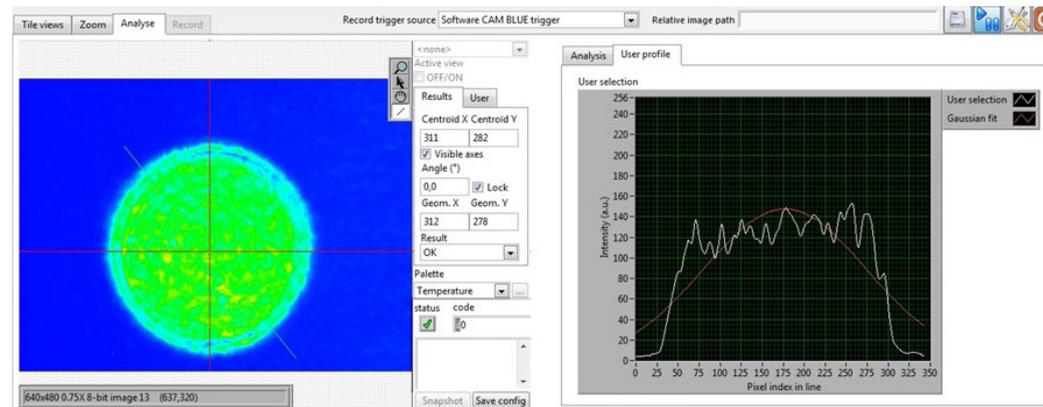
- > Output energy up to 10 J at 532 nm / 5 Hz
- > Ultra-compact footprint: highest ratio Joule per m² of the market
- > Embedded CCD camera to real-time monitor the laser beam
- > Ergonomic design, dedicated for ultra-intense lasers pumping
- > Reduced cost of ownership



Specifications

	Titan	Titan HE
Repetition Rate	1 Hz or 5 Hz	
Wavelength	532 nm model / 1064 nm model	
Pulse Energy*	5 J at 532 nm / 8 J at 1064 nm	10 J at 532 nm / 16 J at 1064 nm
Energy Stability	1.2 % RMS on 1000 shots	1.0 % RMS on 1000 shots
Energy Drift	5 % over 8 h	
Beam Profile	quasi top-hat	
Beam Quality	Mono-mode	
Beam Diameter	~ 21 mm	
Pulse Duration	12 ns FWHM	two pulses of 12 ns FWHM
Timing Jitter	0.5 ns rms	
Divergence	0.5 mrad	
Polarization	Vertical at 532 nm Horizontal at 1064 nm	Vertical at 532 nm, 50 % Horizontal, 50 % Vertical at 1064 nm

*For pumping application, highest beam quality is offered at 5J and 10J, respectively



Beam profile at 532 nm



Dimensions

Titan

Laser head	1186 x 429 x 208 mm
Electronic cabinet	600 x 550 x 835 mm

Titan HE

Laser head	1186 x 764 x 212 mm
Electronic cabinet	600 x 550 x 1240 mm

Specifications are subject to change without prior notice | © 03-2022 | Ref. 1200 - D