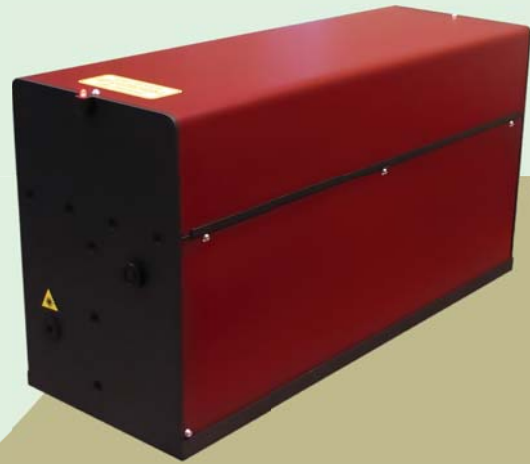


Amplifiers



TETA Yb Regenerative Amplifier

- Pulse duration <300 fs
- >150 uJ per pulse at 1 kHz
- Repetition rates up to 20 kHz
- Optional SH and FH outputs
- PC control software
- High beam quality and pointing stability
- Compact single-box solution



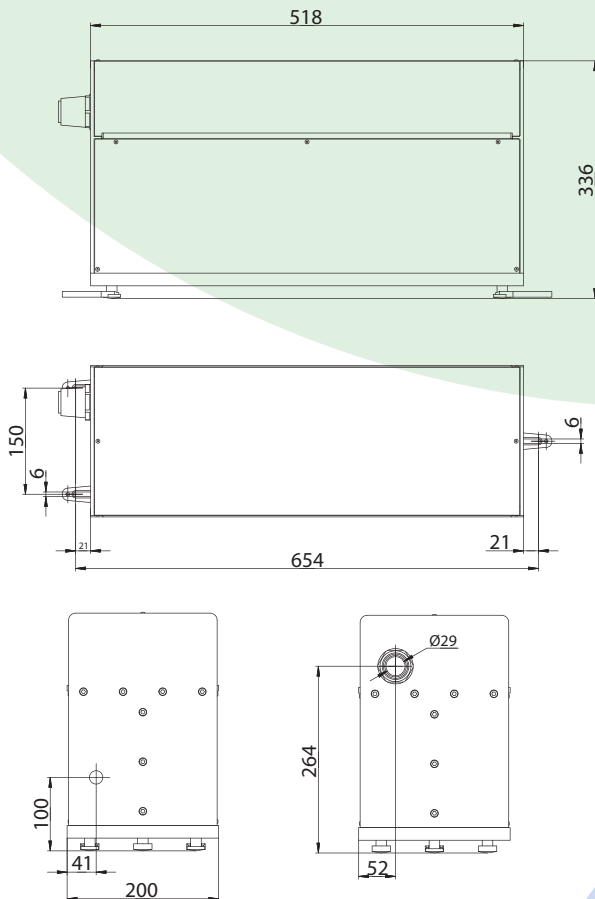
TETA Yb amplifier system

Product overview

The TETA ytterbium ultrafast amplifier system radiates at 1028 nm and provides up to 150 uJ at kHz repetition rates with <300 fs pulses. The system is based on an all-fiber seed oscillator and Yb regenerative amplifier with direct diode pumping scheme. This ensures stable short-term and long-term stability and low M-squared. The unit has small footprint and is thermally stabilized via a closed-loop chiller for further improvement.

The system is offered in three main modifications – TETA-1 (150uJ@1 kHz), TETA-10 (100 uJ@10 kHz) and TETA-20 (50 uJ@20 kHz). An additional built-in Pockels cell offers instant output radiation gating as well as total control over output repetition rate. Moreover, the cell features precise pulse picking with control over the number of fired pulses (burst mode) and temporal period of radiation. The cell also has TTL-level control input for easier OEM integration.

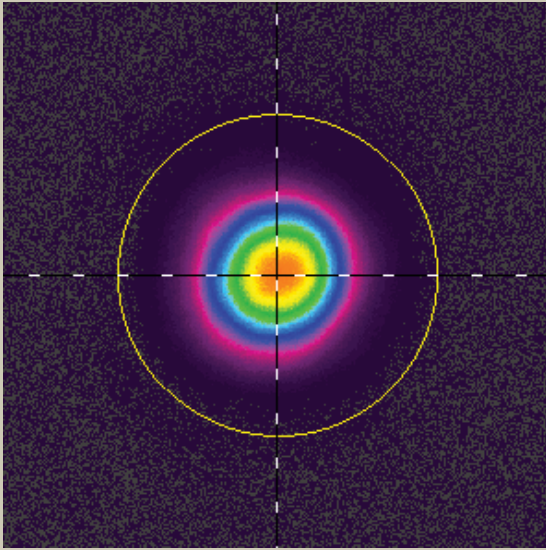
TETA technical specifications



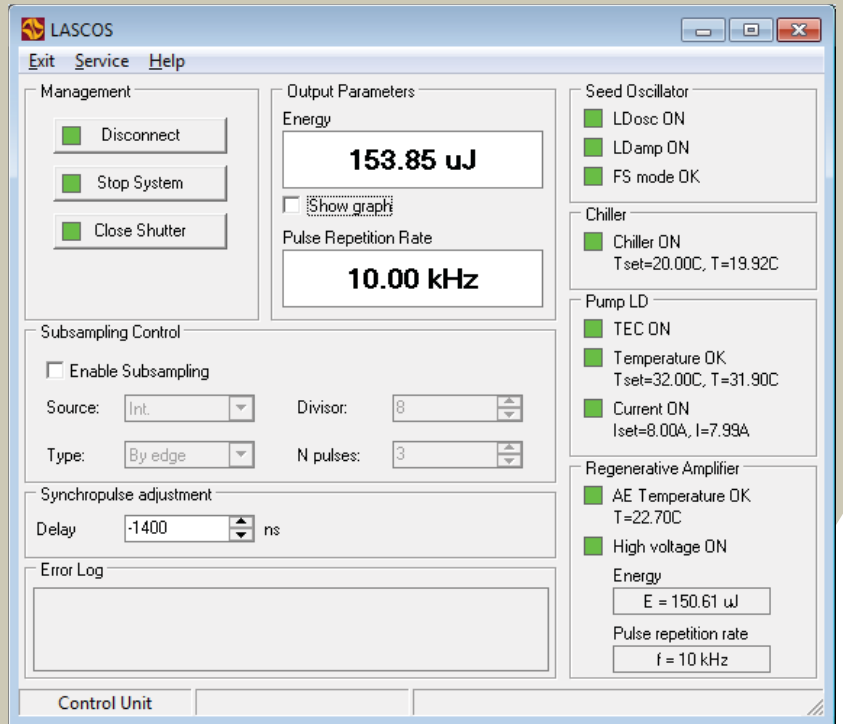
	TETA-X
Pulse repetition rate, kHz	up to 25*
Output pulse energy, μJ	>300 @ 10 kHz (TETA-10) >150 @ 20 kHz (TETA-20)
Average output power, W	>3
Pulse duration, fs	<300
Central wavelength (fixed), nm	1029+/-2**
M ²	<1.3
Beam diameter (1/e ²), mm	4.5
Stability, % rms	<1
Contrast ratio	>10 ³ :1 @ 10 ns >10 ³ :1 @ 1 ps >10 ⁶ :1 @ 5 ps >5x10 ⁷ :1 @ 10-20 ps >5x10 ⁷ :1 @ ASE
Spatial mode	TEM00
Output polarization	vertical
Dimensions, (WxLxH) mm	200x518x360
Cooling	The package includes closed-loop water chiller

* - please specify with order

** - second, third and fourth harmonics upon request

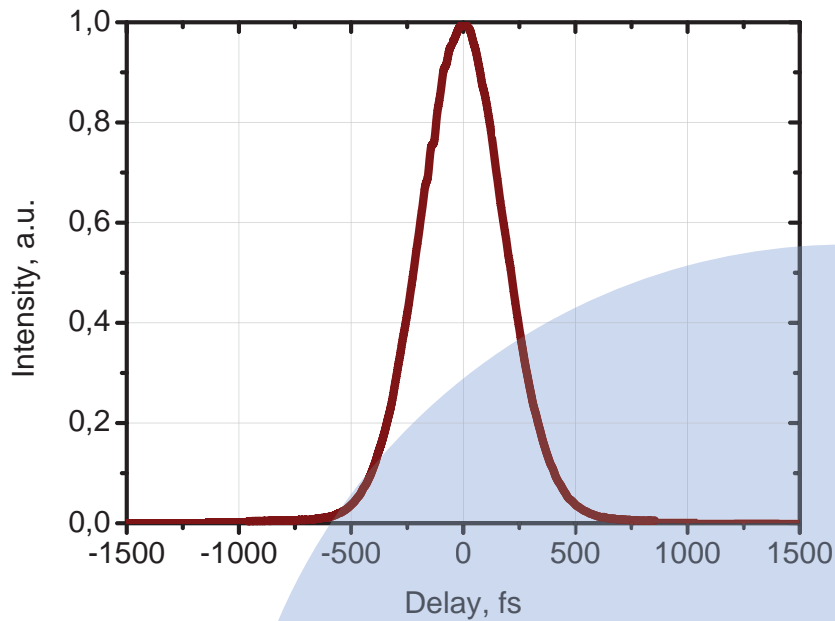


Beam profile at 1029 nm



Software screenshot

TiF technical specifications



Autocorrelation trace width at FWHM: 435 fs
Pulse width at FWHM: 280 fs