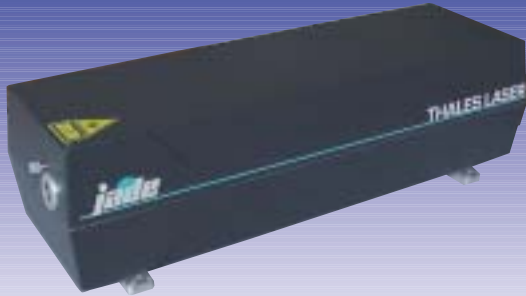


# Jade



## Diode-Pumped Compact Series

**Solid State  
Nd:YLF  
Pulsed Laser**

Jade is a Diode-Pumped Solid State Laser providing average power in excess of 30W at the second harmonic wavelength of Nd:YLF. Its natural birefringence, its ability for maximum energy storage associated with its low thermal lensing allow to generate high energy pulses with multi-kilohertz repetition rate.

Jade emits a low multi-mode beam ( $M^2 < 12$ ) with circular, uniform and smooth quasi-gaussian intensity distribution. This ability for focusing on a long Rayleigh length makes Jade ideal for maximum efficiency in Ti:sapphire amplifier pumping.

Jade benefits from an original diode pumping chamber that provides unprecedented short and long term power stability with consistent spatial beam performances regardless of pump power. With diode-laser lifetimes of thousands of hours, Jade stands out as the cost-effective leader in high repetition rate Nd:YLF lasers.

Jade laser head and electronic devices are designed through industrial rules so that it fits scientific as well as industrial applications. Through RS-232 interface, Jade supervision offers remote control of the laser emission, repetition rate and output power variation, while ensuring safe and optimum operation.

## Features

- 1 to 5 kHz operation
- 20 W @ 527 nm, 1 kHz
- 30 W @ 527 nm, 3 to 5 kHz
- Outstanding stability and focusability with a  $M^2 < 12$
- Computer control

## Applications

- Femtosecond amplifier pumping
- Material processing
- Instrumentation
- Scientific

## Output Specifications\*

Repetition rate (kHz)	1	3	5
Energy per pulse (mJ)	20	10	6
Average power (W)	20	30	30
Pulse width (ns)	< 200	< 300	< 400
Wavelength (nm)	527	527	527
Shot-to-shot stability* (% rms)	< 0.8	< 0.8	< 0.8
Divergence (mrad)	< 1	< 1	< 1
Typical M <sup>2</sup>	< 12	< 12	< 12
Beam pointing stability* (µrad)	± 50	± 50	± 50
Beam profile	multi-mode, quasi gaussian		
Polarization	vertical		

\* Specifications are based on a 25°C room temperature.

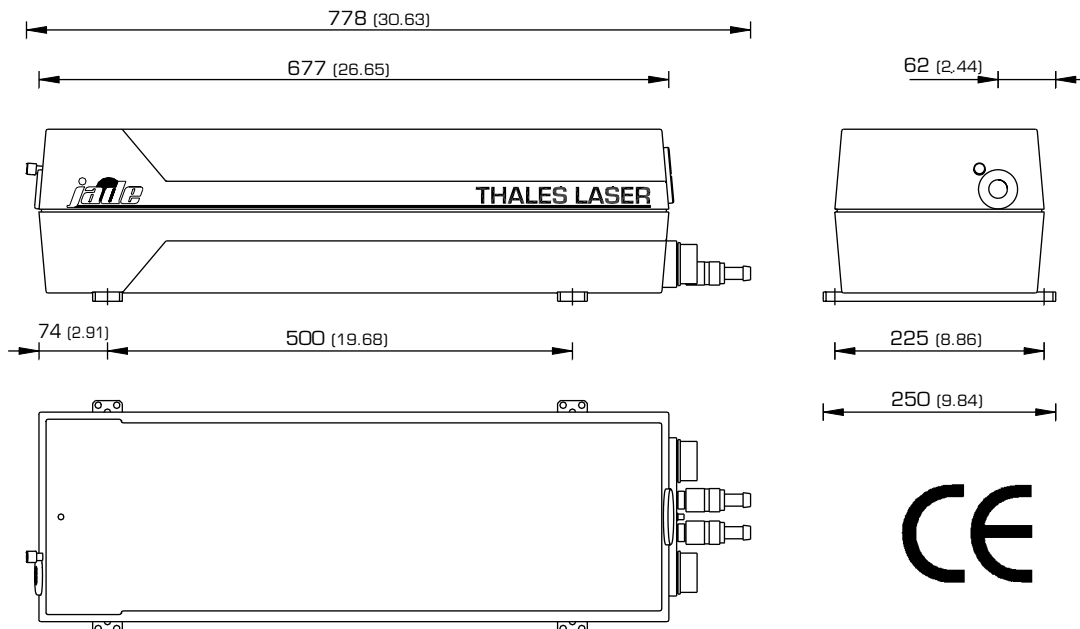
## Utilities & Environment

Power requirements	Voltage	208 VAC	230 VAC
	Current	25 A, single phase	25 A, single phase
	Frequency	60 Hz	50 Hz
No water requirements	Closed-loop chiller included		
Relative humidity	< 65 %		
Operating temperature*	20 - 30 °C		

\* Energy per pulse > 90 % nominal value

## Physical Characteristics

Laser head	Weight	21 kg	
Power supply	Size (H x W x L)	25.6 x 23.6 x 31.5 in	65 x 60 x 80 cm
Chiller	Size (H x W x L)	26.4 x 15 x 24.4 in	67 x 38 x 62 cm
Computer	RS-232, Windows 95, 98, 2000, NT		



Dimensions are given in mm (in).

Due to Thales Laser continuous product improvement policy, specifications are subject to change without notice.

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