

Diva II

Diode-Pumped Compact Series



**Solid State
Nd:YAG
Pulsed Laser**

Diva II represents the outcome of years of research in the field of pulsed diode-pumped solid-state lasers, offering a number of unique advantages.

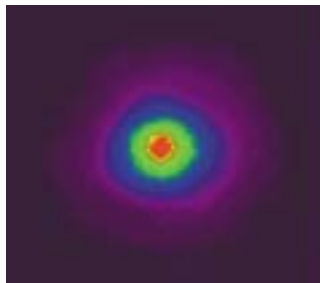
End-pumping through proprietary designed high brightness stack arrays provides outstanding beam quality and power efficiency.

Diode-pumping ensures exceptional lifetime and allows simple air-cooling that makes this laser entirely maintenance-free.

Unmatched stability is provided by a sealed optical cavity together with a special mechanical design.

Heat removal is performed within the laser head itself so that the power supply of Diva II is lightweight and nearly as small as other lasers remote control!

With up to 20 mJ per pulse and repetition rates up to 50 Hz on request, Diva II Nd:YAG model is a versatile tool which fits all photonics' needs from the infrared to the ultraviolet spectral range.



Typical profile at 355 nm

Features

- Single transverse TEM₀₀ spatial mode in the far and near field
- Outstanding energy and beam pointing stability
- T.E. regulated, fully air-cooled
- Sealed optical cavity
- Remote computer control through RS232 interface
- Years of hands-off operation

Applications

- Laser Induced Fluorescence (LIF)
- Matrix Assisted Laser Desorption Ionization (MALDI)
- Laser Induced Breakdown Spectroscopy (LIBS)
- LIDAR
- Scientific pumping
- Ignition
- Mask repair and semi-conductor inspection

Output Specifications *

Wavelength (nm)	1,064	532	355	266
Repetition rate (Hz)	0 - 20	0 - 20	0 - 20	0 - 20
Energy per pulse (mJ)				
Diva	10	5	2.5	2
Diva HP	20	10	5	4
Shot-to-shot stability (% rms)	1.5	2.5	3.0	3.5
Power drift (%/hour)	1	2	3	3
Pulse duration (1) (ns)	8 - 12	8 - 12	8 - 12	8 - 12
Time jitter rms (2) (ns)	1	1	1	1
Beam diameter (mm)	> 1.5	> 1.5	> 1.5	> 1.5
M ²	< 1.2	< 1.2	< 1.2	< 1.2
Beam profile	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀
Beam pointing stability (μrad)	± 50	± 50	± 50	± 50
Polarization	100:1	100:1	100:1	100:1

Diva II series is air cooled.

Conformance to EMC is achieved through compliance with the harmonized standards EN50081-1 for emission and EN50082-1 for immunity.

Please contact Thales Laser or its nearest representative for custom specifications.

* Specifications are based on a 20°C room temperature and are given at 20 Hz.

(1) Full Width at Half Maximum.

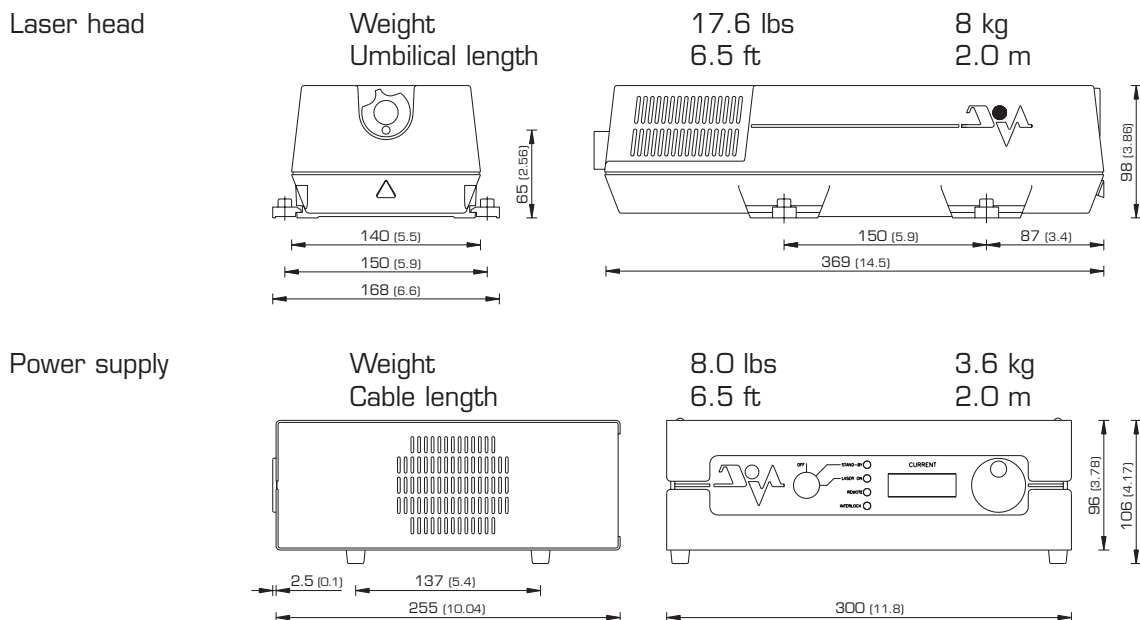
(2) With external triggerings.

Utilities and Environment

Power requirements	Voltage	90 - 240 VAC
	Current	5 A max @ 90 VAC
	Frequency	50/60 Hz
Cooling requirements	Air-cooled laser head and power supply	
Operating temperature (1)	63 - 81 °F	17 - 27 °C
Relative humidity	< 65 %	

(1) From 1,064 nm to 355 nm and with energy per pulse > 90 % nominal value

Physical Characteristics



Dimensions are given in mm (in).

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

FRANCE & EUROPE

THALES LASER S.A.
Route départementale 128
BP 46 - 91401 ORSAY CEDEX
FRANCE
Tél : +33 (0)1 69 33 06 94
Fax : +33 (0)1 69 33 94 58
www.thales-laser.com

JAPAN

THALES LASER K.K.
Sunrise Bldg, 2-16-4
Omori-kita, Ohta-ku, TOKYO
JAPAN 143-0016
Tel : +81 (0)3 5753 4541
Fax : +81 (0)3 5753 4554
www.thales-laser.com

USA

THALES Components Co.
40G Commerce Way - PO Box 540
TOTOWA, NJ 07511
USA
Tel : +1 (973) 812 4303
Fax : +1 (973) 812 9050
www.thales-laser.com

