THALES

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FEATURES

- 4 to 40 kHz operation
- 170 W at 532 nm
- 220 W at 1064 nm
- Outstanding stability
- M2 between 15 and 40 (on request)
- Compact and ruggedized industrial design
- Options: fiber coupling, integrated attenuator

INDUSTRIAL APPLICATIONS

- Laser OLED Lift-Off
- CFRP Machining
- Silicon Annealing

SCIENTIFIC APPLICATIONS

- Femtosecond amplifier pumping
- Instrumentation
- Scientific pump source for non-linear optics

ETNA HP

Diode-Pumped Compact Laser Series

ETNA HP

Diode-pumped compact laser series

The world reference for high average power Nd:YAG laser

Thanks to its unique specifications, outstanding stability, high flexibility and maintenance free operation, the ETNA HP is perfectly suited for industrial environment.
The ETNA HP delivering more than 170W of green power at 10kHz is the best balance choice between high average power, repetition rate and cost requirements.

The ETNA HP is based on Thales latest developments in diode pumping heads renowned for their outstanding power stability. As a unique compromise between energy and repetition rate, the ETNA HP is the best laser solution to mass production requirements for high tech and consumer markets.

Options

Fibered module for industrial applications including:
- Calibrated power measurement
- Computer controlled power attenuation (5-99%)
- Fiber optic injection (compatible with industrial fiber optics)
- Security shutter / Water cooled beam dump

Physical characteristics (Size: H x W x L)

Power supply	80 (31,5) x 60 (23,6) x 83 (32,7)
Cooling unit	60 (23,6) x 44 (17,4) x 83 (32,6)
Laser head	21,3 (8) x 28,5 (11) x 108 (42,5)

* Dimension are given in cm (in)

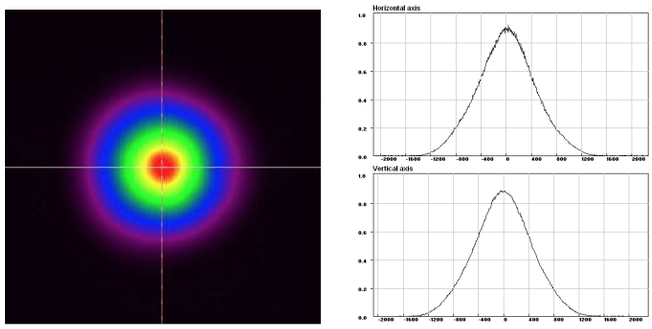
Specifications

Version	IR	LM	HM
Wavelength (nm)	1064	532	532
Repetition rate (kHz) [1]	4-40	8-40	4-20
Energy per pulse	> 22	> 15	> 17
Average power (W) [2]	> 220	> 150	> 170
Typical pulse width (ns)	85	50	60
Pulse to pulse energy stability (% rms)	< 1.0	< 1.0	< 1.0
Typical M^2	20 +/- 2.5	15 +/- 2.5	25 +/- 2.5
Beam pointing stability (µrad)	+/- 30	+/- 30	+/- 30
Typical Beam size (mm) **at waist position**	~ 3.2	~ 2.1	~ 2.7
Beam profile	Multi-mode Gaussian	Multi-mode Gaussian	Multi-mode Gaussian
Polarization	Unpolarized	Vertical	Vertical

[1] Factory preset at one repetition rate [2] Other average power available on request

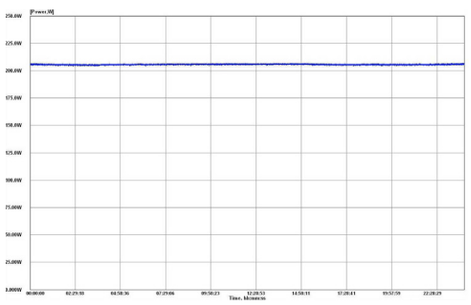
Utilities and environment requirements

Voltage		208 – 230 VAC +/-5% single ϕ	
Frequency		50 – 60 Hz	
Water	**Flow**	> 15 L/min	> 4 gal /min
	Static pressure	3-5 bars	43.5-72 psi
	Temperature	15-17°C	
Operating systems		Windows 98, 2000, NT, XP	



Typical Etna HP beam profile at 532 nm

Long term stability over 30 hours (High M^2 version)



196 W at 532 nm
0.2% rms over 24 hours

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