

ETNA HP

Diode-Pumped Compact Series

FEATURES

- 4 to 40 kHz operation
- 170 W at 532 nm
- 220 W at 1064 nm
- Outstanding stability
- M^2 between 15 and 40 (on request)
- Compatible with industrial environment

APPLICATIONS

- Femtosecond amplifier pumping
- Industrial material processing
- ITO ablation, Si annealing
- Instrumentation
- Scientific pump source for non-linear optics

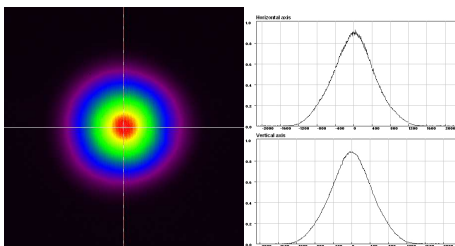


The world reference for high average power Nd:YAG laser

Delivering more than 170 W of green power at 10 kHz, the ETNA HP has been developed to answer the most demanding industrial and scientific applications. ETNA HP is based on THALES latest developments in diode pumping heads renowned for their outstanding power stability.

Its unique specifications in terms of average power, beam quality and stability make the ETNA HP the world reference for pumping high repetition rate Ti:Sa amplifiers.

Thanks to its outstanding stability, high specifications flexibility and its maintenance free operation, the ETNA HP works already successfully in industrial environment for ITO ablation and Si annealing processes.



Typical Etna HP beam profile at 532 nm

ETNA HP

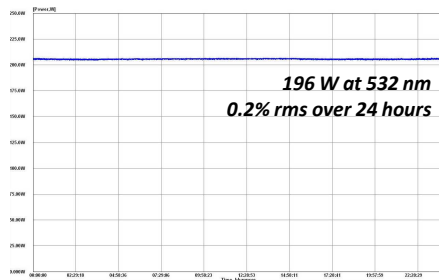
Diode-Pumped Compact Series

Specifications (at 10 kHz)

Version	IR	LM	HM
Wavelength (nm)	1064	532	532
Repetition rate ⁽¹⁾	4-40 kHz	8-40 kHz	4-20 kHz
Energy per pulse (mJ)	> 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

Long term stability measurement (typical)



Options(NEW)

Fibered module for industrial applications including:

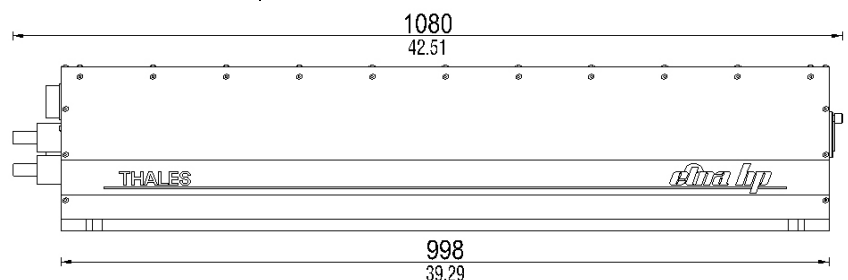
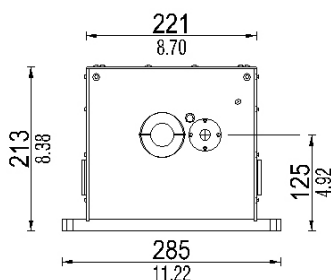
- Calibrated power measurement
- Computer controlled power attenuation (5-99%)
- Fiber optic injection (compatible with industrial fiber optics)
- Security shutter / Water cooled beam dump

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		

Physical characteristics (Size: H x W x L)

Power supply	31.5 x 23.6 x 32.7 in	80 x 60 x 83 cm
Cooling unit	23.6 x 17.4 x 32.6 in	60 x 44 x 83 cm



Dimensions are given in mm (in)

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