

Minilite™ I & II

High Energy Nd:YAG

The Minilite Series is the Amplitude entry level Q-switched Nd:YAG laser platform. It is designed for new and existing users of pulsed lasers allowing easy operation, simple external control and compact size. It provides high levels of performance while maintaining a very reasonable price point.

The Minilite platforms offer users accessible harmonic generators, integrated energy attenuator and simple operation.

Both the Minilite I and II lasers, use a single YAG rod/flashlamp pump chamber, invar resonator, and a stable resonator design which offers maximum energy extraction and excellent beam quality.

Minilite series lasers are used for remote sensing, sample testing, mass spectroscopy, LIF and laser flash photolysis.



Applications

Industry:

- > LCD repair
- > Resistor trimming
- > Metal Sorting
- > PIV

Science:

- > LIF, PLIF, LIBS
- > MALDI
- > PIV

Medical:

- > Sample setup
- > Dimple Tray Illumination
- > Mass spec source

Key Features

- > Operated locally or remotely via TTL interface
- > System entirely self-contained, no external water hook-up needed
- > Easy flashlamp replacement without realignment of the laser oscillator
- > Invar resonator structure ensures long-term thermal and mechanical stability
- > Variable attenuator included

Specifications

	Minilite I	Minilite II
Repetition Rate (Hz)	1-15	
Energy (mJ)		
1064 nm	28	50
532 nm	12	25
355 nm	4	8
266 nm	2	4
Pulsewidth ¹ (ns)		
1064 nm	5 - 7	
532 nm	3 - 5	
355 nm	3 - 5	
266 nm	3 - 5	
Linewidth (cm-1)	1	
Divergence ² (mrad)	< 3	
Beam Diameter (mm)	3	
Jitter ³ (±ns)	0.5	
Energy Stability ⁴ (±%)		
1064 nm	2.0 ; 0.6	
532 nm	3.0 ; 1.0	
355 nm	4.0 ; 1.3	
266 nm	8.0 ; 2.6	
Polarization		
1064 nm	Horizontal	
532 nm	Vertical	
355 nm	Horizontal	
266 nm	Horizontal	

¹ Full width half max

² Full angle for 86% (1/e²) of energy

³ With respect to external trigger

⁴ The first value represents shot-to-shot for 99.9% of pulses, the second value represents RMS

All specifications at 1064 nm unless otherwise noted.

Dimensions

Optical Head (LxWxH)	267 x 172 x 63.5 mm (10.5 x 6.75 x 2.5 in)
Power Supply (LxWxH)	381 x 197 x 365 mm (15 x 7.75 x 14 in)

Weight

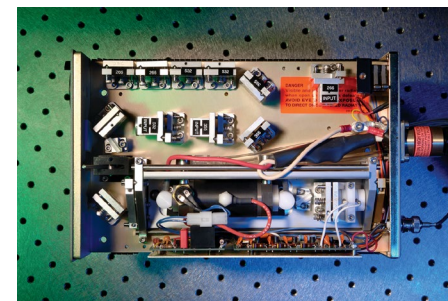
Optical Head	3.6 kg (8 lbs)
Power Supply	14.5 kg (32 lbs)

Water

Closed loop water to air heat exchanger: external cooling water not required (10 oz. deionized water per PS)

Others

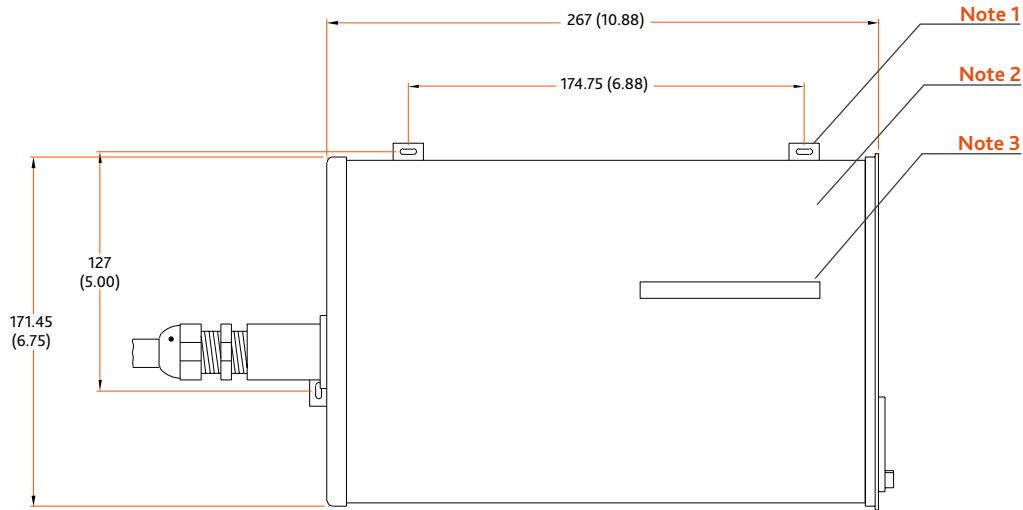
Electrical Service	Option 1: 110 V (4 A) OR Option 2: 220 V (2A), 50/60 Hz
Room Temperature	18 to 30° C (65 to 87° F)
Umbilical Length	3.18 m (10.4 ft)



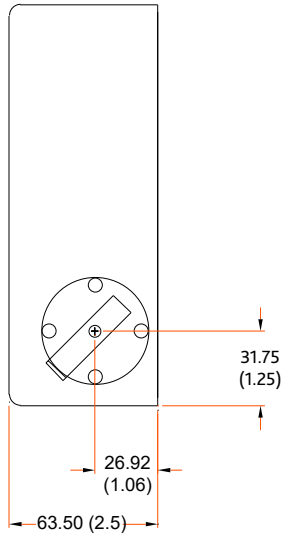
Minilite interior layout

Minilite Physical Layout

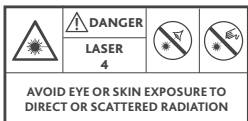
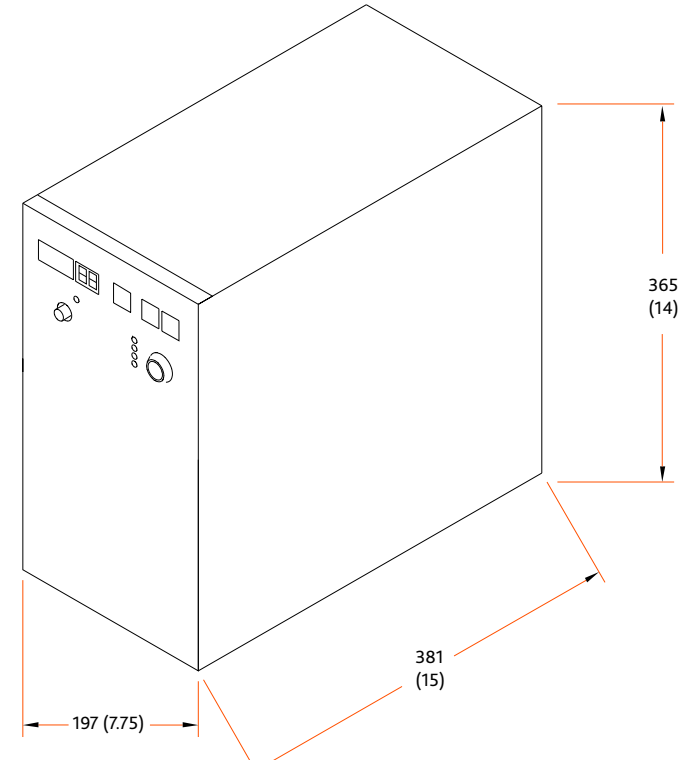
All dimensions are in mm (inches)



- Note 1:** Clamps optional
- Note 2:** Base is drilled & tapped in 4 places with 1/4-20
- Note 3:** Variable Attenuator (VA).



Power Supply



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