

Minilite™ PIV

Nd:YAG Laser for Dual Pulse Applications



MINILITE™ PIV FEATURES & BENEFITS

Safety Interlocks to ensure correct water flow, level, and temperature

No need for an external water hook-up, the system is completely self-contained

A built-in TTL interface for convenient external control

A decoupled kinematic mounted resonator structure ensures long-term thermal and mechanical stability

Very compact package

MINILITE™ PIV SPECIFICATIONS

DESCRIPTION	MINILITE™ PIV
Repetition Rate (Hz)	1-15
Energy (mJ)	
1064 nm	50
532 nm	25
Pulsewidth ¹ (nsec)	
1064 nm	4-6
532 nm	3-5
Divergence ² (mrad)	< 3
Jitter ³ (±ns)	0.5
Energy Stability ⁴ (±%)	
1064 nm	2; 0.7
532 nm	3; 1.0
Beam Spatial Profile (fit to Gaussian) ⁵	
Near Field (<1 M)	0.70
Far Field (∞)	0.95

All specifications subject to change without notice.

Two lasers are built on a single compact platform, providing symmetrical output beam at 532 nm, that consists of two pulses with equivalent energy, beam uniformity and polarization. An alternative configuration is available if orthogonal output polarizations are required in consecutive pulses. Temporal separation can be varied from <10 nsec to >100 nsec to measure most flow distributions.

Minilite™ PIV- Continuum's compact turn-key PIV system

The Minilite™ PIV system is based on Continuum's proven Q-switch Nd:YAG technology. The system is a miniaturized Surelite package providing 10's of mJ in each pulse at 532 nm.

The system offers excellent beam quality, long term stability and increased overall reliability. The ease of operation and safety features, as well as long lifetime, make the Continuum PIV system an excellent choice for your dual pulse application.

NOTES

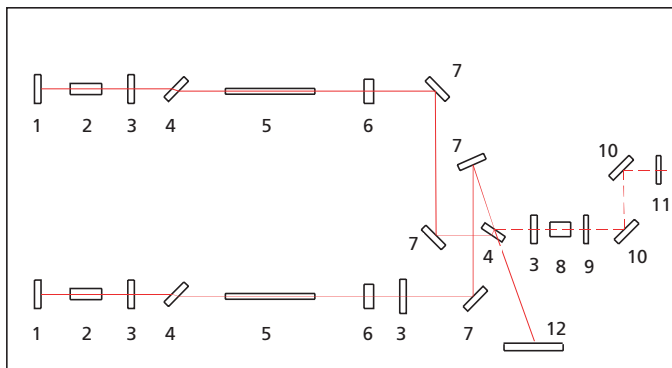
1. Full width half max
2. Full angle for 86% (1/e²) of energy
3. With respect to external trigger
4. The first value represents shot-to-shot for 99.9% of pulses, the second value represents RMS
5. A least squares fit to Gaussian profile
A perfect fit would have a coefficient of 1

All specifications at 1064 nm unless otherwise noted.
All specifications subject to change without notice.

MECHANICAL AND UTILITIES

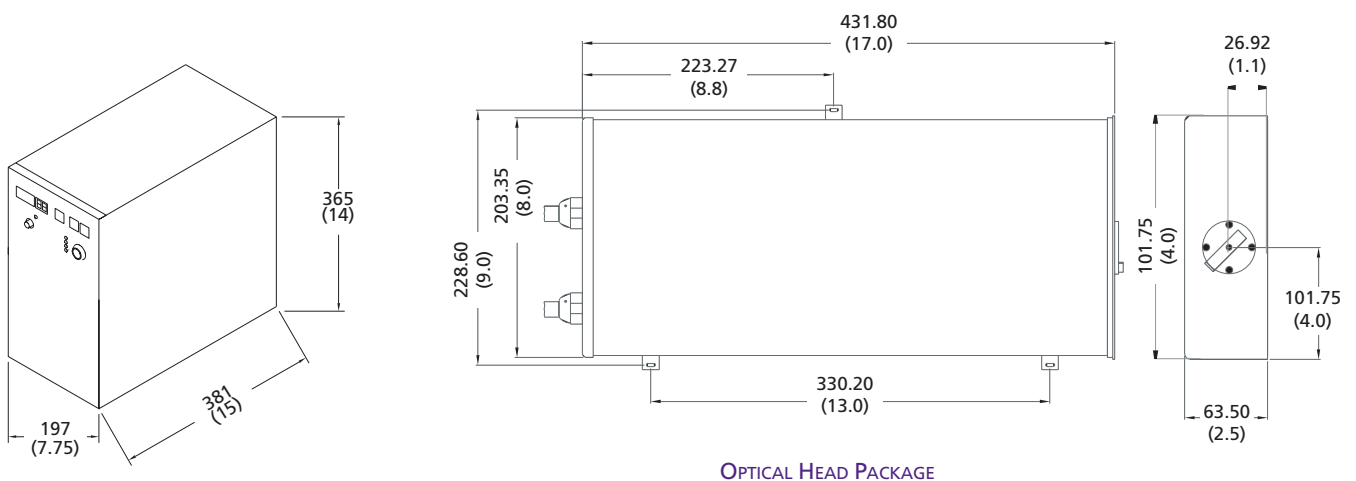
Size	Optical Head (L x W x H)	431.8 x 203.35 x 63.5 mm (17 x 8 x 2.5 in.)
	Power Supply (L x W x H)	381 x 197 x 365 mm (15 x 7.75 x 14 in.)
Weight	Optical Head	3.6 kg (8 lbs)
	Power Supply	14.5 kg (32 lbs) each of two
Water Service		Closed loop water to air heat exchanger: external cooling water not required (10 oz. DI water per PS)
Electrical Service (Specify on Order)		110 V (4 A)
		220 V (2 A) 50/60 Hz
Room Temperature		18.3 to 29.4° C (60 to 85° F)
Umbilical Length		3.0 m (9 ft 10 in.)

MINILITE™ PIV OPTICAL LAYOUT



1. Rear Mirror
2. Pockels Cell
3. Wave Plate
4. Polarizer
5. Rod
6. Output Coupler
7. IR Mirror
8. Second Harmonic Generator
9. Window
10. 532 nm Mirrors
11. Optional Lens
12. Beam Dump

MINILITE™ PIV PHYSICAL LAYOUT
All dimensions in mm (inches)



MINILITE™ PIV System includes two power supplies



DANGER

VISIBLE AND INVISIBLE LASER RADIATION AVOID EYE & SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION

WAVELENGTH 1064nm/100mJ/5ns
WAVELENGTH 532nm/60mJ/3ns
WAVELENGTH 355nm/20mJ/3ns
WAVELENGTH 266nm/20mJ/3ns

3100153 REV 0 CLASS 4 LASER PRODUCT