

Centurion



Industrial, Diode pumped, Q-switched Nd:YAG laser 8ns pulses at 100Hz

Features and Benefits:

- Air cooled - no water required
- Diode pumped for high reliability
- Industrial, hermetically sealed optic train
- Built per military specifications
- Guaranteed to remain aligned
- No consumables to purchase
- Extremely reliable



Applications:

- TFT-LCD repair
- Ti-Sapphire and OPO pumping
- LIDAR
- Laser induced fluorescence
- Remote sensing
- Mass spectroscopy

Dimensions & Weight

Dimensions

All dimensions HxLxW are in mm (inches)

Weight

all weights are in kg (lbs)

Optical laser head (1064nm):

Head Only:

70 x 216 x 128 (2.75 x 8.5 x 5) 3.2 (7)

Head with Air Cooling Unit:

134 x 267 x 128 (5.28 x 10.5 x 5) 4.2 (9.24)

Air Cooling Unit:

65 x 268 x 69 (2.53 x 10.54 x 2.7) 1 (2.2)

Electronics:

483 x 457 x 89 (19 x 18 x 3.5) 13.2 (29)

Harmonic Generation Modules and Options:

Harmonic Generators (2 ω , 2 ω /3 ω , 2 ω /4 ω): 51 x 91 x 76 (1.95 x 3.6 x 3) 0.5 (1.1)

Wavelength Separation Package: 51 x 45 x 76 (1.95 x 1.8 x 3) 0.2 (.45)

Variable Attenuator (1064nm only): 51 x 100 x 76 (1.95 x 4 x 3) 0.6 (1.3)

OPO module: 51 x 95 x 76 (1.95 x 3.8 x 3) 3.6 (1.3)



Centurion Specifications

Resonator	Stable	GRM	
Repetition Rate (Hz)	1-100	1-100	
Energy per pulse (mJ)			Part Numbers:
1064 nm	40	25	N1064E040R100HN, N1064E025R100LN
532 nm	20		N0532E020R100HN
355 nm	6		N0355E006R100HN
266 nm	2		N0266E002R100HN
1.57 μm^*	5		N1570E005R100HN
Energy Stability (%)			
1064 nm	≤ 0.5	≤ 0.5	Variation from mean for 99% of shots
532 nm	≤ 1.0		
355 nm	≤ 2.0		
266 nm	≤ 4.0		
1.57 μm	≤ 4.0		
Pulse Duration (ns)			
1064 nm	8	7	Nominal FWHM, +/- 2ns
532 nm	7		
355 nm	7		
266 nm	6		
1.57 μm	10		
Jitter (+/- ns WRT Q-Switch)	1		Measured from Q-switch Sync Output
Beam Divergence (mrad)			
1064 nm	≤ 7	≤ 1.5	Angle containing 86.5% Energy. Other Methods can predict lower values for GRM Systems
532 nm	≤ 5.5		
355 nm	≤ 4		
266 nm	≤ 4		
1.57 μm	≤ 10		
Beam Diameter (mm)			
1064 nm	2.6	2.7	
532 nm	2.2		
355 nm	1.6		
266 nm	1.4		
1.57 μm	3.5		

Specifications applying to all 1064nm systems	Energy Drift over 8 hour period	<10%	
	Temperature Range	Operating 10/35°C	Storage - 40/70°C
	Diode Lifetime	> 1 Billion shots	
	Max. Altitude	3000m (10 000 feet)	

wavelength (nm)	Polarization	Spectral Purity (%)
1064	Linear	
532	Linear	> 97
355	Linear	> 90
266	Linear	> 85
1570	Linear	

Service Requirement Power: 100-240V, 10A, 50/60Hz, Single phase

Cable length 3 m / 10 feet

Options: Wavelength Separation Package: Dual dichroic is standard.
Motorized Variable attenuator, Manual upon request



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