

# FLARE NX

## Short-Pulsed Diode-Pumped Solid-State Lasers

The FLARE NX is the next generation of passively Q-switched diode-pumped solid-state (DPSS) lasers designed to serve demanding applications in the life sciences and instrumentation markets.

Available in wavelengths from IR to UV, the FLARE NX offers short pulse durations of ~1 ns. The FLARE NX also offers high repetition-rates up to 2 kHz, and pulse energies up to 500  $\mu$ J. The solid-state technology ensures long lifetimes, increasing quality and throughput.

The compact and rugged packaging of the FLARE NX laser head, coupled with digital driver concept, enables direct integration in OEM designs.

The superior performance, proven reliability and ruggedness, combined with ease of operation, make the FLARE NX a high-performing, cost-effective solution.



**Superior Reliability & Performance**

### **FLARE NX Features:**

- **Available wavelengths:**
  - 1030 nm
  - 515 nm
  - 343 nm
- **High pulse energy up to:**
  - 500  $\mu$ J at 1030 nm
  - 300  $\mu$ J at 515 nm
  - 100  $\mu$ J at 343 nm
- **Short pulses ~1 ns range**
- **Pulse on demand, repetition rates from single-shot up to 2 kHz**
- **Excellent beam quality**  
 $TEM_{00}/M^2 < 1.2$
- **Superior reliability and ruggedness**
- **Long life time OEM design**

### **FLARE NX Applications:**

- **Laser Induced Fluorescence Spectroscopy**
- **MALDI-TOF Spectroscopy**
- **Laser Micro Dissection**
- **LIDAR**
- **Inspection and Process including Environmental Control**
- **Materials Processing**
  - e.g. Repair of Memories, Displays

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System Specifications	FLARE NX 1030-1.0-2	FLARE NX 515-0.6-2	FLARE NX 343-0.2-2
Wavelength (nm)	1030 ±1	515 ±0.5	343 ±0.5
Pulse Energy <sup>1</sup> (μJ)(after 10 sec.)	>500	>300	>100
Pulse Energy Variation ptp (%) (after 10 sec. over 10 sec.)		<±5	
Pulse Repetition Rate (Hz)		up to 2000	
Pulse Width (ns)(FWHM, average over 10 sec.)	1.45 ±0.2	1.15 ±0.2	1.0 ±0.2
Spatial Mode		TEM <sub>00</sub> , M <sup>2</sup> <1.2	
Beam Symmetry (%)	>90	>90	>85
Static Pointing (mrad)		≤1	
Dynamic Pointing Stability (μrad)(over 10 sec.)		<200	
Polarization		>100:1, vertical	
Warm-up Time to Stand By (s)		<150	
Base Plate Operating Temperature (°C)		15 to 35°C (59 to 95°F)	
Ambient Temperature (°C)			
Operating		15 to 45°C (59 to 113°F)	
Storage		-20 to +50°C (-4 to 122°F)	
Laser Head Heat Dissipation <sup>2</sup> (W)		≤40	
Relative Humidity %(non-condensing)		<80	
Dimensions (W x H x L)			
Laser Head		93.5 x 38.25 x 160 mm (3.68 x 1.5 x 6.3 in.)	
Controller		130 x 45 x 160 mm (5.12 x 1.77 x 6.3 in.)	
Weight			
Laser Head		~1.25 kg (2.75 lbs.)	
Controller		~0.75 kg (1.65 lbs.)	
Controller Cable Length		1 m (3.28 ft.)	
Operating Voltage <sup>3</sup> (VDC)		24 ±2	
Laser Control Electronics		Digital, OEM <sup>3</sup>	
Mode of Operation		Gating (5V TTL high)	
Communication Interface		RS-232	

<sup>1</sup> Pulse energy at 2000 Hz.

<sup>2</sup> Baseplate temperature 30°C.

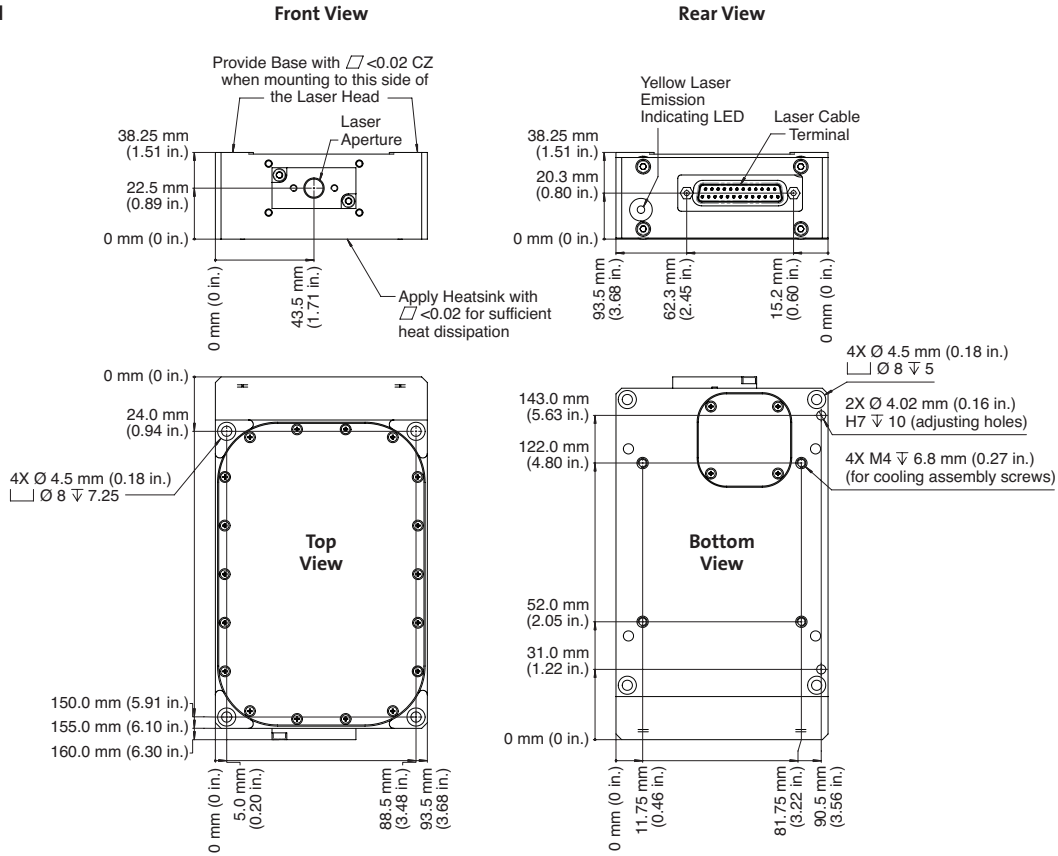
<sup>3</sup> Power supply not included, PC required.

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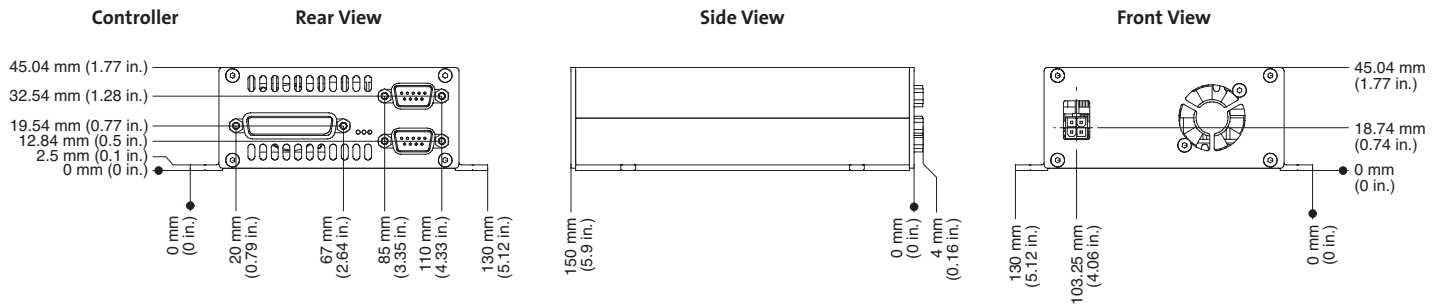
## Short-Pulsed Diode-Pumped Solid-State Lasers

### Mechanical Specifications

#### Laser Head



#### Controller



[www.Coherent.com](http://www.Coherent.com)

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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all FLARE NX lasers. For full details of this warranty coverage, please refer to the Service section at [www.Coherent.com](http://www.Coherent.com) or contact your local Sales or Service Representative.

