



# 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 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.



### FEATURES & BENEFITS

- 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  $TEM_{00}/M^2 < 1.2$

### 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

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)	>500	>300	>100
Pulse Energy Variation ptp (%)	<±5		
Pulse Repetition Rate (Hz)	up to 2000		
Pulse Width (ns)	1.5 ±0.2	1.3 ±0.2	1.0 ±0.2
Spatial Mode	TEM <sub>00</sub>		
M <sup>2</sup> (Beam Quality)	<1.2		
Beam Waist Diameter at 1/e <sup>2</sup> (μm)	490 ±35	360 ±35	300 ±30
Beam Waist Location <sup>2</sup> (mm)	140 ±15	200 ±30	190 ±30
Beam Symmetry (%)	>90	>90	>85
Static Alignment Tolerances			
Beam Position (mm)	<±1		
Beam Angle (mrad)	<±1		
Polarization	>100:1, vertical ±5°		
Warm-up Time to Stand By (s)	<150		
Base Plate Operating Temperature	15 to 35°C (59 to 95°F)		
Ambient Temperature			
Operating	15 to 40°C (59 to 104°F)		
Storage	-20 to +50°C (-4 to 122°F)		
Laser Head Heat Dissipation <sup>3</sup> (W)	≤40		
Relative Humidity (%) (non-condensing)	≤80		
Dimensions (L x W x H)			
Laser Head	155.6 x 93.5 x 38.25 mm (6.13 x 3.68 x 1.5 in.)		
Controller	160 x 130 x 45 mm (6.3 x 5.12 x 1.77 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>4</sup> (VDC)	24 ±2		
Laser Control Electronics	Digital, OEM <sup>4</sup>		
Communication Interface	RS-232		

1 Pulse energy at 2000 Hz, maximum decrease over warranty period <10%.

2 The beam waist location is inside the laser head. Reference surface is the output window.

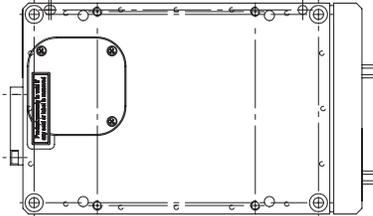
3 Baseplate temperature 30°C.

4 Power supply not included, PC required.

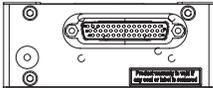
MECHANICAL SPECIFICATIONS

FLARE NX

Bottom View



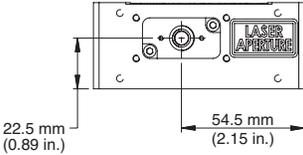
Rear View



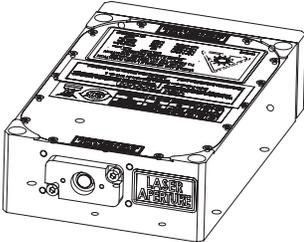
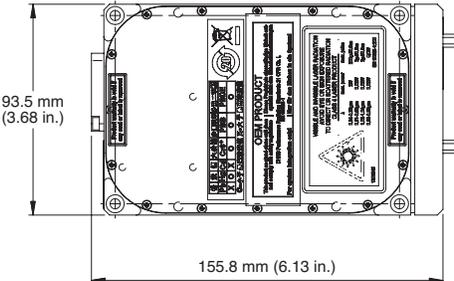
Side View



Front View

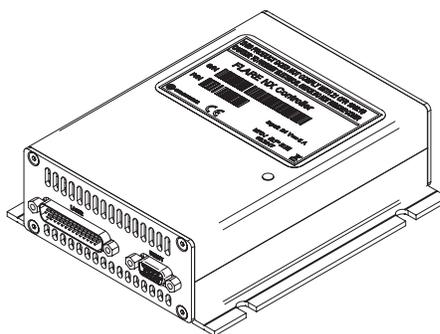
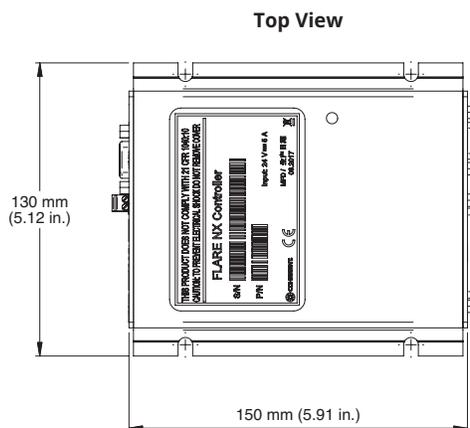
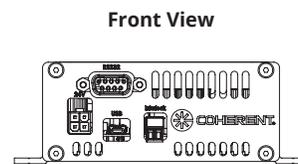
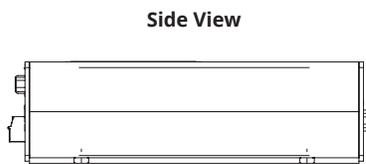
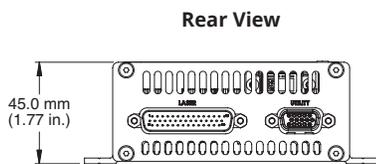


Top View



## MECHANICAL SPECIFICATIONS

### Controller



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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. MC-022-15-0M0721Rev.G Copyright ©2021 Coherent, Inc.

