

# OSPREY

## Femtosecond Laser for Precision Applications

The Osprey femtosecond laser is a highly reliable, cost-effective ultrafast source designed to provide near diffraction limited femtosecond pulses.

The available pulse energy and precision of the system open a host of applications in life sciences, and micromachining. Integrators benefit from its high stability in pointing and power along with low power consumption.

The extremely wide range of dispersion precompensation gives full freedom in design of downstream optics and allows tuning of the pulse width.



### FEATURES

- Low power consumption
- Integrated laser controller
- Dispersion precompensation
- Active power stabilization Light-Loop
- Excellent beam quality and long-term stability

### APPLICATIONS

- Photostimulation for optogenetics
- Microsurgery
- Medical device manufacturing
- Precision Micromachining

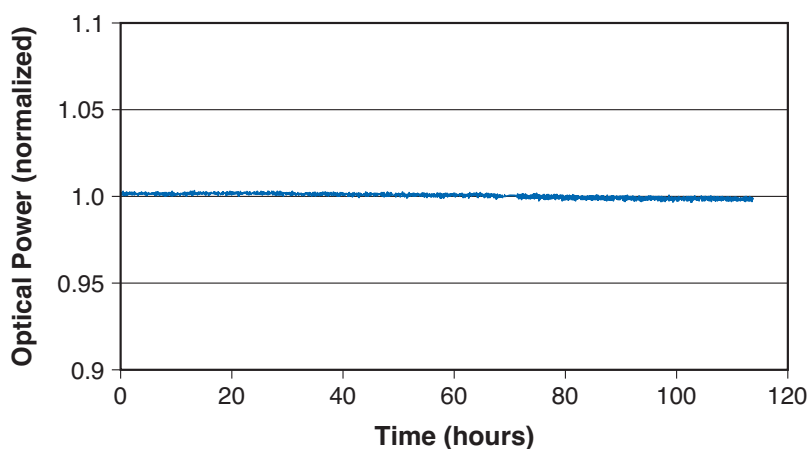
Specifications		Osprey
Wavelength <sup>1</sup> (nm)		1030
Average Power (W)		≥5 at 1 MHz
Pulse Width (fs)		<350
Pulse Energy (μJ)		≥5 at 1 MHz
Pulse Repetition Rate <sup>2</sup>		Single shot to 1 MHz
Beam Mode (M <sup>2</sup> )		<1.2
Dispersion Precompensation (fs <sup>2</sup> )		±160,000
Power Stability <sup>3</sup> (%)		±0.5
Polarization		>100:1 horizontal
Beam Diameter (mm)		3 ±0.2
Ellipticity <sup>4</sup> (%)		<15
Mechanical and Environmental Specifications		
Laser Head Dimensions		670 x 340 x 132 mm (26.38 x 13.39 x 5.22 in.)
Laser Head Mass		34 kg (74.96 lbs)
Operating Temperature Range		18 to 35°C (64 to 90°F)
Non-Operating Temperature		0 to 40°C (32 to 104°F)
Relative Humidity		<70% RH, Non-condensing with dew point <20°C
Electrical and Cooling Requirements		
Power Requirements		24 VDC <150 W
Control Interface		USB Type B 2.0
Sync Output		BNC, 50% duty cycle 4.5 V into 50 Ω
Cooling Requirement		Closed loop chiller

## Notes:

1. Center of mass ±5 nm.
2. Higher repetition rates on request.
3. ≤1 K ambient temperature drift after warm-up.
4. At 960 mm from the output window.

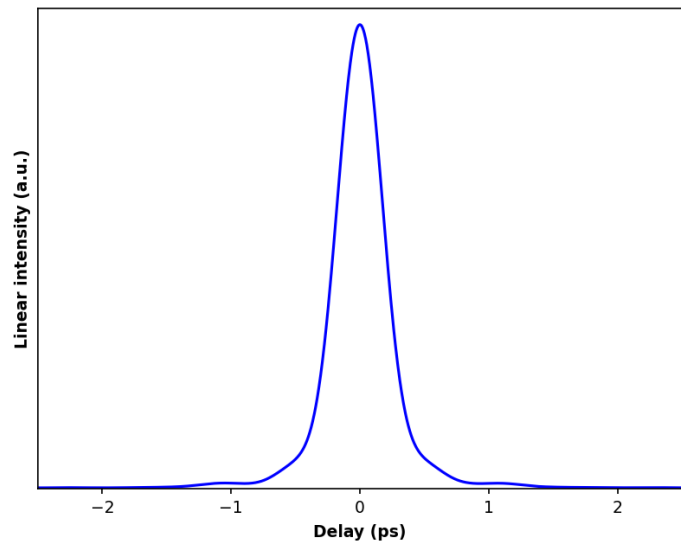
## Typical Performance Data

Typical Power Stability

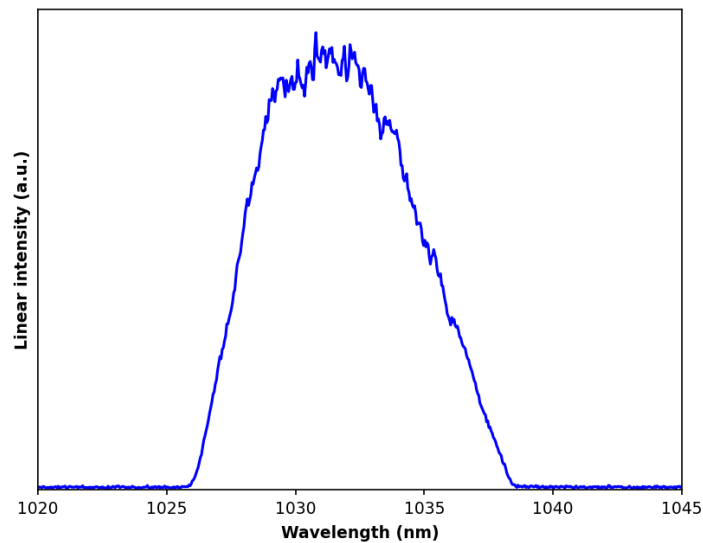


Typical Performance Data

Typical Autocorrelation



Typical Spectrum



Mechanical Specifications

PM15K+ DB-25 + USB

