

# Colibri

A New Generation of Diode-Pumped Nd:YVO<sub>4</sub> Lasers

Diode-Pumped Nd:YVO<sub>4</sub>



## COLIBRI FEATURES & BENEFITS

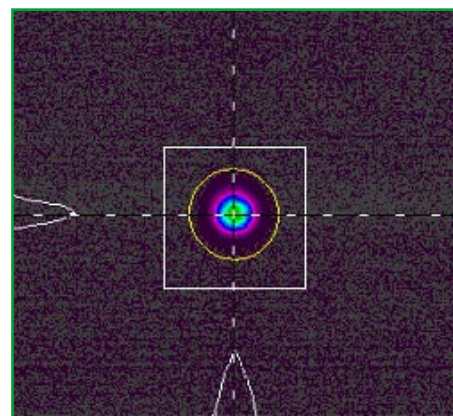
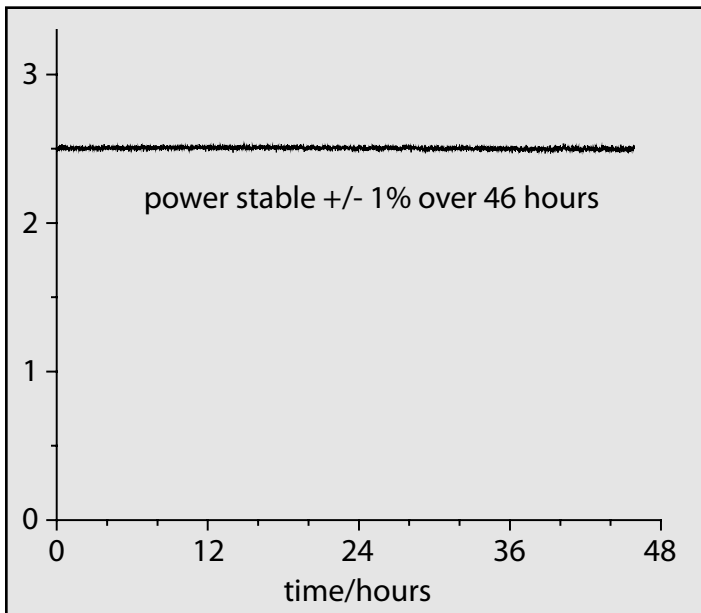
- Highly stable cw operation*
- Excellent beam quality*
- Specifically designed for Ti:Sapphire oscillator pumping*
- Compact, rugged design*
- Hermetically sealed laser head*
- Field-replaceable pump diodes*
- Fiber delivered pump*
- Highly-efficient intracavity harmonic generation*
- RS-232 and Ethernet communication*

| COLIBRI SPECIFICATIONS            |                   |
|-----------------------------------|-------------------|
| WAVELENGTH (nm)                   | 532 nm            |
| CW POWER (W)                      | 2.5               |
| LINewidth (GHz)                   | 37.5              |
| COHERENCE LENGTH (mm)             | 8                 |
| BEAM POINTING STABILITY (mrad)    | <0.02             |
| BEAM DIAMETER (1/e <sup>2</sup> ) | 2.2 mm ± 10%      |
| BEAM DIVERGENCE (mrad)            | <0.4              |
| BEAM QUALITY (M <sup>2</sup> )    | <1.1              |
| SPATIAL MODE                      | TEM <sub>00</sub> |
| POWER STABILITY                   | ± 1% (48 hr)      |
| POLARIZATION                      | H > 100:1         |

The *Colibri* laser is a diode-pumped, all-solid-state, frequency-doubled Nd:YVO<sub>4</sub> laser, producing a high beam quality green (532 nm) output of 2.5 W (CW).

The *Colibri*'s compact and hermetically sealed laser-head design make it insensitive to environmental conditions, delivering the ideal solution for OEM and research applications. The excellent TEM<sub>00</sub> beam quality and long-term power stability make the *Colibri* the ideal pump source for femtosecond Ti: Sapphire oscillators. The laser is permanently aligned for optimal operation, with field replaceable, fiber delivered pump diodes. The computer control package allows for easy integration into existing research projects and applications.

Overall the *Colibri* delivers an affordable package without sacrificing system performance, stability, and reliability.



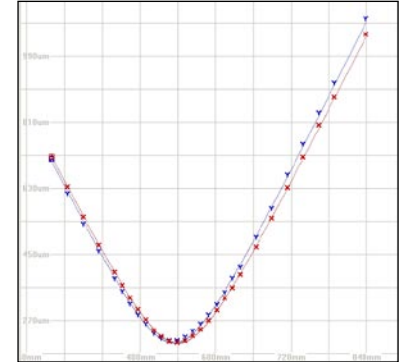
Typical beam profile

# Colibri

## MECHANICAL & UTILITIES REQUIREMENTS

|                    |                             |   |
|--------------------|-----------------------------|---|
| Size               | Optical Head (L x W x H)    | 10.05 x 3.80 x 2.80 in (25.4 x 9.7 x 7.1 cm)    |
|                    | Power Supply (W x H x D)    | 19.00 x 7.00 x 20.30 in (48.3 x 17.8 x 51.6 cm) |
| Weight             | Optical Head                | 5.5 lbs (2.6 kg)                                |
|                    | Power Supply                | 45 lbs. (20.5 kg)                               |
| Electrical Service | Single Phase                | 110-200 or 220-240 VAC $\pm$ /-10%, 50/60 Hz    |
|                    | Typical Power Consumption   | 300 W   |
| Control Interface  | User Interface              | Full Featured Front-Panel Control               |
|                    | Serial Interface            | RS- 232   |
|                    | Control Software            | MS Windows-based <i>Laser Commander™</i>        |
| Umbilical Length   |                             | 10.0 ft (3m)                                    |
| Environmental      | Operating Temperature Range | 15 - 35°C                                       |
|                    | Storage Temperature Range   | +4°C - 50°C                                     |
|                    | Relative Humidity           | 8 - 80%, non condensing                         |

## LASER SYSTEM CHARACTERISTICS

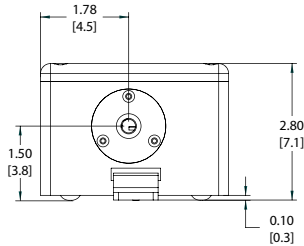


Focusing diagram, with f=500 mm lens

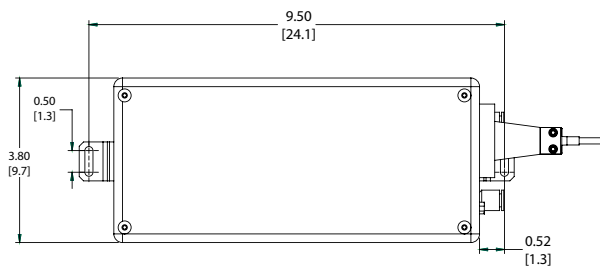
## Colibri PHYSICAL LAYOUT

All dimensions are in inches (cm)

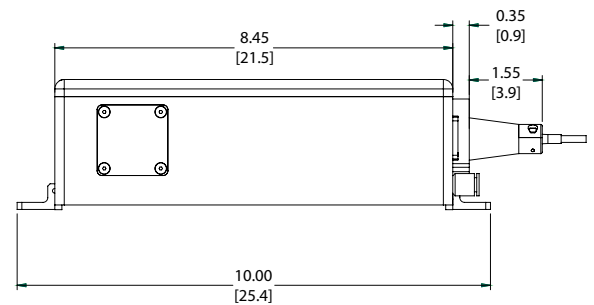
### FRONT VIEW



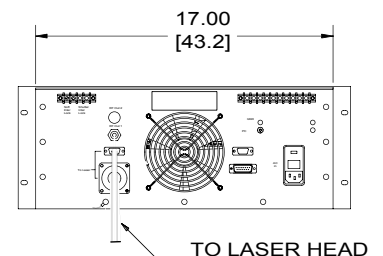
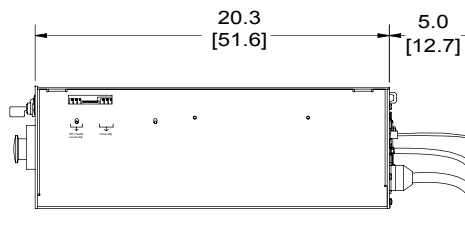
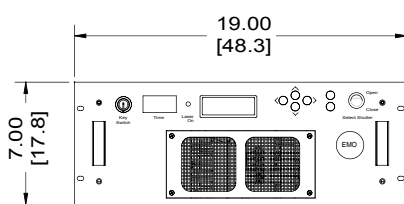
### TOP VIEW



### SIDE VIEW



## POWER SUPPLY



ISO 9001:2000



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