

Tunable Narrowband Diode Laser with Amplifier



NarrowDiode



NarrowDiodeA

Our new ***NarrowDiode*** laser is a small footprint and low-priced external cavity diode laser. The wavelength separation is realized by a low loss interference filter instead of the common diffraction grating.

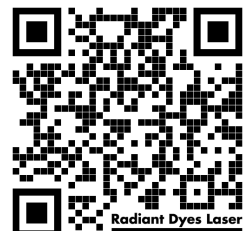
Due to this new design, the laser is characterized by a **high robustness** against mechanical and thermal disturbances.

Another advantage of our laser is the **fixed output beam**, which is independent from the wavelength.

Furthermore, the laser guarantees a **narrow linewidth** and **large tunability** at the same time. Wavelength stabilization by frequency modulation spectroscopy is also available.

With the new amplifier output power up to 1,5W can be achieved.

<i>Features:</i>
• Narrow linewidth (down to 20 kHz)
• High stable Radiant Dyes mechanics
• 7 GHz mode-hop free tuning
• Anti-reflection coated diodes
• Design by Observatoire de Paris



Radiant Dyes Laser & Accessories GmbH

NarrowDiode

Tunable Narrowband Diode Laser Interference-filter-stabilized with external cavity

Advantages:

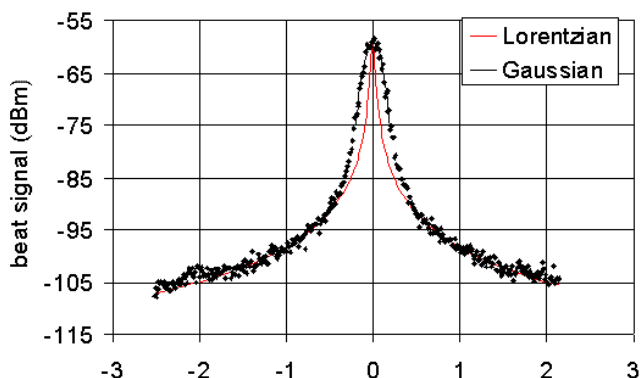
- Very narrow linewidth (down to 20kHz)
- Typical wavelengths: **420nm, 780nm, 798nm, 817nm, 852nm** (others on demand)
- Very high robustness against mechanical and thermal disturbances
- Wavelength stabilization by frequency modulation spectroscopy possible
- Fixed output beam
- Application under extreme conditions, e.g. in space

Typical Applications:

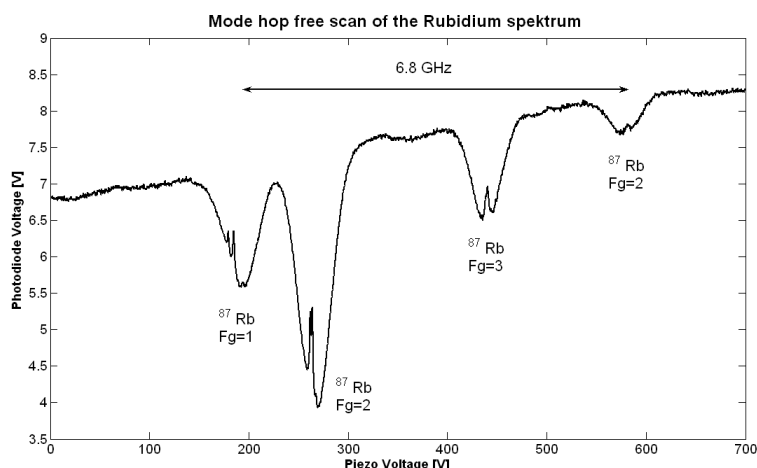
- High Resolution Spectroscopy
- Raman Spectroscopy
- Laser Cooling & Trapping

Optional Features:

- Frequency doubling
- Amplifier



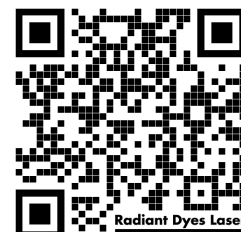
Power Spectrum of the Beat Signal between two Lasers



Typical Application: Rubidium Spectrum measured with **NarrowDiode Laser**

Specifications	NarrowDiode 780	NarrowDiode 798	NarrowDiode 817	NarrowDiode 852
Narrow Linewidth	20 kHz	20 kHz	20 kHz	20 kHz
Wavelength range	app. 783-761nm	app. 801-783nm	app. 820-802nm	app. 855-834nm
Output Power Diode Laser	➤ 50 mW			
Output Power with Amplifier	➤ 1,5 W			
Mode-hop free by Piezo Scanning	7 GHz (up to 20 nm with mechanical tuning and mode-hopping)			
Design by Observatoire de Paris				

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Radiant Dyes Laser