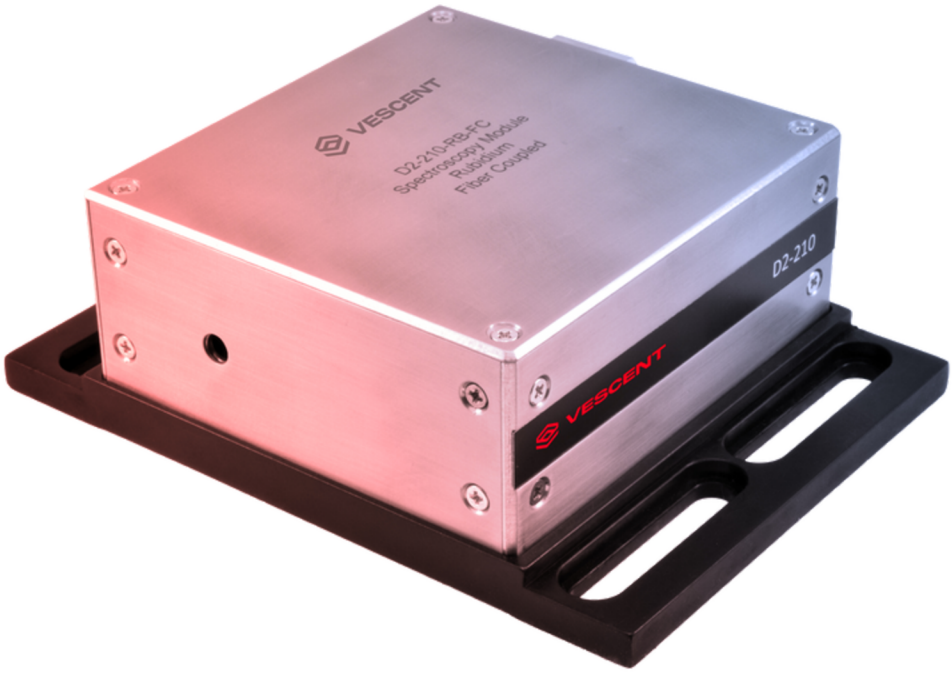
D2-210 Spectroscopy Module

Vescent's D2-210 second-generation Spectroscopy Module makes locking to atomic transitions easier than ever before. Redesigned to maximize performance in a number of laser-locking environments, the D2-210 makes laser stabilization simple.



D2-210 Spectroscopy Module

The D2-210 is built to be a stable reference for lasers at alkali transition wavelengths. The magnetic shield case protects the atoms from stray fields and the internal oven stabilizes the vapor cell temperature. Robust micro-optics for Doppler-free spectroscopy maintain a stable alignment and accommodate free-space or fiber-coupled input. With balanced detection, the D2-210 rejects most laser intensity noise. The D2-210 can be charged with either rubidium, cesium, or potassium.

The D2-210 allows flexible operation, accepting laser powers from microwatts to over a hundred milliwatts with little loss and a beam path that effectively eliminates back reflections to the laser. The D2-210 is compatible with our D2-125 Laser Servo as well as other feedback loop filters. The D2-210 outputs a low-noise signal for locking to an absorption feature. It can optionally support Doppler-broadened background subtraction to further increase the signal to noise ratio.

D2-210 Spectroscopy Module

D2-210 Right Side

Features

- Available in Rb, Cs, and K cell versions
- Temperature stabilized
- Magnetically shielded
- Optional doppler subtraction and fiber coupling
- Pass-through module with adjustable beam pick-off

D2-210 Specifications

Parameter	Value
Fill Options	Rubidium, Cesium, or Potassium
Optical Input Configurations [1]	Free space or fiber coupled
Input Power Range	2 to 1,000 mW
Supported Locks	Side and Peak
Doppler Subtraction	Optional
Detector Bandwidth	>5 MHz
Temperature Stabilization	Included
Photodetection	Included
Power Requirements [2]	+5 V and ±15 VDC
Dimensions	3.62 x 4.98 x 1.7 in 9.2 x 12.7 x 4.3 cm

[1] Fiber coupling optional.

[2] Power supply not included. See Vescent D2-005.

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