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3D Printing an External Cavity Diode Laser Housing ERIK BREKKE, St Norbert Coll, TYLER BENNETT, St Norbert College, ERIC HAZLETT, St. Olaf College — The ability to control the frequency of an external cavity diode laser is an essential component for undergraduate laboratories through atomic research. Typically the housing for the diffraction grating and piezo is either commercially purchased or milled from metal. Here we present an alternative to these more expensive options using 3D printing, a commonly available tool in many physics departments. We have examined the laser performance using atomic spectroscopy and self-heterodyne interferometry. The performance and affordability of these designs make them an appealing option for future use.

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