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AL BA HR MK YU(30) Priority: **21.12.2004 US 637967 P**(71) Applicant: **Davidson Instruments, Inc.****The Woodlands TX 77381 (US)**

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(54) **Tunable laser for dynamic measurement**

(57) A method for monitoring changes in a gap which corresponds to changes in a particular environmental parameter using a tunable laser and interferometer at high frequency is disclosed. The laser light provided to the interferometer is swept through a small range of wavelengths. Light modulated by the interferometer is detected and a non-sinusoidal light intensity output curve is created, a reference point on the curve identified and subsequent sweep of the laser performed. The difference in time, wavelength, or frequency at the occurrence of the reference point between the two sweeps allows for measuring the relative changes in the gap and, as a result, the change in the environmental parameter.

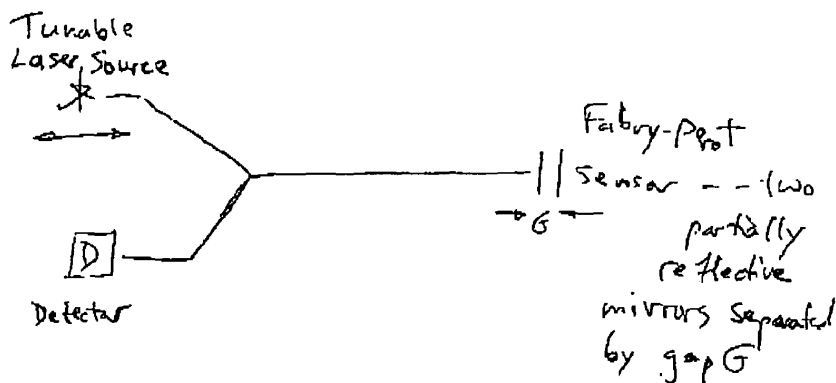


Figure 1 Schematic of sensor and optoelectronics

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