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(54) **MULTIPLE WAVELENGTH SENSOR SUBSTRATE**

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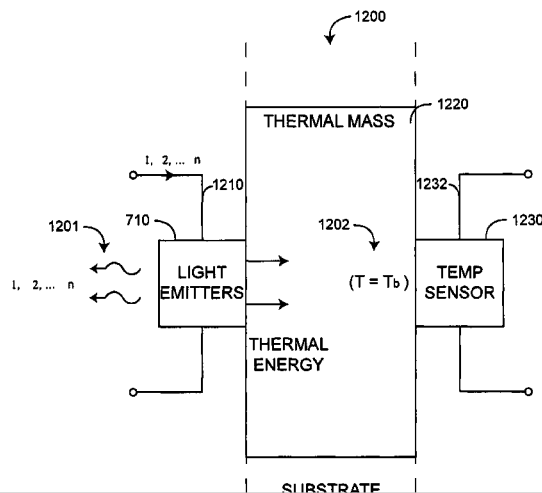
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(57) **ABSTRACT**

A physiological sensor has emitters configured to transmit optical radiation having multiple wavelengths in response to corresponding drive currents. A thermal mass is disposed proximate the emitters so as to stabilize a bulk temperature for the emitters. A temperature sensor is thermally coupled to the thermal mass. The temperature sensor provides a temperature sensor output responsive to the bulk temperature so that the wavelengths are determinable as a function of the drive currents and the bulk temperature.

**30 Claims, 48 Drawing Sheets**



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