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Heart Rate and Blood Oxygen Level Measurement

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Abstract: In this project, we will measure the pulse rate and blood oxygen level using a pulse oximeter sensor. Thispulse oximeter is designed by using a pulse oximetersensor which consists the one IR light and one RED light and another photodiode and the other photodiode is used on the same side. When this light falls on the finger then the light bombards blood from the finger and then it reflects, that reflected signal is received by the photodiode. The photodiode converts light energy into electrical form and is fed to the ATmega328 Microcontroller on Arduino. That will take the signal and shows pulses and oxygen saturation on LCD.

Keywords: Measuring heart rate and blood oxygen level; Reflectance pulse oximeter; non-invasive blood oxygen saturation.



Fig1.Detection methods for measuring the blood oxygen level

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