

ARD 2 **Arduino Compatibles**

Controllers, Shields, Modules & Sensors

Heartbeat Sensor

ARD2-2239

- Detect the pulse of a fingertip
- Light up an LED each time a pulse is detected

Description

This sensor uses a bright infrared (IR) LED and a phototransistor to detect the pulse of a fingertip. A red LED flashes with each pulse. The IR LED lights up the top of the finger, and phototransistor on the bottom of the finger measures the light emitted. When the heartbeat pulses the resistance of the photo transistor will be slightly changed. The sensor uses a very high resistance resistor, because most of the light is absorbed by the finger and the phototransistor must be sensitive enough to detect these small changes in light. The resistance can be adjusted to get the best results.

It is important to keep stray light from entering the phototransistor. For home lighting that is particularly important because the lights at home are generally 50HZ or 60HZ and thus fluctuate, so a faint heartbeat will add considerable noise. When running the program the measured values are printed. It could be challenging to measure an actual heart rate value using this sensor.

Specifications

Colour (Board) Black

Material PCB

Pinout

Module	Arduino	Function
S	A0	Signal via Arduino Board
Middle	5V	Power Supply
–	Ground	Ground Connection

