

# Peripheral Blood Flow (PPG+Temp) Wrist Sensor

## Main Features



- ❑ Is an Optical Sensor that provides Volumetric Blood Flow measurement of an arterial blood in an organ.
- ❑ Most common placements for a PPG sensor are Finger Tips, Wrist, Forehead, and Earlobes.
- ❑ Less common placements are Vagina and Esophagus.
- ❑ Our PPG Sensor along with our software is able to provide excellent signal, even though the blood volume pulse is somewhat damped by the time it reaches the skin, taking advantage of distend to the arteries and arterioles in the subcutaneous tissue.
- ❑ We drive PPG signal through transmissive absorption or by reflection.
- ❑ Our software displays both DC component of the signal that is attributable to the bulk absorption of the skin tissue, and AC component, that is directly attributable to variation in blood volume in the skin which is caused by the pressure pulse of the cardiac cycle.

## State-of-the-art Sensors and Systems for Physiological Measurements

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## Possible Uses

Some possible Uses of PPG Sensor with an appropriate software are:

- ❖ oxygen saturation
- ❖ relative blood pressure (BP)
- ❖ cardiac output
- ❖ assessing autonomic function (ANS)
- ❖ detecting peripheral vascular disease
- ❖ Heart Rate (HR)
- ❖ Inter-Beat Interval (IBI)
- ❖ Pulse Height (PH)
- ❖ Biofeedback
- ❖ Research

## Specifications

### PPG Sensor:

Manufactured by a very small yet advanced electronics. The sensor can be placed on the wrist or elsewhere:

- ❖ One Transmitter Type:
    - ❖ Photocurrent, 950 nm, 1mW/cm<sup>2</sup>, >45uA
  - ❖ Two Receivers Type:
    - ❖ IR, IFmax1200mA, 80mW, Wavelength Pk: 880nm
- Other wave lengths available on request.*

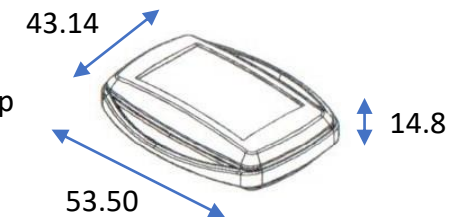
### Temperature Sensor:

Our PPG sensor has PPG and Temperature measures. The sensor can be placed on the wrist or elsewhere to measure minute changes in skin temperature:

- ❖ Calibrated Measurement Range: 60 - 100 deg. F
- ❖ Absolute Accuracy: Better than + - 0.25 deg. F over calibrated Measurement Range, better than + - 0.1 deg. F @ 95 deg. F., including thermal inter-changeability. Thermal Time Constant: 320 mSec.

### Physical Attributes:

- ❖ Color: White and attractive Light Blue:
- ❖ Wrist Strap: Comes with elastic wrist strap



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