

Study of reflection pulse oximeter

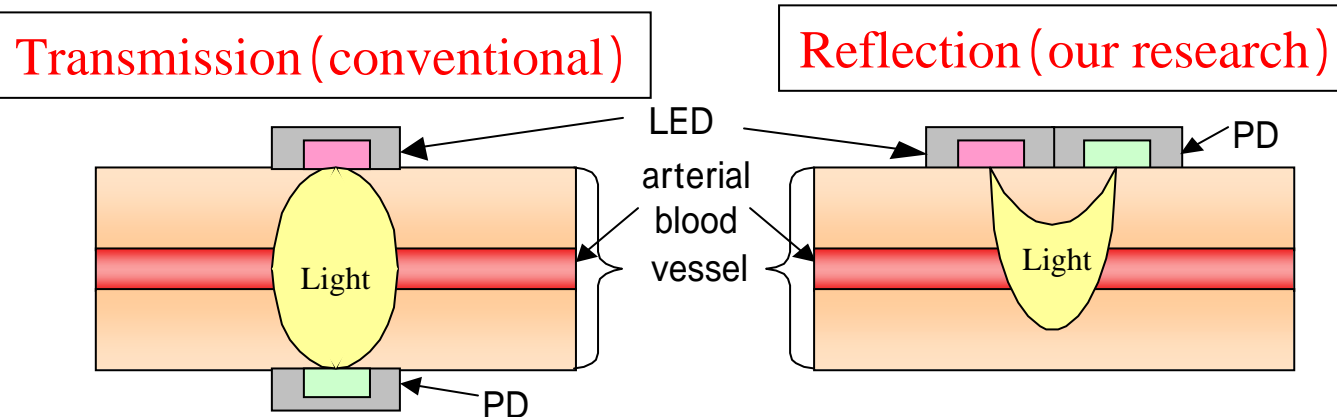
Pulse oximeter is one of the medical instruments to measure oxygen saturation of arterial blood using two wavelengths in the red and near infrared ranges. In medical treatment, it is very important to know the oxygen saturation of arterial blood, and pulse oximeters are inevitable instruments for monitoring patients' health conditions.

Oxygen Saturation is ...

It is the ratio of the concentration of oxygenated hemoglobin $[HbO_2]$ to that of total hemoglobin $[HbO_2]+[Hb]$ in blood.

$$SpO_2(\%) = \frac{[HbO_2]}{[HbO_2]+[Hb]} \times 100$$

Pulse oximeter



Flexibility of measurement sites and safety of reflection type

Measurement site of transmission type is restricted to fingers, ears and other thin tissues where the transmitted light signal is measurable. Tissues can be damaged by prolonged pressure with the transmission type of devices. Reflection pulse oximeters can be installed at any site of body without pressure so that tissue damages can be avoided.