



Light is wearable

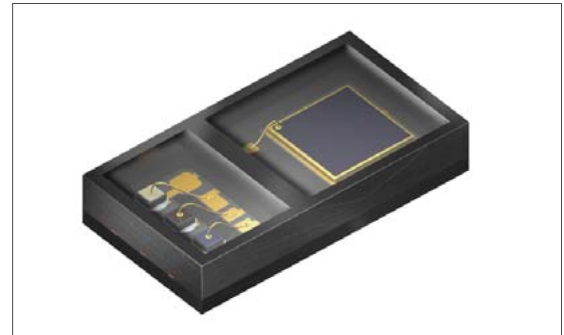
The new SFH 7050 for
Biomonitoring applications

Light is OSRAM

OSRAM
Opto Semiconductors



Integrated optical sensor SFH 7050



Simplifying and improving fitness monitoring:
Compact, efficient, reliable

Made for mobile devices like smart watches and fitness armbands: SFH 7050

Ready to go new ways

The new SFH 7050 is the first integrated optical sensor from OSRAM Opto Semiconductors for automatic fitness tracking. The compact sensor includes three light emitting diodes of different wavelengths which are based on high-efficiency chip technology, ensuring low energy consumption and high signal quality for extremely reliable measurements at the same time. A built-in photo detector receives the reflected optical signals and is separated from the emitters by an opaque barrier.

Three in one

The emitters may be individually controlled, so that the sensor can be used for various applications. Green light has established itself as the best option for the pulse measurements on the wrist. Red or infrared emitters are generally preferred for pulse measurement on the finger, because they can also measure the oxygen content of the blood (pulse oximetry). In combination with the photodiode, the

infrared LED can also be used as a proximity sensor. The measurement starts or stops automatically when the sensor touches the skin or is removed from the skin. The integrated optical barrier prevents crosstalk of the three LEDs to the photodiode and thus corruption of the optical signal or the entire measurement.

Features

- Multi-chip package featuring 3 emitters and one detector
- Light barrier to block optical crosstalk

Applications

- Heart rate monitoring
- Pulse oximetry
- Proximity

Technical data

BioMon Sensor SFH 7050	
Component size	4.7 × 2.5 × 0.9 mm ³
Sensitive area of photodiode	1.3 × 1.3 mm ²
Wavelengths of emitter	Red: 660nm Green: 530nm Infrared: 940nm

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