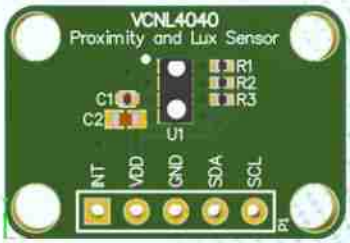
Lux Sensor

Overview

Lux Sensor is a high accuracy ambient light digital 16-bit resolution sensor in a miniature transparent 6.8 mm x 3.0 mm x 2.5 mm package. It includes a highly sensitive photo diode, a low noise amplifier, a 16-bit A/D converter and supports an easy to use I2C bus communication interface.

Key Features

- Integrated solution combining proximity and ambient light sensing in one package.
- High sensitivity for accurate detection of objects and light levels.
- Wide detection range suitable for consumer and industrial applications.
- I²C interface for simple integration with microcontrollers.
- Low power consumption optimized for portable and battery-powered devices.
- Interrupt functions for proximity and ambient light thresholds, reducing MCU load.
- Compact package enabling space-saving designs.



Technical Specifications

- Proximity Sensor Range: Up to 200 mm with sunlight immunity.
- Ambient Light Sensor Range: 0.0125 lux to 20,000 lux (16-bit resolution).
- Supply Voltage: 2.5 V to 3.6 V.
- Communication Interface: I²C, up to 400 kHz.
- Package Type: 8-pin lead-free, compact surface-mount package.
- Operating Temperature: –40 °C to +85 °C.
- Current Consumption: ~80 µA (ALS), ~200 µA (Proximity), <1 µA in shutdown mode.

Application

- Smartphones & Tablets – Auto screen brightness control, proximity sensing during calls.
- Wearables – Gesture recognition and power-saving display control. And many more