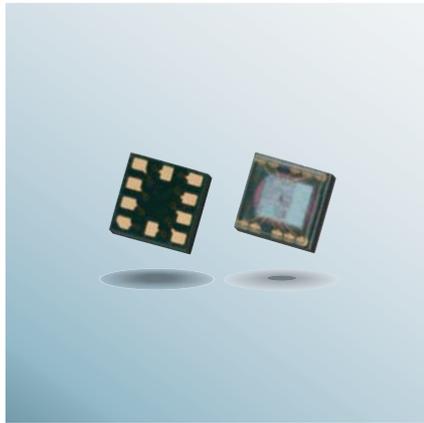


Monolithic Optical Proximity/Ambient Light Sensor BH1771GLC



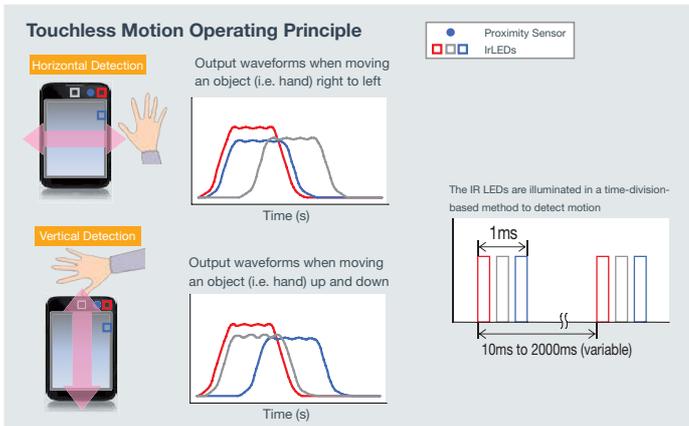
Ambient light sensor and proximity sensor with touchless motion function

Product Outline

The BH1771GLC integrates an optical proximity sensor and digital ambient light sensor (ALS) on a single chip. The proximity sensor can detect objects 1cm to 10cm away, making touchless motion possible. Simply wave an object, such as a hand, above the sensor to initiate various operations (e.g. scroll). The ALS features a wide detection range, from darkness to direct sunlight, allowing adjustment of the brightness of the LCD and keypad in mobile phones and portable devices to match ambient conditions for optimum visibility with minimal power consumption.

The industry's first touchless motion function

The BH1771GLC incorporates a proximity sensor with 3ch infrared LED driver and an ambient light sensor in a compact package measuring only 2.8mm×2.8mm. Connect 3 infrared LEDs in order to detect both motion and brightness. Ideal for compact portable LCD-equipped devices such as mobile phones and digital cameras.



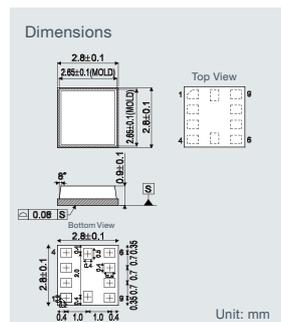
Features

Proximity Sensor

- Comparator/I²C output
- Digital 8bit output
- Integrated IrLED current driver
- Built-in sunlight-cancelling circuit

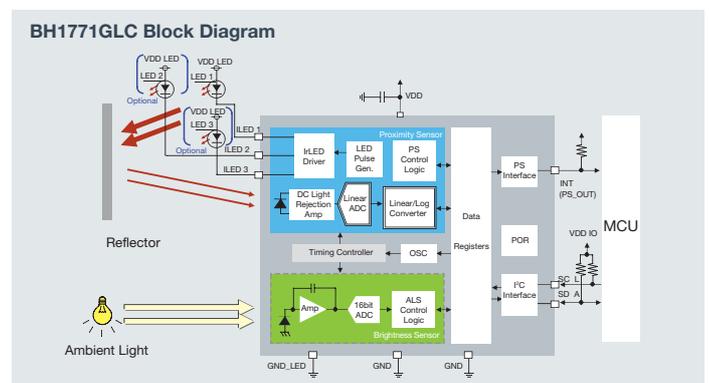
Ambient Light Sensor

- Digital 16bit output
- Sensitivity variation: ±15%



Single-chip design contributes to device miniaturization

The internal proximity sensor utilizes a 3ch LED driver designed to drive 3 infrared LEDs situated near the sensor. The phase difference of the reflected light (time-divided pulses) from each LED is then detected to determine the direction of movement of the reflecting object (i.e. human hand). This makes touchless operation possible - in a compact form factor.



Optical Detection Mechanism

