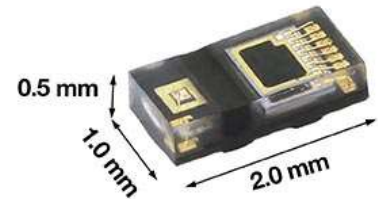




Featuring a VCSEL and Smart Dual I²C Slave Address, VCNL36828P Proximity Sensor Offers Idle Current Down to 5 μ A in Compact 2.0 mm x 1.0 mm x 0.5 mm SMD Package for Battery-Powered Consumer Applications, Including TWS Earphones and VR / AR Headsets

Product Benefits:

- Features a vertical-cavity surface-emitting laser (VCSEL) with a 940 nm peak wavelength and no visible “red-tail”
- Combines a photodiode, application-specific integrated circuit (ASIC), 16-bit ADC, and smart dual I²C slave address in a compact 2.0 mm by 1.0 mm by 0.5 mm surface-mount package
- Low idle current of 5 μ A
- Sunlight cancellation up to 140 klx
- 200 mm operating range
- Typical rated supply voltage of 1.8 V
- A programmable interrupt function allows designers to specify high and low thresholds to reduce continuous communication with the microcontroller
- Intelligent cancellation reduces cross-talk
- A smart persistence scheme ensures accurate sensing and faster response time
- RoHS-compliant, halogen-free, and Vishay Green



Market Applications:

- Automatic screen wake-up and turn-off functions in smartphones and smart watches
- User detection in wireless stereo (TWS) earphones, virtual reality / augmented reality (VR / AR) headsets, and smart glasses

The News:

The Optoelectronics group of Vishay Intertechnology introduces a new fully integrated proximity sensor designed to increase efficiency and performance in consumer applications.

- Compared to previous-generation solutions, the VCNL36828P offers a 20 % smaller package, 20 % lower idle current, and 40 % higher sunlight cancellation
 - Delivers superior proximity detection while reducing power consumption to increase efficiency in space-constrained, battery-powered applications
- To lower costs, the proximity sensor’s smart dual I²C slave address allows for the connection of two proximity sensors without the need for a multiplexer



The Key Specifications:

Part number	VCNL36828P
Function	PS + VCSEL
Package size (mm)	2.0 x 1.0 x 0.5
Supply voltage (V)	1.65 to 2.0
I ² C bus voltage (V)	1.2 to 3.6
Max. VCSEL driving current (mA)	20
Operating range (mm)	200
Supply current, idle state (μA)	5
Proximity resolution	16 bits

Availability:

Samples and production quantities of the VCNL36828P are available now, with lead times of 14 weeks.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?80306> (VCNL36828P)

Contact Information:

THE AMERICAS

Jim Toal
jim.toal@vishay.com

EUROPE

Boris Lazic
boris.lazic@vishay.com

ASIA/PACIFIC

Jason Soon
jason.soon@vishay.com