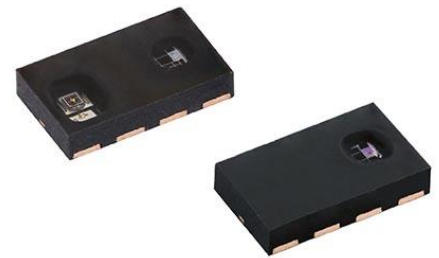




# New VCNL3030X01 and VCNL3036X01 Automotive Grade Proximity Sensors in Low Profile SMD Packages Deliver High Resolution Up to 20 $\mu\text{m}$ for Force Sensing in Automotive, Consumer, and Industrial Applications

## Product Benefits:

- High resolution up to 20  $\mu\text{m}$
- Combine a photodiode with an IR emitter (VCNL3030X01) or onboard driver with internal logic for up to three external IREDs (VCNL3036X01)
- Integrated amplifier and ADC circuitry
- 4 mm by 2.36 mm surface-mount package with a low 0.75 mm profile
- AEC-Q101 qualified
- Support the I<sup>2</sup>C bus communication interface
- Programmable interrupt function
- Selectable 12-bit and 16-bit outputs
- Intelligent cancellation eliminates cross-talk
- A smart persistence scheme ensures accurate sensing and faster response time
- IRED wavelength (VCNL3030X01) peaks at 940 nm and has no visible “red-tail”
- RoHS-compliant, halogen-free, and Vishay Green



## Market Applications:

- Force sensing applications in steering wheel controls, laptop smart power buttons and multi-force trackpads, and touchpads for IoT devices and kitchen appliances

## The News:

The Optoelectronics group of Vishay Intertechnology introduces two new fully integrated Automotive Grade proximity sensors with high resolution up to 20  $\mu\text{m}$  for force sensing applications. They each combine a photodiode, amplifier, and ADC circuitry in a 4 mm by 2.36 mm surface-mount package with a low 0.75 mm profile. The VCNL3030X01 features an on-board infrared emitter (IRED) while the VCNL3036X01 is designed to be used with up to three external IREDs, for which an onboard driver with internal logic is provided. The VCNL3030X01 and VCNL3036X01:

- Provide higher resolution compared to previous-generation sensors
- Prevent false triggers
- Operate normally even if the user is wearing gloves
- For force sensing applications, the sensors offer the flexibility to fine-tune the current for short displacements
- Designed to work with external IREDs, the VCNL3036X01 provides increased flexibility for product design
- Programmable interrupt function allows designers to specify high and low thresholds to reduce the continuous communication with the microcontroller



### The Key Specifications:

Part number	VCNL3030X01	VCNL3036X01
Package size (mm)	4 x 2.36 x 0.75	
Supply voltage (V)	2.5 to 3.6	
I <sup>2</sup> C bus voltage (V)	1.8 to 5.5	
Pulse current (mA)	200	
Operating range (mm)	300	500
Proximity resolution	16 bits	

### Availability:

Samples and production quantities of the new proximity sensors are available now, with lead times of six to 12 weeks for large orders.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?84960> (VCNL3030X01)

<http://www.vishay.com/ppg?84937> (VCNL3036X01)

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