



PROXIMITY SENSORS

LIGHT TO DIGITAL – VCNL4X SERIES

IN A NUTSHELL

1.5 m Presence and proximity sensing up to **1.5 meters**

Programmable emitter current

Upper and lower thresholds, and interrupt functions

16-bit resolution

0.85 mm Low profile of **0.85 mm**

Connects directly to a microcontroller via I²C

Fully integrated solutions with infrared emitter, proximity photodiode, and signal conditioning IC

Automotive-qualified options (-X01)



APPLICATIONS

- Mobile devices (e.g. smart phones, touch phones, PDAs, GPS) for touch screen locking, power saving
- Automotive for presence detection
- Attract mode engagement
- Automatic doors, faucets, and toilets
- Robots for cliff detection and docking
- Toys for edge of table detection and collision avoidance



ROBOTS



AUTOMATIC FAUCETS, DOORS, AND TOILETS



AUTOMOTIVE

COMPETITIVE ADVANTAGE

- Sensors include 16-bit ambient light sensor at no extra cost
- Optical noise suppression

16 bit



Part Number	L	W	H	IR LED	Prox	ALS	Interrupt	Package	AEC-Q101	Range	Remark
VCNL4010	3.9	3.9	0.7	•	•	•	•	FAM		0.2 m	Lowest height
VCNL4020X01	4.9	2.4	0.8	•	•	•	•	FAM	•	0.2 m	Highest operating temperature in market
VCNL3020	4.9	2.4	0.8	•	•		•	FAM		0.2 m	Low height, proximity only
VCNL4040	4	2	1.1	•	•	•	•	PCB		0.2 m	Smallest package in the market. Improved ALS with Filtron™
VCNL4200	8	3	1.8	•	•	•	•	PCB		1.5 m	1.5 meter proximity