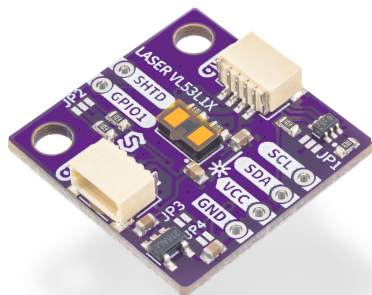


VL53L1X TOF LASER DISTANCE SENSOR



Weight

50 g

DESCRIPTION

Achieve precise distance measurements from 30mm to 4 meters with the VL53L1X Time-of-Flight laser sensor. Perfect for robotics, drones, and automation projects, this invisible 940nm Class 1 laser provides fast and accurate ranging at up to 50Hz frequency. Whether you're building obstacle-avoiding robots, drone landing systems, or smart shelves, this sensor delivers the precision and speed your projects demand. The programmable Region of Interest allows you to adjust the field of view from 15° to 27°, optimizing detection for your specific needs.

Built on the advanced VL53L1X chip, this breakout board features a standard I2C interface with programmable addressing (default 0x29) and supports up to 400kHz communication speed. Operating from 2.6V to 3.5V with ultra-low standby consumption of just 6μA, it's perfect for battery powered projects. The compact 22x22mm form factor with two lego-compatible mounting holes makes integration simple, while the wide operating temperature range (-10°C to +70°C) ensures reliable performance in demanding environments.

Ideal for service robots and automation systems requiring long distance obstacle detection, drone navigation systems for landing assistance and ceiling detection, smart shelves and vending machines for inventory management, and user detection systems for automatic device control. The sensor's high-speed ranging capability and programmable features make it perfect for both hobbyist projects and professional automation systems. Quick, responsive and precise, truly the 2.0 experience of what you would expect from a traditional distance sensor!

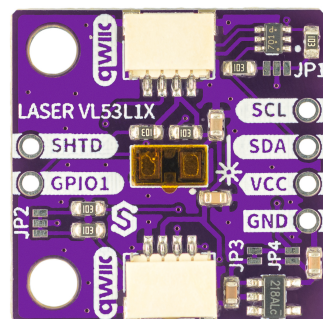
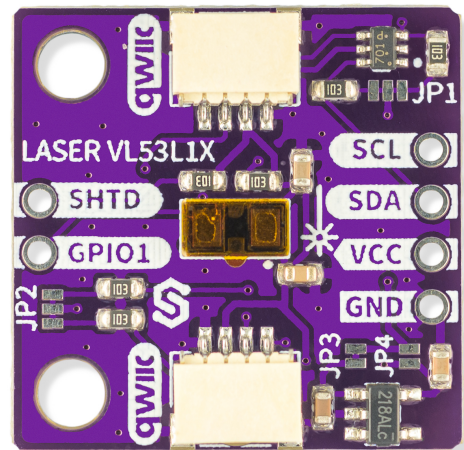
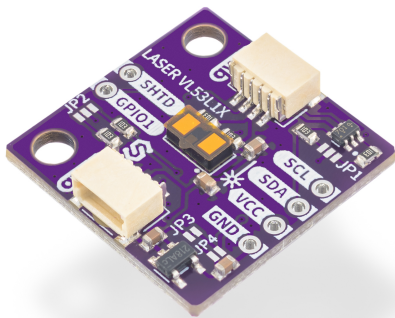
FEATURES

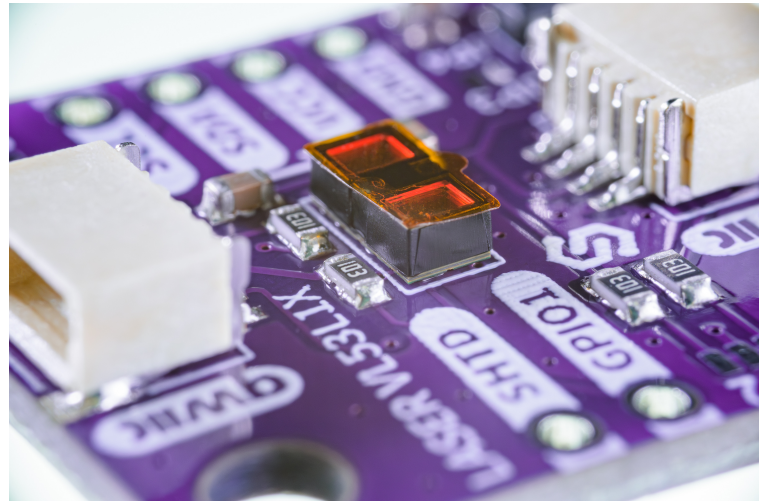
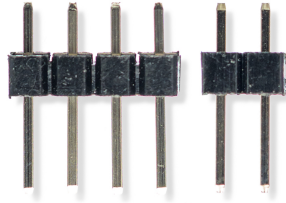
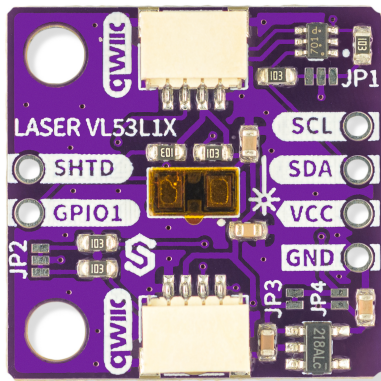
- Range: 30mm to 4000mm (4 meters) precise measurement

- Dimensions: Compact 22x22mm / 0.9x0.9 inch form factor (LEGO®-compatible)
- Frequency: Up to 50Hz ranging for real-time applications
- Laser: 940nm Class 1 invisible laser emitter (eye-safe)
- Region of Interest (ROI): Adjustable field of view 15° to 27°
- I2C Interface: Up to 400kHz, programmable address (default 0x29)
- Operating Voltage: 2.6V to 3.5V for modern microcontroller compatibility
- Temperature Range: -20°C to +85°C for demanding environments
- Active Consumption: 16-18mA during measurement
- Standby Consumption: Ultra-low 6µA for battery projects

USEFUL LINKS

OTHER IMAGES





Weight

50 g