



Description:

The VL53L0X is a Time-of-Flight (ToF) laser distance sensor from STMicroelectronics that measures absolute distances up to 2 meters with high accuracy. Key features include its compact size, Class 1 laser (eye-safe), I2C communication, and performance independent of target color or reflectance.

Features:

1. **Technology:** Time-of-Flight (ToF) using a 940 nm VCSEL (vertical cavity surface-emitting laser).
2. **Measurement Range:** Up to 2 meters.
3. **Accuracy:** $\pm 3\%$.
4. **Communication:** I2C interface for control and data transfer, with a programmable I2C address.
5. **Power:** Can be powered by a 2.6V to 5.5V source and uses an onboard regulator to provide power to the sensor.
6. **Dimensions:** 4.4 mm x 2.4 mm x 1.0 mm.
7. **Eye Safety:** Class 1 laser device, compliant with IEC 60825-1:2014.

Performance:

- Independent of target reflectance.
- High immunity to ambient light.
- Advanced optical cross-talk compensation.
- Fast measurements, with up to 60 measurements per second.

Applications:

- Robotics (obstacle detection)
- Camera autofocus
- Gesture recognition
- Proximity sensing (e.g., in phones)
- Hand dryers, soap dispensers, and faucets

Package Includes:

1 x GY-53 VL53L0X Laser ToF Flight Time Ranging Sensor Module.

1 x Jumper Connector (without soldered).