

This is a comparison between ultrasonic and laser distance sensors

HC-SR04 vs TOF10120



- Low cost (\$1.25 USD)
- Exposed to environment
- 1-pin or 2-pin digital I/O
- Larger size
- Slower response
- Wider field of view



- Higher cost (\$10.00 USD)
- Sealed to environment
- Serial connection & I2C Bus
- Very small
- Quick response
- Narrow field of view

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HC-SR04 vs TOF10120

- Range rated 2 cm - 400 cm
- Working Voltage 5 VDC
- Working Current 15 mA
- Dimensions 45*20*15 mm
- 40 KHz sound pulses
- Ultrasonic transducers



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Main Points:

- The Ultrasonic sensor has a wider field of view, the laser distance sensor has a very small field of view
- Ultrasonic sensor's range starts at 2cm versus the laser sensor's 10cm
 - This means the laser sensor would have to be set back at least 10cm from the ping pong ball at all heights that the ball reaches. With the already small FOV from the laser sensor, it would have a much harder time accurately picking up the ball then the ultrasonic sensor. The ultrasonic sensor can get close to the ball and still accurately read the distance, with a wider FOV being better for picking up the ping pong ball