

# ToF & PIR Sensing Intelligence

MSD01 ToF Sensors for precise space and stock awareness.



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The MSD01 ToF Sensor Series are Bluetooth Low Energy sensors engineered to provide precise, real-time distance measurements using advanced Time-of-Flight (ToF) technology. The lineup includes the MSD01-D11 ToF Distance Sensor and the MSD01-D22 ToF Occupancy Sensor, which integrates an additional passive infrared (PIR) module. With millimeter-level precision ( $\pm 10\text{mm}$ ), 99% detection accuracy, and a range of up to 5 meters, the MSD01 series enables fully anonymous and non-intrusive occupancy detection—ideal for demanding applications such as warehouse inventory monitoring, smart shelving in supermarkets, and desk occupancy management in libraries or workplaces.

- Millimeter-level Precision
- 99% Accuracy
- 150° Adjustable Sensor Head
- Possible for Split-Directional Sensing
- 100% Anonymous Detection
- 5 Years & Replaceable Battery

## SPECIFICATIONS

	MSD01-D11 ToF Distance Sensor	MSD01-D22 ToF Occupancy Sensor
Size:	90 mm * $\Phi 34$ mm	110 mm * $\Phi 34$ mm
Weight:	63 g	72 g
Bluetooth Version:	Bluetooth® LE 5.0	
Transmission Distance:	150m (492ft) in open area	
Battery:	2,700 mAh lithium battery, replaceable	
Battery Life:	5 years	
Operating Temperature:	-10°C~+60°C (14°F~140°F)	-10°C~+45°C (14°F~113°F)
Operating Humidity:	≤95% RH, non-condensing	
ToF Measurement Range:	Default 2500 mm, Optional 5000 mm	
ToF Measurement Accuracy:	Short range:± 10mm / Long range:+5%	
PIR Sensing Distance:	/	3m (9.84ft)
Button:	Power button & tamper alarm	
Installation:	Double-sided adhesive tape, magnetic mount with the included accessory	
ToF FOV	27°	
PIR FOV:	/	Horizontal 100° / Vertical 20°

## APPLICATIONS

