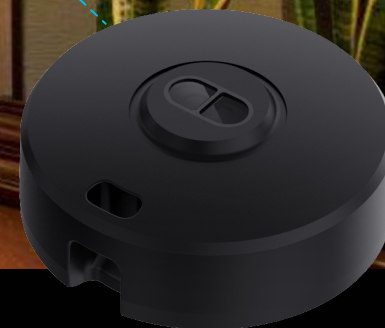# Compact | Durable

S02R ToF Ranging Sensor

The S02R ToF ranging sensor, a Bluetooth Beacon that utilizes Time-of-flight technology to achieve distance measurement. It is based on BLE 4.2 and designed to be compact and IP67 waterproof, making it suitable for real-time usage monitoring by attaching it to soap dispensers, tissue boxes, or trash cans. It can also be deployed in restrooms for real-time occupancy monitoring to reduce regular maintenance costs.

With its 600mAh large battery and periodic working mechanism, the product guarantees a lifespan of more than 3 years, making it the preferred choice for IoT-enabled smart offices, factories and plaza.

Key point

IP67 waterproof	3+ years battery life	Compact design

Up to 3m ranging distance	Millimeter ranging accuracy	Periodic working mechanism

*① Adv interval－1000ms, Standby duration－0, Tx Power－0dBm, without accelerometer sensor.

General specs

Connectivity:	BLE 5.0
Dimensions:	Φ38.0*14.5mm
Color:	Black
Material:	PC
Weight:	25g
IP rating:	IP67
Battery capacity:	600mAh | Replaceable
Battery lifespan:	3 years - Short range mode(<1.2m)
	1 year - Long range mode(1.2m-3m)
Operating temperature:	-20°C to 60°C
Transmission range:	150m (in open area without obstacles)
Installation:	3M sticker
Certification:	FCC | CE | RoHS | REACH | Bluetooth

ToF Sensor specs

Max. distance:	3000mm
Min. distance:	40mm
Ranging error①:	±10mm in short range (<0.1m)
	±5% in medium range (0.1m-1.2m)
	±1% in long range (1.2m-3m)
Field-of-view(FOV):	27°

38mm

38mm

14.5mm
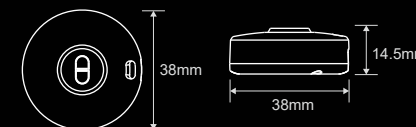
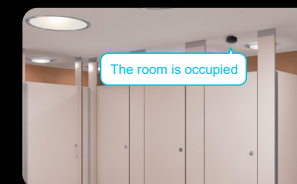## Application scenarios
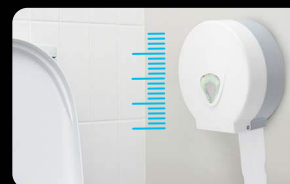
Office/Supermarket
· Trash bin fill level detection
· Paper and towel dispenser fill level detection

Warehouse
· Stock count
· Inventory level monitoring

The room is occupied

Toilet
· Occupancy detection
· Soap dispenser fill level detection