

# LoRaWAN LiDAR ToF Distance Sensor

## LDS40-LB



## OVERVIEW:

The Dragino LDS40-LB is a **LoRaWAN LiDAR ToF (Time of Flight) Distance Sensor** for Internet of Things solution. It is capable of measuring the distance to objects as close as 0m to 40m. The LiDAR probe uses laser induction technology for distance measurement.

The LDS40-LB can be applied to scenarios such as horizontal distance measurement, parking management system, object proximity and presence detection, intelligent trash can management system, robot obstacle avoidance, automatic control, sewer, etc.

It detects **the distance between the measured object and the sensor**, and uploads the value via wireless to LoRaWAN IoT Server.

The LoRa wireless technology used in LDS40-LB allows device to send data and reach extremely long ranges at low data-rates. It provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption.

LDS40-LB **supports BLE configure and wireless OTA update** which make user easy to use.

LDS40-LB is powered by **8500mAh Li-SOCI2 battery**, it is designed for long term use up to 5 years.

Each LDS40-LB is pre-load with a set of unique keys for LoRaWAN registrations, register these keys to local LoRaWAN server and it will auto connect after power on.

## Features:

- LoRaWAN 1.0.3 Class A
- Bands: CN470/EU433/KR920/US915/EU868/AS923/AU915/IN865
- Ultra-low power consumption
- Laser technology for distance detection
- Measure Distance: 0.1m ~ 40m @ 90% Reflectivity; 0.1m ~ 13.5m @ 10% Reflectivity
- Monitor Battery Level
- Ambient light immunity: 100klux
- Distance resolution : 1cm
- Central wavelength : 850nm
- FOV : 3°
- Enclosure rating : IP65
- Support Bluetooth v5.1 and LoRaWAN remote configure
- Support wireless OTA update firmware
- AT Commands to change parameters
- Downlink to change configure
- 8500mAh Battery for long term use

## Specifications:

### Common DC Characteristics:

- Supply Voltage: 2.5v ~ 3.6v
- Operating Temperature: -40 ~ 85°C

### LoRa Spec:

- Frequency Range, Band 1 (HF): 862 ~ 1020 Mhz, Band 2 (LF): 410 ~ 528 Mhz
- Max +22 dBm constant RF output vs.
- RX sensitivity: down to -139 dBm.
- Excellent blocking immunity.

### Battery:

- Li/SOCI2 un-chargeable battery
- Capacity: 8500mAh
- Self-Discharge: <1% / Year @ 25°C
- Max continuously current: 130mA
- Max boost current: 2A, 1 second

### Power Consumption:

- Sleep Mode: 5uA @ 3.3v
- LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm

## Order Info: LDS40-LB-XX

### XX: The default frequency band

- XX: Frequency Bands, options: EU433, CN470, EU868, IN865, KR920, AS923, AU915, US915

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