

# TF-LC02 LiDAR Module

## Introduction & Features

TF-LC02 is a high-precision ranging LiDAR module, based on ToF principle and built in TDC (Time-to-digital Converter) architecture, mainly used for different kinds of robots including vacuum cleaning robot, drone and intelligent household appliances. This product is easy to operate and install. It supports UART communication.

## Main Application Scenarios

- Intelligent household appliances
- Home robot
- Other consumer products

## Performance parameters

## Others

Operating range	3cm~200cm @ 90% reflectivity <sup>1</sup>	Storage temperature	-20°C~85°C
Data acquisition time	33msec	Operating temperature	-20°C~70°C
Accuracy <sup>1</sup>	±2cm @ (3cm~100cm); ±5% @ (100~200cm)	Dimension	20mm*11.5mm*7.6mm(L *W*H)

## Optical parameters

## Electrical parameters

Light source	VCSEL	Supply voltage	3~3.6V
Central wavelength	940nm	Average current	≤15mA
Photobiological safety	Class1 (IEC60825-1:2400)	Power consumption	≤50mW
FoV	±9° <sup>2</sup>	Communication signal level	LVTTL (3.3V)

*\*Warning : This product is recommended to be used in indoor, direct sunlight will cause performance degradation.*

## Appearance & Dimension

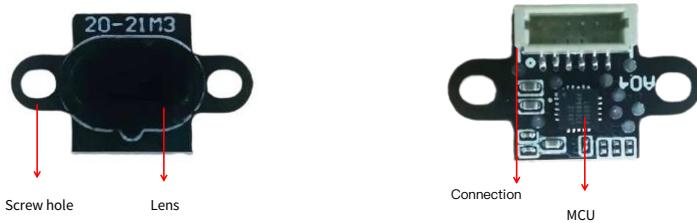


Figure 1 TF-LC02 appearance diagram

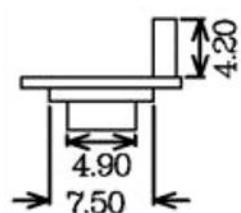
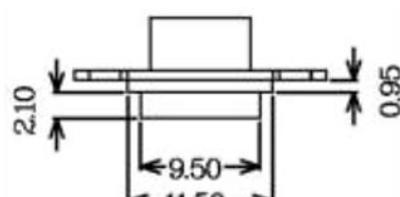
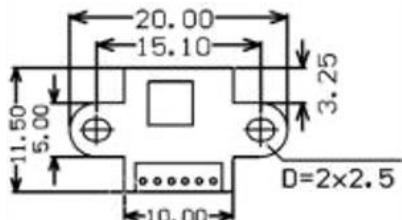


Figure 2 TF-LC02 dimensions (Unit: mm)

## Installation & Usage

1. Ensure that the installation environment is clean, and the module lens is kept clean of dust or any other particles;
2. Keep the module lens clean during the usage, remove any dust, water drops and other contaminants with cotton in time;
3. Do not touch the circuit board with your hands, wear anti-static gloves or anti-static wrist strap for operation;
4. Any kind of debris between the module lens and the mounting surface may block the optical path and affect the measurement performance;
5. Tighten the screws to ensure that the product do not slide, ensure that the module lens is horizontal.

*\*This product is designed for consumer product, is not applicable to high reliability and high security scenarios. Please read the datasheet and manual carefully before using.*

<sup>1</sup> White board (90% reflectivity) at 25°C;

<sup>2</sup> This is a theoretical reference value.