

TF40-S LiDAR Module

TF40-S is a high-precision ranging LiDAR module, and the range is up to 40m. The precision can be mm level.

Product features

- Highly Precision
- Small Size
- Small FoV
- Visible Light

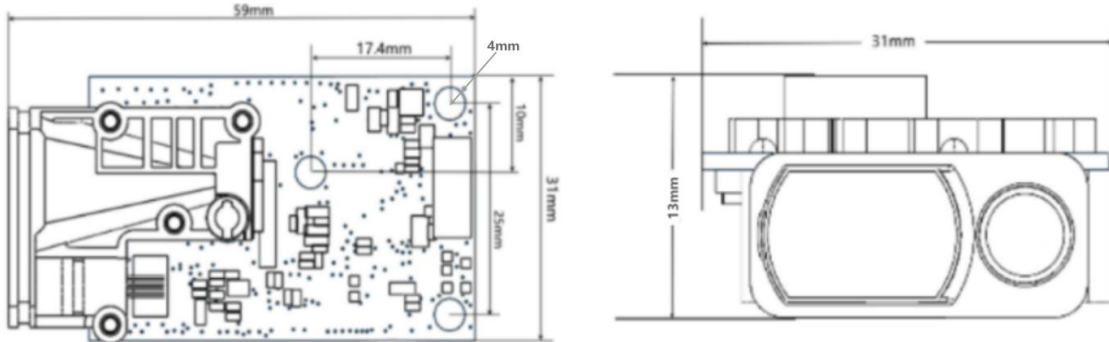
Application Scenarios

- Focus Assist
- Intrusion Detection



Performance Parameters	
Range	0.05-40m@90% Reflectivity ¹ 0.05-20m@10% Reflectivity ²
Accuracy ³	±2mm
Resolution	1mm
Frame rate	5Hz
Repeatability	1 σ : <2mm
Working Temperature	-10~50°C
IP rate	/
Optical Parameters	
Light Source	LD
Central Wavelength	635nm
Eye Safety	CLASS 2 (EN 60825)
FoV ⁴	<1mrad
Electrical Parameters	
Power Supply	3.3V
Average current	≤180mA
Power Consumption	≤0.6W
Peak Current	≤180mA
Communication Level	LVTTL(3.3V)
Interface	UART
Others	
Dimension	31mm*59mm*13mm(L*W*H)
Storage Temperature	-30~70°C
Weight	10g±2g
Cable Length	10cm
Interface (UART)	
Default Baud-rate	9600
Data Bit	8
Stop Bit	1
Parity Check	None

Drawings:



Tolerance: $\pm 2\text{mm}$

Installation & Usage

1. Ensure that the installation environment is clean, and the module lens is kept clean of dust or any other particles;
2. Do not touch the circuit board with your hands, wear anti-static gloves or anti-static wrist strap for operation;
3. Any kind of debris between the module lens and the mounting surface may block the optical path and affect the measurement performance;
4. Tighten the screws to ensure that the product does not slide, ensure that the module lens is horizontal.
5. It should not be used in a strong vibration environment for a long time;
6. Keep the surface of the lens clean during use. If there is dust, dirt or water attached, clean it immediately with a cotton cloth.

**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.*

¹The range is tested under white board (90% reflectivity) at 25°C;

²The range is tested under black board (10% reflectivity) at 25°C;

³The accuracy is tested under white board (90% reflectivity) at 25°C; Changes in conditions may cause changes in measurements.

⁴This is a theoretical reference value.