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

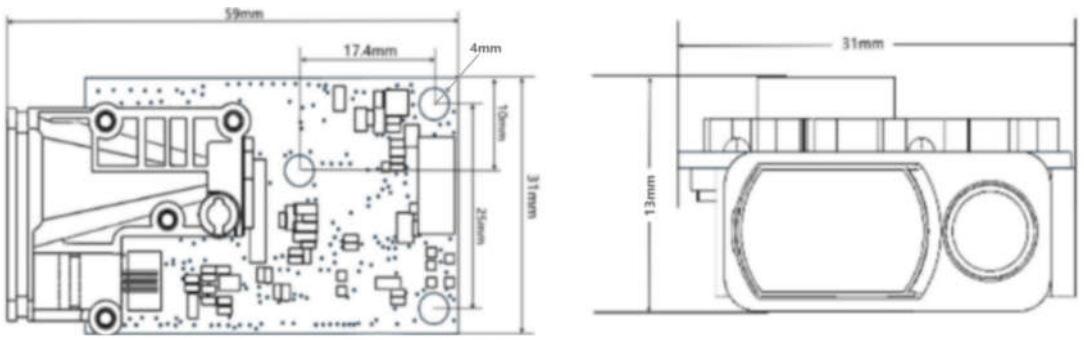
Application Scenarios

- Focus Assist
- Intrusion Detection

SPECIFICATIONS

Performance Parameters	
Range	0.05-40m@90% Reflectivity[1] 0.05-20m@10% Reflectivity[2]
Accuracy[3]	±2mm
Resolution	1mm
Frame rate	5Hz
Repeatability	1σ: <2mm
Working Temperature	-10~50℃
IP rate	/
Optical Parameters	
Light Source	LD
Central Wavelength	635nm
Eye Safety	CLASS 2（EN 60825）
FoV[4]	<1mrad
Electrical Parameters	
Power Supply	3.3V5
Average current	≤180mA
Power Consumption	≤0.6W
Peak Current	≤180mA
Communication Level	LVTTL(3.3V)5
Interface	UART
Others	
Dimension	31mm*59mm*13mm(L*W*H)
Storage Temperature	-30~70℃

Weight	10g±2g
Cable Length	10cm
Interface（UART）	
Default Baud-rate	9600
Data Bit	8
Stop Bit	1
Parity Check	None
Drawings	



公差：±2mm

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 wrest 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 do not slide, ensure that the module lens is horizontal.
5. It should not be used in 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 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.

[1] The range is tested under white board (90% reflectivity) at 25℃;

[2] The range is tested under black board (10% reflectivity) at 25℃;

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

[4] This is a theoretical reference value.

[5] TF40-S is not 5V voltage tolerant. While interfacing LiDAR with micro-controller, please make sure that your controller's driving voltage and logical voltage are both 3.3V.