TF02-Pro-W LiDAR

TF02-Pro-W is a single-point ranging LiDAR specially developed for level detection, equipped with a unique dust-removal wiper, which can automatically clean the lens of front panel of LiDAR. The product is based on the ToF (Time of Flight) principle and provides stable, accurate and reliable ranging performance by optimizing the optical system and utilizing built-in algorithms.

Main product features

- ✓ High range
- ✓ High frame rate
- ✓ Low power consumption
- ✓ Self-cleaning function

Main application scenarios

- ✓ Level Detection

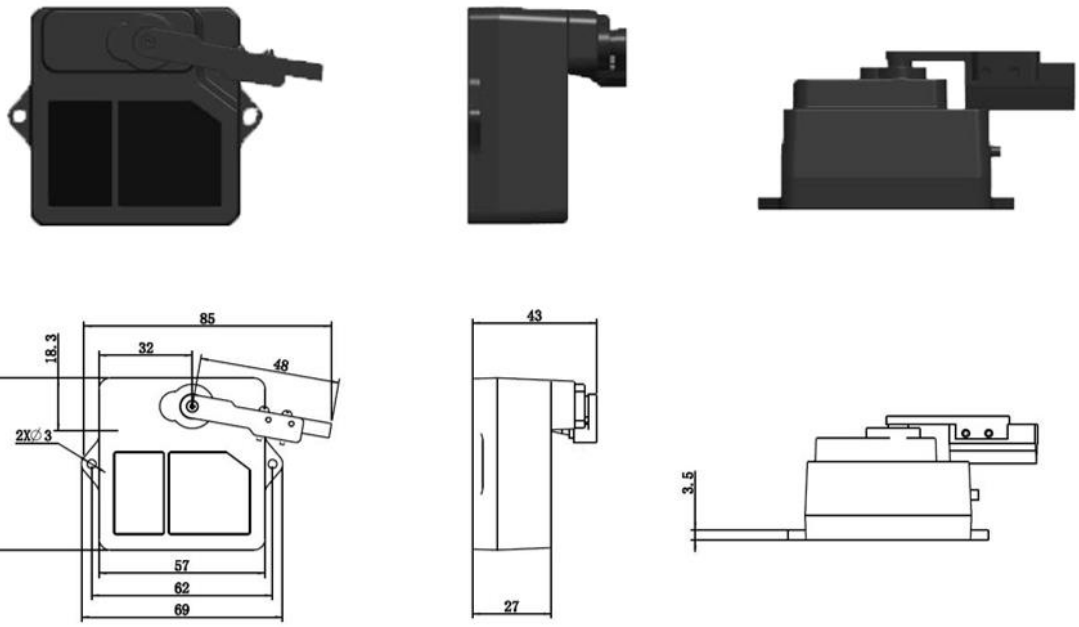
Product Performance		
Operating Range	Indoor 0Klux	Outdoor 100Klux
	0.1m~25m @90% reflectivity[1] 0.1m~12m@10% reflectivity[2]	0.1m~25m @90% reflectivity 0.1m~12m@10% reflectivity
Accuracy[3]	±6cm @ (0.1m~6m) ; ±1% @ (6m~25m)	
Distance resolution	1cm	
Frame rate	1Hz~1000Hz (adjustable, default100Hz) [4]	
Repeatability	1σ: ＜2cm (0.1m~25m@90% reflectivity)	
Ambient light immunity	100Klux	
Enclosure rating	IP5X	
Optical parameters		
Photobiological safety	Class 1 (IEC60825)	
Central wavelength	850nm	
Light source	VCSEL	
FoV	3°[5]	
Electrical parameters		
Supply voltage	DC 5V	
Average current	≤400mA	
Power consumption	≤2W	
Peak current	1A	
Communication level	LVTTL (3.3V)	
Others		
Dimension (L×H×W)	85mm×59mm×43mm	
Housing	PC/ABS	

Operating temperature	-20℃~60℃
Storage temperature	-30℃~80℃
Weight	90g (with cables)
Cable length	120cm

Communication interface

UART		I²C	
Default baud rate	115200 (adjustable)	Max transmission rate	400kbps
Data bit	8	Master/Slave mode	Slave
Stop bit	1	Default address	0x10
Parity	None	Address range	0x01~0x7F

Dimensions



1. The detection range is determined with the standard white board (90% reflectivity) at 25℃.
2. The detection range is determined with the standard black board (10% reflectivity) at 25℃.
3. The accuracy is measured with the standard white board (90% reflectivity) at 25℃.
4. The highest frame rate is 1000Hz, the customized frame rate should be calculated by the formula: 2000/n (n is an integer with ≥ 2).
5. The angle is a theoretical value, the actual angle value has some deviation.
6. Disclaimer: As our products are constantly improving and updating, the specifications of TF02-Pro-W are subjected to change. Please refer to the official website for the latest version.