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

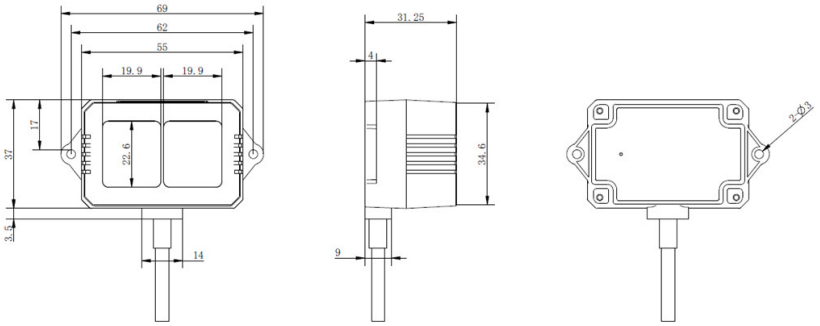
- High range
- High frame rate
- Low power consumption
- Self-cleaning function

Main application scenarios

- Level Detection

SPECIFICATIONS

Parameters		Typical Value	
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	
Optical parameters	Photobiological safety	Class 1 （IEC60825）	
	Central wavelength	850nm	
	Light source	VCSEL	
	FoV	3°[5]	

Parameters		Typical Value			
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.

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.