TFmini-i LiDAR

TFmini-i is an updated single-point ranging LiDAR based on TFmini-S. It has been optimized in communication interface and input voltage, making it satisfy different industrial applications. The product is based on the ToF (Time of Flight) principle and provides stable, accurate and reliable ranging performance.

Main product features

- ✓ Wide range input voltage
- ✓ CAN/RS-485 interface

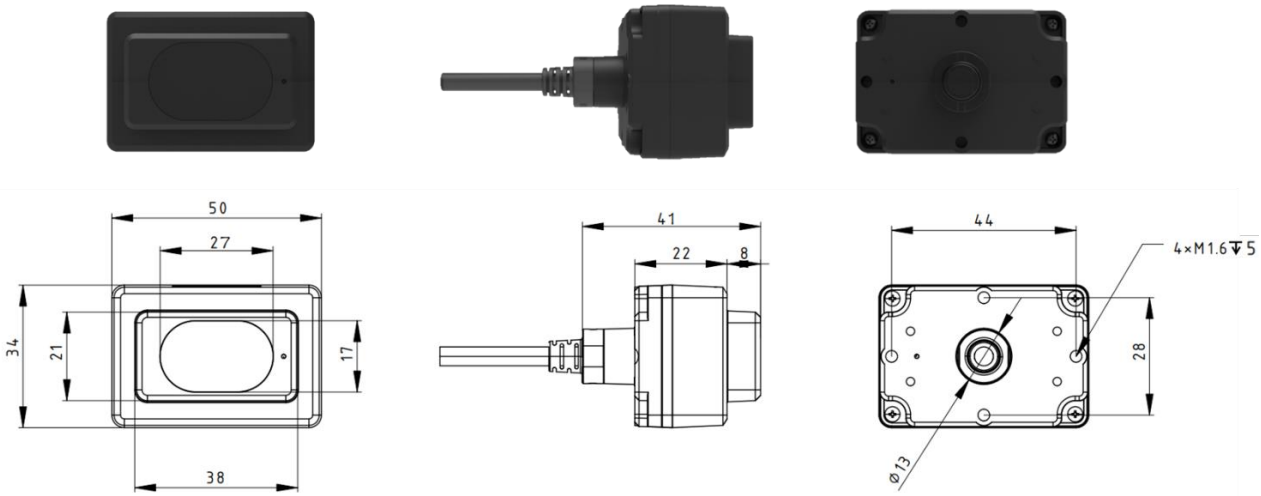
Main application scenarios

- ✓ Pedestrian detection
- ✓ Vehicle detection
- ✓ Altitude gauge
- ✓ Robot

Product Performance		
Operating Range	Indoor 0Klux	0.1m~12m @90% reflectivity[1]
		0.1m~7m@10% reflectivity[2]
	Outdoor 70Klux	0.1m~12m @90% reflectivity
		0.1m~7m@10% reflectivity
Accuracy[3]	±6cm @ (0.1m~6m) ; ±1% @ (6m~12m)	
Distance resolution	1cm	
Frame rate[4]	1Hz~100Hz (adjustable, default 100Hz)	
Ambient light immunity	70Klux	
Enclosure rating	IP65	
Optical parameters		
Photobiological safety	Class 1 (IEC60825)	
Central wavelength	850nm	
Light source	VCSEL	
FoV[5]	2°	
Electrical parameters		
Supply voltage	DC 7V~30V	
Average current	≤65mA @12V	
Power consumption	≤0.8W @12V	
Peak current	100mA@12V	
Others		
Dimension (L×H×W)	50mm×34mm×41mm	
Housing	ABS/PC/PMMA	
Operating temperature	-20℃~60℃	
Storage temperature	-30℃~75℃	
Weight	52g (with cables)	
Cable length	70cm(including 7P terminal) / 200cm(no terminal)	

Communication interface			
RS-485		CAN	
Interface parameters	Default value	Interface parameters	Default value
Baud rate	115200	Baud rate	250kbps
Data bit	8	Receiving ID	0x00000003
Stop bit	1	Transmitting ID	0x00000003
Parity	None	Frame Format	Standard frame

Dimensions[6]



1. The detection range is determined with the standard white board (90% reflectivity) at 25℃, changes in conditions may cause changes in measurement results.
2. The detection range is determined with the standard black board (10% reflectivity) at 25℃, changes in conditions may cause changes in measurement results.
3. The accuracy is measured with the standard white board (90% reflectivity) at 25℃, changes in conditions may cause changes in measurement results.
4. The highest frame rate is 100Hz, the customized frame rate should be calculated by the formula: 200/n (n is an integer with ≥ 2).
5. The angle is a theoretical value, the actual angle value has some deviation.
6. TFmini-i mounting holes are 5mm deep (non-through hole) with 4×φ1.6 holes on the back. Use M2 cross round head and flat tail self-tapping screws to install the holes
7. Disclaimer：As our products are constantly improving and updating, the specifications of TF02-i are subjected to change. Please refer to the official website for the latest version.