

TF02-Pro-W LiDAR (Mid-range distance sensor)

1. Product Description

TF02-Pro-W is a single-point ranging LiDAR based on TF02-W upgrade. The performance and accuracy of different reflectivity are improved, it can achieve stable, accuracy, sensitive and high frequency range detection.

Main features of product:

- The range up to 25 meters
- High frame rate(up to 1000Hz)
- Dust-removal function

Main applications:

- Material level measurement



2. Technical Specifications and Parameters

Table 1 Main characteristic parameters of TF02-Pro-W

Parameter Name		Value
Product performance	Operating Range	0.1~25m@90%reflectivity 0.1~12m@10%reflectivity 0.1~25m@90%reflectivity (100Klux) 0.1~12m@10%reflectivity (100Klux)
	Accuracy ¹	±6cm (0.1~6m) , ±1% (6~25m)
	Distance Resolution	1cm
	frame rate	100Hz
	Repeatability	1σ: < 2cm (0.1~25m@90% reflectivity)
	Ambient light resistance	100Klux
	Operation t temperature	-20~60°C
Optical Parameters	Protection Level	IP5X
	Light source	VCSEL
	Central wavelength	850nm
	FOV	3°
Electrical Parameters	Photobiological safety	Class 1 (EN60825)
	Supply voltage	DC 5V
	Average Current	≤400mA
	Power consumption	≤2W
	Peak Current	1A
	Communication level	LVTTL (3.3V)
Other Parameters	Communication interface	UART/I2C
	Dimensions	85x59x43mm (L*W*H)
	Weight	90g (with cables)
	Enclosure material	PC/ABS
	Storage temperature	-30~80°C
	Cable length	120cm

¹ Accuracy was calculated based on a standard white board with 90% reflectivity in indoor condition(25°C), changes in conditions may cause errors to increase.

3. Product Appearance and Structure

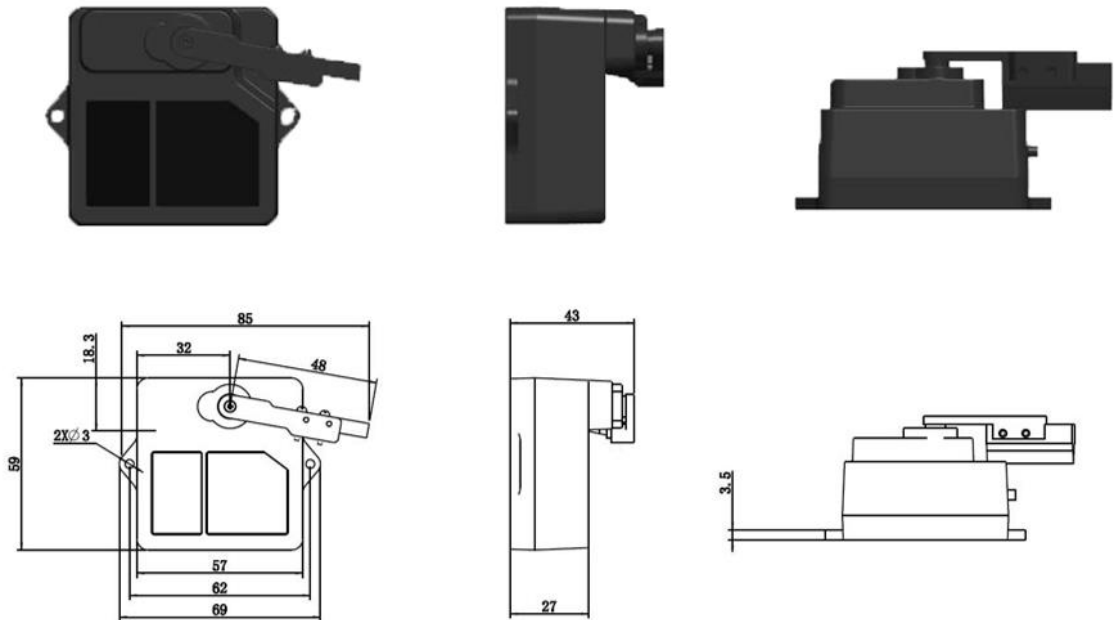


Figure 1 Dimension of TF02-Pro-W (Unit:mm)

4. Communication Interface

Table 2 Communication Interface--UART

Default Baud rate	115200
Data bits	8
Stop bit	1
Parity	None

5. Product Certification

