

Coupled with unique optical and electrical design, the product is based upon ToF (Time of Flight) and adopts 850nm infrared light source so as to measure distance with stability, precision, high sensitivity, and high speed.

The product is built with algorithms adapted to various application environments so as to offer excellent distance measurement performances with low cost and small size. The product adopts multiple adjustable configurations for flexible use by the client, which is better to satisfy the end-users' demand.



**Main product features** ●Small size ●Light weight ●Low power consumption

**Main application scenario** ●Pedestrian detection ●Vehicle detection ●Intelligent barrier gate

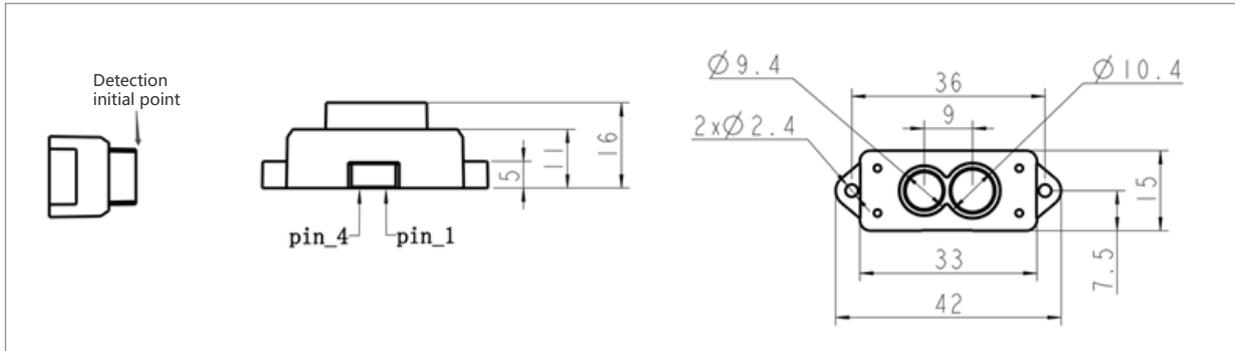
### ■ Technical Specifications and Parameters

	Description	Parameter value
Product performance	Operating range	0.3m~12m <sup>①</sup>
	Accuracy	±6cm@ (0.3m-6m) <sup>②</sup>
		±1%@ (6m-12m) <sup>③</sup>
	Distance resolution	1cm
	Frame rate	100Hz
	Default unit of distance output	cm
	Ambient light immunity	70klux
	Operation temperature	0~60°C
Enclosure rating	/	
Optical parameters	Light source	LED
	Central wavelength	850nm
	Photobiological safety	Exemption level(EN62471)
	FOV	2.3°
Electrical parameters	Supply voltage	5V±0.1V
	Average current	≤140mA
	Power consumption	≤0.7W
	Peak current	800mA
	Communication level	LVTTL (3.3V)
	Communication interface	UART
Others	Dimension	42mm*15mm*16mm(L*W*H)
	Housing	ABS+PC
	Weight	5g±0.3g
	Storage temperature	-20°C~75°C
	Cable length	10cm

Note: ① Range based on the indoor test with the standard white board (90% reflectivity) at 25°C as the detection object;

② ③Accuracy based on the indoor test with the standard white board (90% reflectivity) at 25 °C as the detection object.

### Product Appearance and Structure



TFmini dimensions (Unit: mm)

### Communication Interface

Communication interface	UART
Default baud rate	115200 (adjustable)
Data bit	8
Stop bit	1
Parity check	None

### Configurable parameters

Before modifying the product configuration, need to enter configuration mode(42 57 02 00 00 00 01 02), and then do the relevant configuration commands in Table 4. After completing the configuration, quit the configuration mode (42 57 02 00 00 00 00 02).

Configurable items	Description	Default
Protocol format	Support multiple formats of output,9Bytes(cm), 9Bytes(mm),“Pixhawk” etc.	9Bytes(cm)
Exclude threshold of Strength	When the strength is lower than the minimum threshold, the output is -1	Default minimum threshold:20
Frame rate	Up to 100Hz, that is, 10ms output once.	100Hz
Detection Pattern	Automatic detection pattern/Fix detection pattern	Automatic detection pattern
Range limit	Threshold of ranging limit (mm),by Maxrange-Mode and BlindMode setting	Maxrange:12000mm; Blind:300mm
Baud rate	Support baud rate setting of 9600-2000000	115200
Trigger sources	Automatic operating and trigger operating can be set	Automatic operating
Restore factory settings	Restore all configurations to factory configuration	/

Note: More configuration parameters and command could be found in the production manual.

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Product Certification