



TFmini S LiDAR module - Short-Range ToF LIDAR Range Finder

SKU 101990620

TFmini S LiDAR module - Short-Range ToF LIDAR Range Finder is a distance sensor of LIDAR which can emit near-infrared ray and measure the phase difference between the emitting ray and reflected ray to calculate the distance through ToF.

Key Features

- High Sensitivity: Emits near-infrared ray and catches the reflected ray which can give the response in a short time.
- High Precision: ToF method is used to calculate the phase difference between the emitting and reflected rays to measure the distance. The accuracy is $\pm 6\text{cm}$ for 0.1-6m range and $\pm 1\%$ for the 6m-12m range.
- Selectable Interface: I2C and UART interface for developers to choose from.

Description

TFmini S LiDAR module - Short-Range ToF LIDAR Range Finder is a distance sensor of LIDAR which can emit near-infrared ray and measure the phase difference between the emitting ray and reflected ray to calculate the distance through ToF. Because of the LIDAR principle, it is hard to give an accurate distance between the transparent objects like water or glass. However, it is still a sensitive distance sensor in measuring the moving object and calculate the distance between the object and TFmini in real-time.

This distance sensor leaves I2C and UART interface for developers and you can simply plug TFmini through the TTL to USB converter to the PC and get the distance data on your computer.

As for the software, there is a test software upper computer software of TFmini that you can download to observe the distance changing when the object is moving in real-time. If you want to view more details, please click the link - datasheet.

Specification

Name of parameter		Values
Product performance	Operating range	0.1m~12m@90% reflectivity
	Accuracy	±6cm@ (0.1-6m)±1%@ (6m-12m)
	Distance resolution	5mm
	Frame rate	100Hz
	Ambient light immunity	70 Klux
	Operation temperature	0°C~60°C
Optical parameters	Light source	VCSEL
	Central wavelength	850nm
	Photobiological safety	Class1 (IEC60825)
	FOV	2°

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 / I2C
Others	Housing	ABS+PC
	Storage temperature	-20°C~75°C
	Cable length	30cm
	Weight	12g
	Dimension	42mm*15mm*16mm (L*W*H)

Part List

1x TFmini S LiDAR module - Short-Range ToF LIDAR Range Finder

1x JST GH1.25 - 4P cable (Both two sides are JST GH1.25 - 4P interfaces)

1x JST GH1.25 - 4P cable (One side for JST GH1.25 - 4P interface and the other side for 4 Dupont Line male type)

ECCN/HTS

HSCODE	9031900090
UPC	

