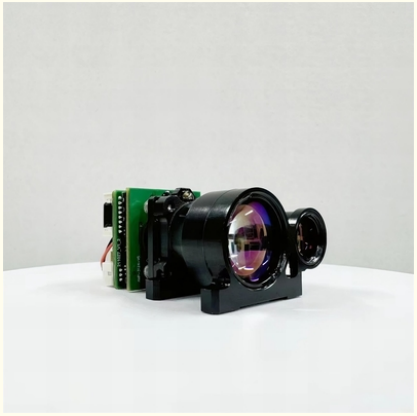
Laser Displacement Measurement Sensor 1535nm Laser Ranging Technology Industrial, Laser Distance Measurement

Our Product Introduction

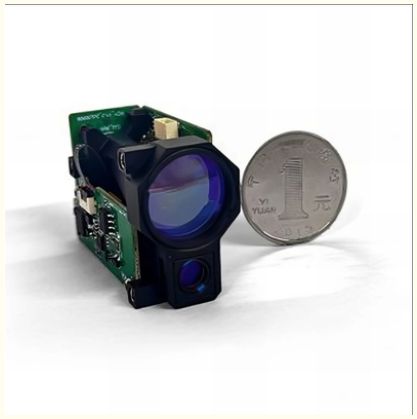
Basic Information

- Place of Origin: SHENZHEN
- Brand Name: FOVA
- Certification: CE;FCC
- Model Number: YZT-CJ-0510A
- Minimum Order Quantity: 10
- Packaging Details: 27X22X17cm
- Delivery Time: 7-15days
- Payment Terms: T/T
- Supply Ability: 10000PCS/Month



Product Specification

- Ranging Accuracy: ±2m
- Warranty Years: 1 Year
- Waterproof Rating: IP54
- Frequency: 1 Hz
- Power: Low Power Consumption
- Software Compatibility: Windows, Linux, MacOS
- Laser Type: Class 1M, 905nm
- Beam Divergence: 1 Mrad
- Function: Measuring Distance
- Pulse Energy: Up To 10 MJ
- Battery Life: Up To 10,000 Measurements
- Pulse Duration: Less Than 10 Ns
- Interface: RS232/RS422
- Highlight: **laser displacement measurement sensor**, **laser displacement sensor**,



More Images

Product Description

Laser Range Finder Module,power supplaser rangefinder,1535nm Laser Rangefinder Laser Ranging Technology for Industrial,

YZT-CJ-0510A Laser Range Finder Module

Technical Specification

Overview

The YZT-CJ-0510A Laser Rangefinder is an eye-safe laser rangefinder within the optoelectronic system, capable of detecting target distances and transmitting the measured distance to the host computer via serial communication.

Structural Composition and Main Performance Indicators

The YZT-CJ-0510A Laser Rangefinder consists of a laser, a transmission optical system, a reception optical system, and a control circuit. The main performance characteristics are as follows:

2.1 Ranging capacity

Visibility under visibility conditions is not less than 8km, diffuse reflectance ≥0.3, humidity ≤80%, the vehicle (2.3m×2.3m target) ranging distance ≥5km.

2.2 Function

a) single ranging and continuous ranging;
b) Range strobe, front and rear target indication;
c) Self-test function.

2.3 Performance

a. Wavelength: 1535nm±5nm;
b. Laser divergence Angle: ≤0.5mrad;
c. Continuous ranging frequency: 1~10Hz adjustable;
d. Ranging accuracy: ≤±2m (RMS);
e. Accuracy: ≥98%;
f. Minimum measuring range: ≤20m;
g. Ranging resolution: ≤30m (multi-target);
h. Power supply voltage: DC9V ~ 16V; (Customizable)
i. Weight: ≤55g;
j. Power: average power consumption ≤1.5W (1Hz operation), peak power consumption ≤5W;
k. Size: ≤55mm×41mm×26mm;
l. Working temperature: -40℃ ~ +60℃;
m. Storage temperature: -50℃ ~ +70℃;

2.4 Interface

Communication Interface: RS422, 115200bps, wiring definition as shown in Table 1;

Table 1: Wiring Definition for 8P Socket

Serial No.	Definition	wire color	Remarks
1	RS422 RX+	Brown	RS422 Receive (+)
2	RS422 RX-	Blue	RS422 Receive (-)
3	RS422 TX-	Yellow	RS422 Transmit (-)
4	RS422 TX+	Purple	RS422 Transmit (+)
5	GND	White	Communication Interface Ground
6	+12V	Red	Power Supply
7	GND	Black	Power Supply Ground
8	Reserved	Blank	Reserved

2.5 Dimension

For detailed information, please refer to the product's three-dimensional envelope and assembly drawing.

User Precautions

The laser emitted by this rangefinder is 1535nm, which is safe for human eyes. Although it is an eye-safe wavelength, it is advised not to look directly into the laser.
When adjusting the parallelism of the optical axis, be sure to cover the receiving lens to avoid permanent damage to the detector due to excessively strong echoes.
This rangefinder module is not airtight. Ensure that the relative humidity of the environment is below 80% and maintain a clean and sanitary environment to prevent damage to the laser.

The range of the rangefinder is related to atmospheric visibility and the nature of the target. Range will be reduced in fog, rain, and sandstorms. Targets like green tree clusters, white walls, and exposed limestone have better reflectivity and can increase range. Additionally, increasing the angle of the laser beam to the target will reduce the range.
Do not emit lasers at highly reflective targets such as glass or white walls within 20 meters to avoid echo overstrength and damage to the APD detector.

Do not plug or unplug cables while the device is powered on.
Ensure the correct polarity of the power supply connection to avoid permanent damage to the equipment.

Shenzhen FOVA Technology Co.,Ltd

+86 19806733949 allenxiao1003@gmail.com fovapower.com

23F, Building B, Fujian Building, No. 2048 Caitian Road, Fushan Community, Futian Street, Futian District, Shenzhen