



15km Laser Range Finder Module

JIOPTICS® laser range finder module machine is designed for aircraft, tanks, aircraft guns and other application scenarios of the military pulse laser range finder machine, has a small size, light weight, low power consumption, long action distance, long service life, human eye safety working band and other advantages, is an important technical equipment to improve the product aiming accuracy.

Ranging range: visibility not less than 10km, for vehicle (2.3m X 2.3m target), 0.3 diffuse reflectivity, ranging distance 8000m; visibility not less than 20km, for vehicle (2.3m X 2.3m target), 0.3 large diffuse reflectivity target, ranging distance 15000m, Welcome to buy 15km Laser Range Finder Module from us.

JIOPTICS® 15km Laser Range Finder Module Parameters

Main functions: The main functions of the laser ranging measuring machine are:

- a) Single ranging and continuous ranging;
- b) Three target ranging and before and after the target instructions;
- c) Self-inspection function (including: current APD temperature, high voltage value, internal voltage, blind area value);
- d) Standstandby wake up function can be modified to TTL interface.

Performance

- a) Wavelth range: $1.54\mu\text{m} \pm 0.02\mu\text{m}$
- b) Minimum action distance: 30m;
- c) Effective passage pore diameter: 40mm;
- d) Continuous range measuring frequency: 0.5Hz-10Hz;
- e) Distance measurement accuracy: $\pm 2\text{m}$;
- f) Qutest rate:> 98%.

2 Environmental adaptability

- a) Working environment temperature: $-40\text{C} + 65\text{C}$;
- b) Storage ambient temperature: $-55\text{C} + 70\text{C}$.

3 Reliability

Average number of laser pulses (MNBF) 3IX IO. Time

4 Electrical characteristics

- a) Power supply voltage: DC12V;
- b) Power consumption: the average power consumption is not greater than 2W.

5.Weight: $\leq 150g$

6.Size: 64X42X80mm

7.OEM/ODM ranging modules and custom solutions

The STA0815 is designed for system integrators looking for a convenient, powerful and compact laser ranging solution. It provides reliable performance in a wide range of applications.

It is very small, ultra-light, has low power consumption and can be measured over a long distance. It is suitable for handheld devices (thermal imaging), weapon mounting applications, portable systems and lightweight sensor suites and unmanned aerial vehicles or UGVs.

8.Electrical interface

Electrical connector model: J30J; the detailed definition of electrical interface is as follows:

Pipe foot serial number	definition	function	remarks
1	GND	the earth	
2	GND	the earth	
3	GND	the earth	
4	VCC 12V	At 12V, the input is positive	revisability
5	VCC 12V	At 12V, the input is positive	revisability
6	RS422 RX+	Serial mouth receiving +	Upper computer to range finder
7	RS422 RX-	Serial Receiver-	Upper computer to range finder
8	RS422 TX-	String mouth send oneself can	Range finder to upper computer
9	RS422 TX+	Serial port send +	Range finder to upper computer

Communication protocol

Data transfer between the range finder and the upper computer includes the following:

Control command: including start ranging, continuous ranging, single ranging, query command, etc.

Return data: including distance information, ambient temperature, rangefinder state, etc. Data

exchange between range finder and upper computer, using 422 bus. The specific software communication protocol is shown as follows:

Communication format: RS422 communication, port rate of 115200bps (which can be changed according to customer requirements);

Data format: 8-digit data, a start bit, one stop bit, no parity, data is composed of header byte, command part, data length, parameter part, check byte;.

Communication mode: the main control and range finder adopt the main-slave communication mode, and the main control sends the range finder a control command, which receives and performs the instruction. In the ranging state, the data and status of the ranging returned according to the ranging cycle. The communication format and command content are shown in the following table.

Main control send The message format is as follows:

Table 2. Description of sending the message format

order number	name	explain	code	remarks
1	STXO	The message began to mark	55(H)	
2	CMD	CW	See Table 3	
3	LEN	DL	Number of all characters except start flag, command word and check	
4	DATAH	paramete		
5	DATAL			
6	CHK	Different or verification	In addition to the effect bytes, other bytes different or	