



# OTL-JDIIV7 Laser Rangefinder

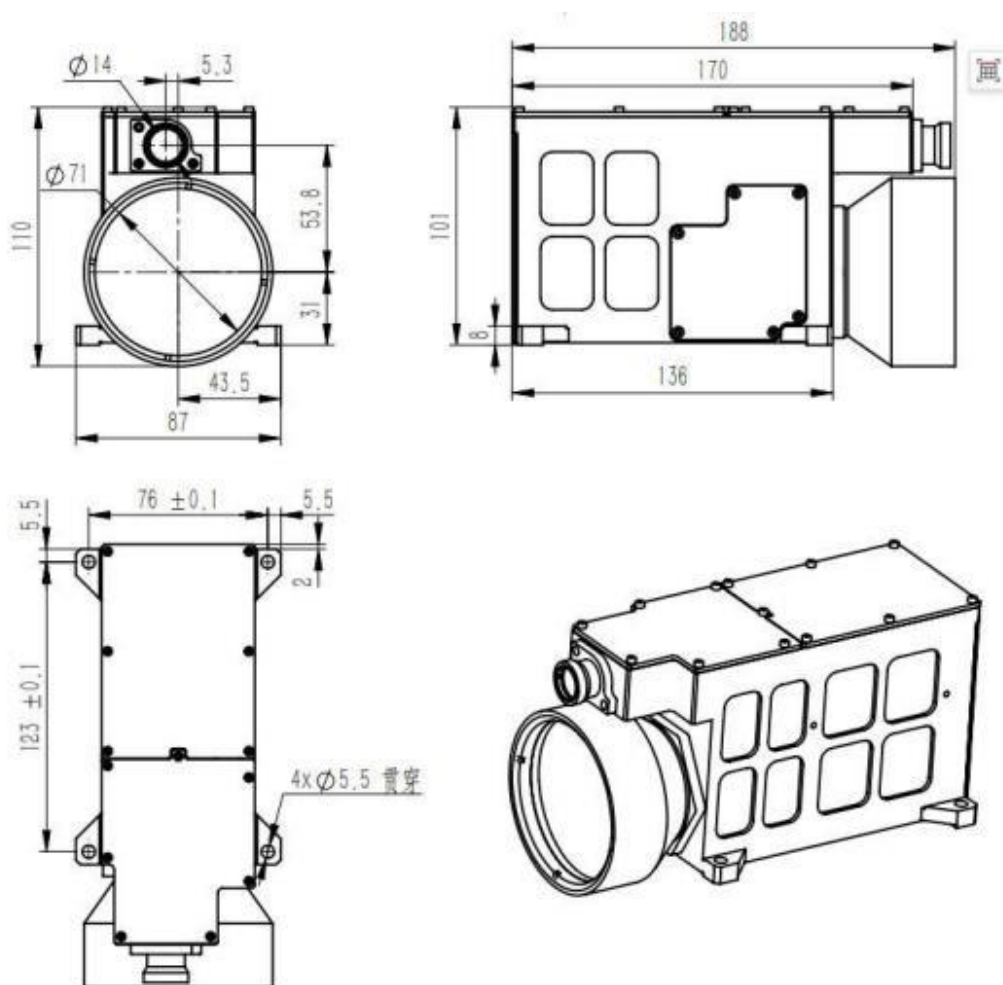
High-Precision · Long-Range · Reliable Performance



DATASHEET

## OTL-JDIIV7 Laser Rangefinder

The JDIIV7 laser rangefinder is a critical component of the integrated photoelectric reconnaissance and surveillance system. It can be deployed alongside the system for all-weather operation to acquire distance data regarding targets.



PRODUCT OVERVIEW

The OTL - JDIIV7 laser rangefinder is a critical component of the integrated photoelectric reconnaissance and surveillance system; it can be deployed alongside the system for all-weather operation to acquire distance data regarding targets.

PRODUCT COMPOSITION

- A laser
- A laser transmitting antenna
- A laser receiving antenna
- A signal acquisition and processing system
- A control unit
- An interface circuit

KEY FEATURES

- Laser wavelength: 1535 nm
- Maximum range: ≥ 30 km
- Minimum measurement range: ≤ 100 m
- Range measurement accuracy: better than 2 m
- Accuracy: ≥ 98%
- Maximum operating frequency: 5 Hz

ENVIRONMENTAL SPECIFICATIONS

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Operating temperature | -40 °C to +60 °C                                                                                |
| Vibration             | Specified in "Class 4 — Trucks/Trailers/Tracked vehicles — Securing cargo" of GJB150-A.16-2009. |

TECHNICAL SPECIFICATIONS

|                             |                                                             |
|-----------------------------|-------------------------------------------------------------|
| Product model               | OTL - JDIIV7                                                |
| Product name                | Laser Rangefinder                                           |
| Laser wavelength            | 1535 nm                                                     |
| Maximum range               | ≥ 30 km                                                     |
| Minimum measurement range   | ≤ 100 m                                                     |
| Range measurement accuracy  | Better than 2 m                                             |
| Accuracy                    | ≥ 98%                                                       |
| Laser beam divergence angle | 0.6 ± 0.1 mrad                                              |
| Maximum operating frequency | 5 Hz                                                        |
| Operating times             | 30 min @ 1 Hz, interval 2 min; 5 min @ 5 Hz, interval 2 min |
| Total weight                | ~ 1500 g (excluding the scope fixture)                      |
| Overall dimensions          | ≤ 188 × 87 × 110 mm³ (excluding the sight fixture)          |
| Power supply voltage        | 12 ± 2 VDC                                                  |
| Average power consumption   | ≤ 20 W                                                      |
| Peak power consumption      | ≤ 30 W                                                      |
| Standby power consumption   | ≤ 5 W                                                       |

SERVICE LIFE & WARRANTY

Either 100,000 cycles or 15 months, whichever occurs first, shall mark the end of the warranty period.

STANDARD ACCESSORIES

|                                       |        |
|---------------------------------------|--------|
| Electrical connector (J30J-15TJL-300) | 1 unit |
| Sighting device fixtures              | 1 set  |
| Lens caps                             | 1 set  |

APPLICATIONS — ADDED TEXT

- Integration into photoelectric reconnaissance and surveillance systems
- Distance measurement for targets within the specified measurement range
- Use as part of a compatible integrated system

RED HIGHLIGHT = added explanatory/application text for review before publication.

EXPANDED PRODUCT INFORMATION — REVIEW ADDITIONS

Product Role and System Integration

The OTL - JDIIV7 is specified as a laser rangefinder intended to operate as part of an integrated photoelectric reconnaissance and surveillance system. Its stated role is to acquire distance data relating to targets and make that information available to the host system through the documented electrical and communication interface. System-level integration should follow the host platform's approved mechanical, electrical, and communication requirements.

Measurement Capability

The source specification lists a maximum measurement range of at least 30 km and a minimum measurement range of no more than 100 m. It also states range measurement accuracy better than 2 m and an accuracy figure of at least 98%. These figures should be presented together with their original wording and should not be interpreted as guarantees for every target, atmosphere, surface, or operating condition unless the manufacturer provides additional test conditions.

Laser and Optical Characteristics

The specified laser wavelength is 1535 nm, and the laser beam divergence angle is 0.6 ± 0.1 mrad. These are core optical parameters of the product and are useful for technical comparison and system-level planning. The source does not provide additional details such as pulse energy, receiver aperture, eye-safety classification, or target reflectivity assumptions; such details should be requested from the manufacturer if they are required for a project.

Operating Modes and Duty Cycle

The unit supports single measurement and continuous measurement commands through the communication protocol described in the source document. The listed operating profiles are 1 Hz for up to 30 minutes followed by a 2-minute interval, and 5 Hz for up to 5 minutes followed by a 2-minute interval. These duty-cycle limits should be observed during system operation. The source also describes a command for stopping continuous operation.

### Electrical Power and Installation

The stated supply voltage is  $12 \pm 2$  VDC. Average power consumption is listed as no more than 20 W, peak power consumption as no more than 30 W, and standby power consumption as no more than 5 W. The unit's total weight is approximately 1500 g excluding the scope fixture, and the overall dimensions are no greater than  $188 \times 87 \times 110$  mm excluding the sight fixture. Mounting clearance and connector access should be checked against the actual product drawing before installation.

### Environmental Conditions

The operating temperature range specified in the source is  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ . The document also identifies a vibration test environment by reference to Class 4 in GJB150-A.16-2009. These entries should be quoted as written; they do not, by themselves, establish any additional ingress-protection rating, storage-temperature range, humidity limit, shock rating, or certification not expressly listed in the source.

### Communication and Host Control

The source describes a serial communication interface using a single connector for communication and power, with a baud rate of 9600 for the documented data frames. Output messages include a start marker, status information, target-distance bytes, and a terminator. Input commands are defined for single measurement, repeated measurement at the specified rates, and stopping repeated measurement. Integrators should verify the pin assignments, signal directions, and frame-length examples against the manufacturer's approved interface document before releasing a system design.

### Fault Reporting and Service Support

The protocol includes status information for several fault conditions, including signal-processing circuit failure, APD voltage failure, laser power-supply failure, no dominant wave, and no echo. These status indications can help a host system identify abnormal operation and guide troubleshooting. The exact response procedure, repair policy, and diagnostic workflow are not defined in the supplied source and should be confirmed with the manufacturer.

### Supplied Accessories

The accessories listed in the source are one electrical connector identified as J30J-15TJL-300, one set of sighting-device fixtures, and one set of lens caps. The source does not list optional cables, software, mounting brackets beyond the stated fixture set, or calibration tools. Any additional items required for a complete installation should be confirmed when ordering.

### Product Handling and Documentation

For reliable integration, retain the manufacturer's approved connector pinout, command protocol, external dimensions, and operating limits with the equipment documentation. Protect optical surfaces with the supplied lens caps when the unit is not in use, and avoid relying on dimensions or mounting assumptions that have not been confirmed against the final hardware revision. These are general handling recommendations and should be reviewed against the manufacturer's instructions.

### Technical Information to Confirm Before Publication

Before publishing a final catalog, request confirmation from the manufacturer for the exact connector pinout and TX/RX signal directions, the stated output-frame length versus the fault-frame example, any laser safety classification, any formal environmental certifications, and the test conditions underlying the stated accuracy. These details are not fully established by the supplied source and must not be presented as confirmed specifications until verified.

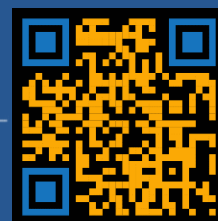


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