



# TACTICAL WEARABLE LASER WARNING SYSTEM

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In an ever-evolving landscape of modern warfare and security challenges, the TWL-200 Wearable Laser Warning System stands as a pinnacle of innovation, designed to ensure the safety and effectiveness of military personnel in laser-threat environments. This advanced system offers real-time laser detection, directional alerts, and a suite of cutting-edge features that empower users with unmatched situational awareness. In this document, we provide comprehensive details on the specifications and performance metrics that make the TWL-200 an indispensable asset for military operations.

## Laser Detection

- Response Time: < 200 milliseconds.
- Wavelength Coverage: 700 to 1700 nanometers.
- Pulse Repetition Frequency (PRF) Detection: DC to 1 Mhz.
- Minimum Detectable Energy: 500 microwatts per square centimeter.

## Laser Types and Corresponding Wavelengths

**Guidance Lasers:** The TWL-200 can detect various guidance lasers used in military applications, including:

- 532 nanometers (green laser)
- 1064 nanometers
- 1300 nanometers
- 1550 nanometers

**Range-Finding Lasers:** The system is capable of identifying range-finding lasers operating within the wavelength range of 700 to 1700 nanometers.

## Physical Dimensions

- Width: 58±2 mm (2.28 inches)
- Height: 44±2 mm (1.73 inches)
- Length: 97±2 mm (3.82 inches)
- Weight: 220 grams (7.76 ounces)

## Power and Battery

- Power Source: Rechargeable and replaceable CR-123A / 16340 battery.
- Battery Weight: < 4.8 ounces
- Continuous Operation: Up to 72 hours.

## Field of View

- Horizontal Field of View: Up to 220°.
- Vertical Field of View: Up to 110°.
- Azimuth Detection: Up to 360°.

## Environmental Resilience

Ingress Protection Rating: IP69K (Submersible).

Drop Resistance: Up to 2 meters (6.56 feet).

## Audio and Vibration Modes

- Adjustable Volume Levels:
  - Low: 80 dBA
  - Medium: 90 dBA
  - High: 105 dBA
- Mode Options: Sound mode, vibration mode, and sound and vibration modes together.

## Log Capability

- Log Storage: Up to 500 detections.

## Long Battery Life

- Extended battery life allows for continuous operation without frequent recharging.

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## Key Performance Metrics

### Detection Sensitivity

- Rapid detection of laser threats, including guidance or range-finding lasers.
- Accurate identification of laser sources with minimal false alarms.

### Directional Alerts

- Real-time audio and/or vibration alerts indicating threat location (e.g., "threat detected on far left side").
- Enhanced situational awareness for immediate response.

### Battery Efficiency

- Up to 72 hours of continuous operation, reducing the need for frequent recharging.
- Power-efficient design for prolonged field use.

### Integration and Compatibility

- Seamless integration with existing military headgear.
- Advanced Friendly and Foe Detection Algorithms:
- Incorporates algorithms for differentiating between friendly and hostile laser sources.
- Utilizes PRF passcodes to enhance identification and security.

### Security Measures

Enemy-disabling function safeguards sensitive technology from potential misuse.

### Conclusion

The TWL-200 Wearable Laser Warning System offers not only advanced laser detection capabilities but also precise performance specifications that enhance user safety, situational awareness, and operational efficiency. With its compact design, long battery life, adjustable audio and vibration modes, and immunity to false alarms, it is the ideal choice for military personnel operating in laser-threat environments. The system's capability to detect various guidance and range-finding lasers, along with advanced algorithms for friendly and foe detection, further underscore its value in critical missions, ensuring user safety and mission success.