



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.

Key Technical Specifications

Laser Detection

- Response Time: < 200 milliseconds.
- Wavelength Coverage: 600 to 1600 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)

- 632 nanometers
- 1064 nanometers
- 1300 nanometers
- 1550 nanometers

Range-Finding Lasers: The system is capable of identifying range-finding lasers operating within the wavelength range of 600 to 1600 nanometers.

Physical Dimensions:

- Width: 58.2 mm
- Height: 44.2 mm
- Length: 97.2 mm
- Weight: 140 grams (3.53 ounces)

Power and Battery:

- Power Source: Rechargeable and replaceable CR-125 battery.
- Battery Weight: < 3.3 pounds.
- 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.

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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.

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.
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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.
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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.