**Diode-Pumped Eye-Safe Laser Range Finder**

**ABOUT L-3 ALST**

Part of L-3 Communications, a global leader in defense technologies and services, Advanced Laser Systems Technology (ALST) is an ISO 9001 certified full-service designer and manufacturer of military grade Eye-Safe Laser Range Finder, Laser Designator, and Multi-Function Laser Systems.

**PRODUCT OVERVIEW**

The Diode-Pumped Eye-Safe Laser Range Finder (DP-ELRF) II is a Class 1 eye-safe, long-range laser range finder with improvements that extend capabilities beyond L-3 ALST’s legacy flash-lamp product line. Improvements to laser beam divergence, laser boresight retention, system shot-life and receiver sensitivity result in superior product performance even in the most demanding operational environments. The improved DP-ELRF II maintains constant Class 1 eye-safe operation and ruggedized environmental hardening.

**FEATURES**

- Up to 20 km ranging capability
- 5 mJ nominal energy
- Diode-Pumped Erbium:Glass
- Pulse Repetition Frequency ≤ 2 Hz
- ≤ 450 μrad beam divergence
- Avalanche Photo Diode Detector (APD)
- ANSI-Z136.1-2007 and IEC 60825-1 Class 1 Eye-Safe
- Single connector interface for power and communication
Diode-Pumped Eye-Safe Laser Range Finder

SYSTEM
Max Range: See Figure 1
Min Range: 50 m
Transmitter Boresight Accuracy (relative to nominal emission axis): \( \leq 1.0 \) mrad / axis at ambient temperature
Boresight Retention over operating temperature (relative to initial factory alignment): \( \leq 100 \) µrad (all environments)
MTBF: 11,000 hours (uninhabited airborne cargo environment @ 40 °C - system powered and firing 25 % of time)
7,500 hours (composite wheeled environment @ 50 °C - system powered and firing 25 % of time)

LASER
Wavelength: 1535 nm ± 5
Class: Class 1 IAW ANSI-Z136.1-2007
Pulse Rate: \( \leq 2 \) Hz
Laser Shot Life: > 1,000,000 shots
Beam Divergence: Note: 1
Energy Output: Note: 1
Pulse Width: Note: 1

RECEIVER
Range Resolution: 1 m
Range Accuracy: 5 to 300 m Target 7 m 1σ
301 to 10,000 m Target Range: 4 m 1σ
Range Logic: First / Second / Last
Multi-target discrimination: \( \geq 25 \) m
Detector Type: Note: 1
Receiver Sensitivity: Note: 1

MECHANICAL
Weight: \( \leq 5.44 \) kg (2.0 lbs)
Dimensions: 188.0 mm (7.40 in.) X 88.4 mm (3.48 in.) X 72.4 mm (2.85 in.) (see Figure 2)
Environmental Enclosure: Open frame

ELECTRICAL
Communications Protocol: RS-232 Std (RS-422 and RS-485 available)
Input Voltage: 12 VDC to 32 VDC
Power Consumption: \( \leq 20 \) W

ENVIRONMENTAL
Operating Temperature: \(-40 \) °C (\(-40 \) °F) to \(+71 \) °C (\( +159.8 \) °F)
Environmental Standards: MIL-STD-810F and MIL-STD-461F

NOTE 1: These parameters, together and in combination with the atmospheric and target characteristics shown, provide the user with the achievable range performance shown in Figure 1.

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