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

**PRODUCT OVERVIEW**

The Diode-Pumped Eye-Safe Laser Range Finder (DP-ELRF) V employs the latest in range finding technology. Using a diode-pumped erbium: glass laser transmitter and a TE-cooled APD receiver, the DP-ELRF V provides high-pulse rate, low-input power requirements, and longer ranging pulses. The low-beam divergence and larger receiver aperture provide for more accurate ranging on smaller targets. Combined with the higher rep rates, the DP-ELRF V is an excellent long-range choice for fire control systems even for small targets, such as missiles while maintaining Class 1 or Class 3R eye safety.

**FEATURES**

- Up to 50 km ranging capability
- 3.2 mJ nominal energy
- Pulse repetition options of 1, 4, or 10 Hz
- TE-cooled Avalanche Photodiode Detector (APD)
- ANSI Z136.1-2007 Class 1 or Class 3R Eye-Safe
- Kinematic-mounting interface for reliable boresight retention
- Single-connector interface for power and communication

**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.
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): $\pm 200 \mu$rad / axis at ambient
MTBF: 1,500 hrs

**LASER**

Wavelength: 1535 nm ± 5
Class: Class 1 IAW ANSI-Z136.1-2007 or Class 3R
Pulse Rate: ≤ 4 Hz Continuous for no less than 20 minutes
Beam Divergence: Note: 1
Energy Output: Note: 1
Pulse Width: Note: 1

**BORESIGHT PROJECTOR**

Wavelength: Visible
Divergence: ≤ 1.0 mrad

**RECEIVER**

Range Resolution: 2 m
Range Accuracy: 50 to 300 m Target 7 m 1 σ
301 to 10,000 m Target Range: 4 m 1 σ
Range Logic: First / Second / Last
Multi-target discrimination: ≥ 25 m
Detector Type: Note: 1
Receiver Sensitivity: Note: 1

**MECHANICAL**

Weight: ≤ 5.22 kg (11.5 lbs)
Dimensions: 253 mm (9.96 in.) X 220.7 mm (8.69 in.) X 139.7 mm (5.50 in.) (see Figure 2)
Environmental Enclosure: Open frame

**ELECTRICAL**

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

**ENVIRONMENTAL**

Operating Temperature: -31 °C (-25 °F) to +60 °C (+140 °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.

Figure 1: DP-ELRF V
Ranging Performance Using Various Targets (FAR ≤ 0.1 %)

Figure 2

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