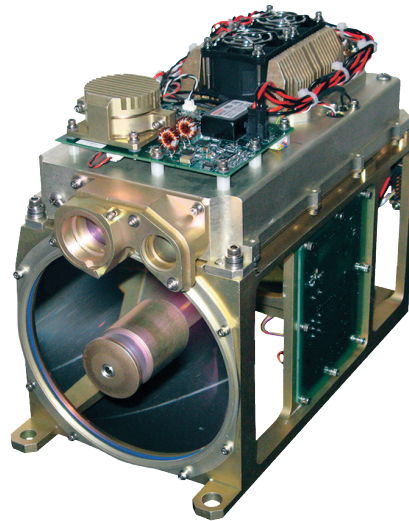


Diode-Pumped Eye-Safe Laser Range Finder

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) 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



Use of U.S. DoD visual information does not imply or constitute DoD endorsement.



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):	$\leq \pm 200 \mu\text{rad}$ / axis at ambient
MTBF:	1,500 hrs

LASER

Wavelength:	1535 nm $\pm$ 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

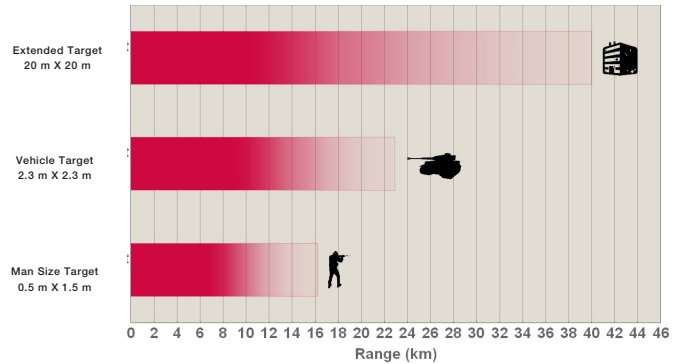
Communications Protocol:	RS-422 (RS-232 and RS-485 available)
Input Voltage:	12 VDC to 32 VDC
Power Consumption:	≤ 20 W

ENVIRONMENTAL

Operating Temperature:	-31 °C (-25 °F) to +60 °C (+140 °F)
Environmental Standards:	MIL-STD-810F and MIL-STD-461F

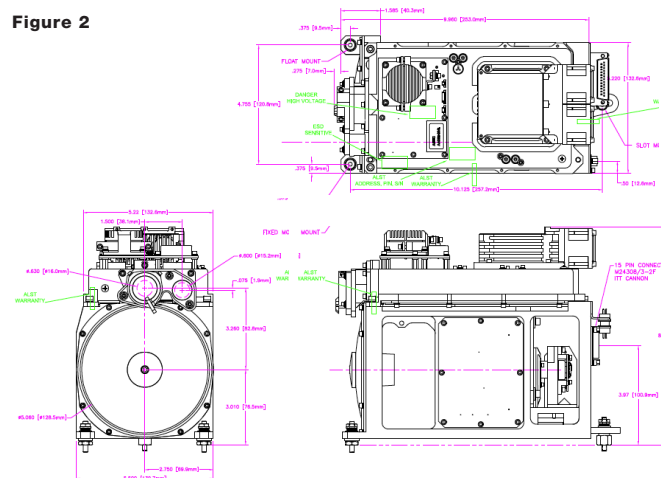
Figure 1: DP-ELRF V

Ranging Performance Using Various Targets (FAR ≤ 0.1 %)



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 2



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