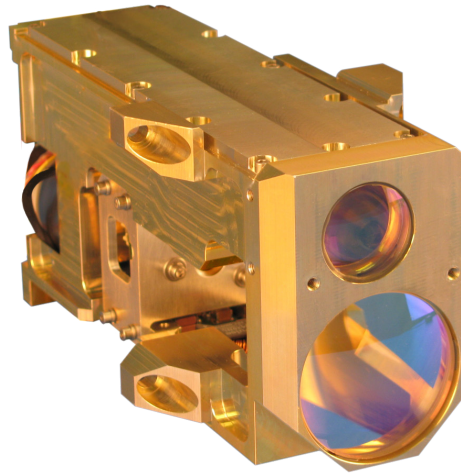


Diode-Pumped Eye-Safe Laser Range Finder

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.



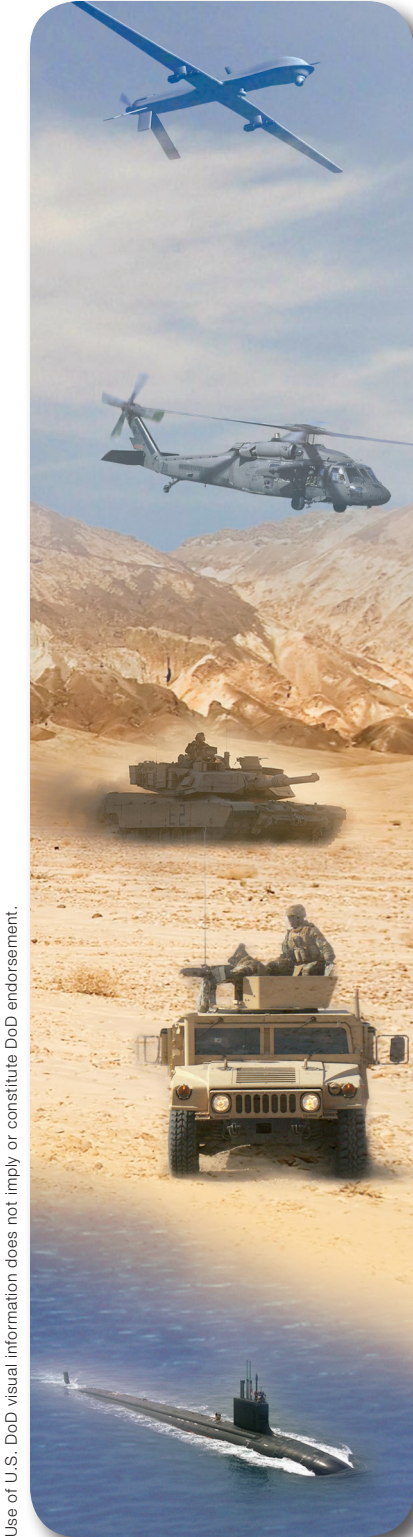
PRODUCT OVERVIEW

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 μ rad 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

INVISIBLE LASER RADIATION
CLASS 1 LASER PRODUCT



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):	$\leq \pm 1.0 \text{ mrad}$ / axis at ambient
Boresight Retention over operating temperature (relative to initial factory alignment):	$\leq \pm 100 \text{ } \mu\text{rad}$ (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:	≤ 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 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:	≤ 5.44 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

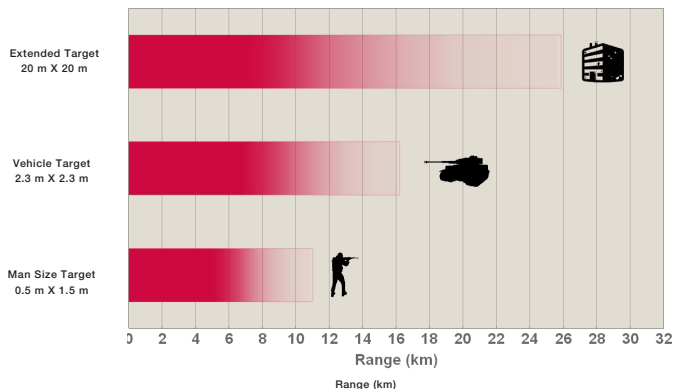
ELECTRICAL

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

ENVIRONMENTAL

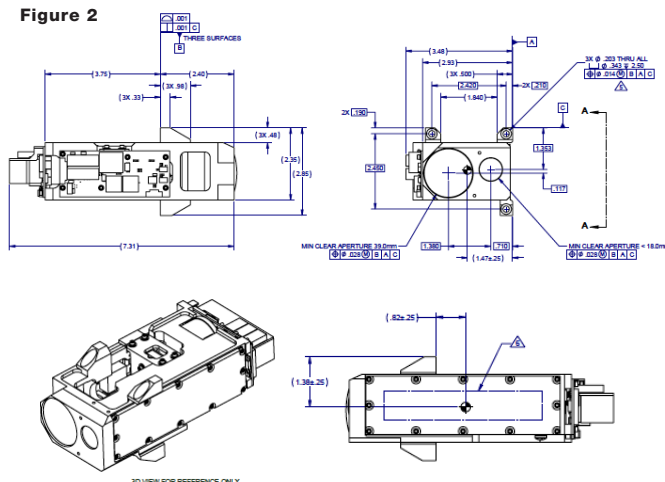
Operating Temperature:	-40 °C (-40 °F) to +71 °C (+159.8 °F)
Environmental Standards:	MIL-STD-810F and MIL-STD-461F

Figure 1: DP-ELRF II
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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Cleared by DoD/OSR for public release under 15-S-2564 on 9/21/15. Export of this product is regulated by the U.S. Department of State in accordance with guidelines of "International Traffic in Arms Regulations (ITAR)" per Title22, Code of Federal Regulations, Parts 120-130.

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