SELEX GALILEO

A Finmeccanica Company

TYPE 162 HIGH POWER ULTRA LIGHT-WEIGHT LASER DESIGNATOR (ULD-HP)

SELEX Galileo has invested in developing a new generation of athermal lasers to provide >80mJ per pulse STANAG 3733 and PIM capability in a family of light weight, compact products for man-portable, ground vehicle and UAV applications.

The development of this laser architecture has been based on meeting a variety of customer requirements to provide a compact lightweight platform for a family of laser products. By adopting a modular approach, a common laser resonator design can be used for the three distinct applications, whilst the surrounding electronics, non-core optics and general chassis definition are reconfigured to suit. This approach allows consistent performance over a wide range of environmental and operational conditions and the additional benefits of design and parts commonality for production.

LATEST LASER TECHNOLOGY

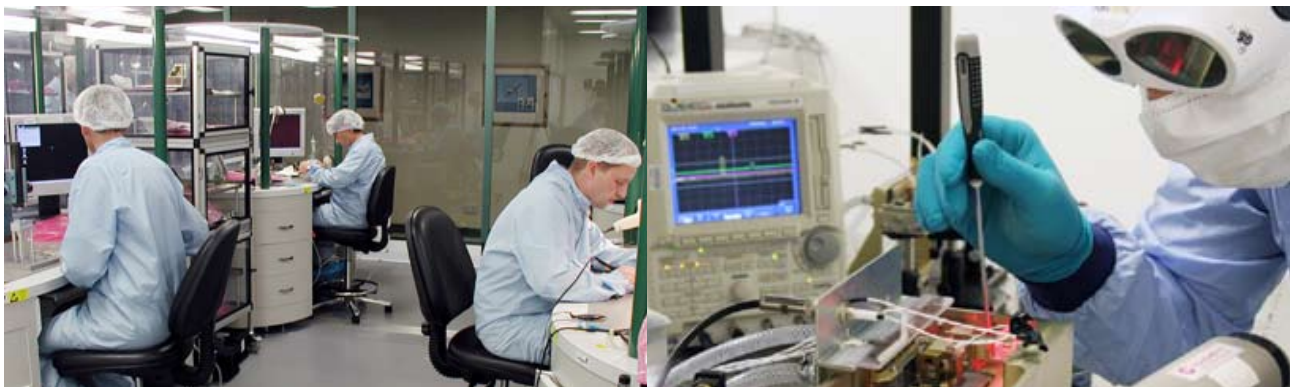
The ULD-HP utilises recent advances in laser technology, particularly in the areas of pump diode design, Nd:YAG slab configuration, athermal resonator design and high efficiency heat exchangers. This results in the ULD-HP offering full performance over a broad operating temperature and robust packaging suitable for military applications.

Diode-pumping provides exceptional reliability, lifetime and performance and, combined with the athermal laser resonator approach, delivers dramatic reductions in size, weight and cost over traditionally fielded equipment.

KEY FEATURES

- Compact athermal laser resonator
- Diode technology for increased efficiency and long life performance
- Good beam quality
- No warm up time
- Reduced heat-load
- High duty cycle
- RS422 interface
- Low life-cycle costs.

HIGH POWER ULTRA LIGHT-WEIGHT LASER DESIGNATOR ULD-HP



TECHNICAL SPECIFICATIONS

Output Energy	> 80 mJ
Pulse width	18±7 ns
Repetition Rate	STANAG 3733
Beam Diameter	< 40 mm
Beam Divergence	< 500 µRad
Boresight jitter	<100µRads (peak)
Boresight retention	<100µRads (±20°C excursion)
TEMPERATURE	
Operating	-40 to +60 °C
Storage	-40 to +85 °C
MTBF	6000hrs (Mil-Hdbk-217 prediction)
Dimensions	220 x 110 x 70 mm
Mass	< 2.0 Kg
Comms	RS422
Avg Power consumption	< 55 W (when firing)
Power Supply	18 - 36 V

MAN PORTABLE CONFIGURATION	
Control unit	165 x 70 x 41 mm
	< 0.5 Kg (incl batteries)
Battery options	Recharegable lithium-ion batteries
	12 x CR123

EXPERIENCE

SELEX Galileo has a reputation for providing customers with the best in high performance and cost-effective technology for laser requirements. More than 4,500 lasers have been produced and supported for over 25 countries - with integration complete on some 40 platforms across air, land and sea. We are currently under contract to develop the next generation of laser technology within the F-35 Joint Strike Fighter electro-optic targeting system.

COLLABORATIVE DEVELOPMENT WITH FIBERTEK

The ULD-HP has been the outcome of a successful collaboration with Fibertek Inc, based in Herndon VA, USA. Fibertek has many years of experience with innovative laser designs for military applications. The combined and complimentary strengths of SELEX Galileo and Fibertek have been fundamental in the development of the ULD-HP.

FIBERTEK, INC.

MAN-PORTABLE CONFIGURATION

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