



Radar &amp; Advanced Targeting

## TYPE 158 LASER RANGEFINDER, DESIGNATOR AND ILLUMINATOR

The Type 158 laser provides designation, ranging and illumination for airborne platforms. Configured in a two-box format to ease integration, this highly capable dual wavelength laser is designed to support gated Burst Illumination LADAR (BIL) sensor systems.

The Type 158 LRDI has been designed for high energy, airborne operations within high performance targeting pods and turret based Electro Optic (EO) systems.

Utilising state-of-the-art laser design and manufacturing techniques developed by Selex ES, the Type 158 LRDI provides a highly compact laser in a flexible configuration.

This multi-function laser extends the normal rangefinding and designation capability as used with laser-guided weapons. It provides high energy output at  $1.57\mu\text{m}$  and incorporates a dynamic variable beam divergence capability for use with BIL imaging systems to provide long range Combat Identification.

The Type 158 LRDI consists of 2 modules:

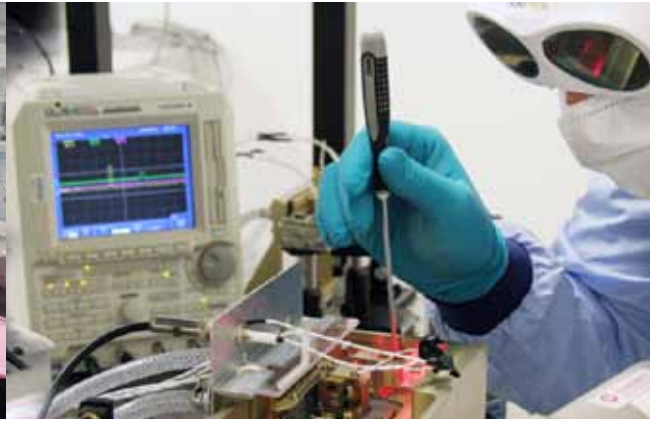
- Laser transmitter/receiver
- Electronics Unit and PSU.

### LATEST LASER TECHNOLOGY

The Type 158 LRDI incorporates a range of the latest laser technologies particularly in the area of laser diode pumping, Nd:YAG slabs, optical parametric oscillators and high efficiency heat exchangers. With these technologies, the laser delivers a highly reliable performance with every shot fired at maximum energy, consistent good beam quality and a substantially reduced heat-load.

### Key features

- Compact and Lightweight laser transceiver
- Dual-band (switchable) using common optics
- High MTBF
- Diode technology for increased reliability and low-cost of ownership
- Good Beam Quality
- Reduced heat load
- Variable beam divergence telescope for use with BIL systems.



## TECHNICAL SPECIFICATIONS

### Dimensions

Laser Transceiver Unit	251 x 105 x 104 mm
Laser Electronics Unit	150 x 103 x 75 mm

### Mass

Laser Transceiver Unit	< 3.4 kg
Laser Electronics Unit	< 1.3 kg

### Output Energy

Tactical	>150mJ at 1.06µm
Training	> 40mJ at 1.57µm

### Beam Divergence

Tactical	<0.22 mRad
Training	<0.6 to <3.2mRad

### Repetition Rate

Both wavelengths	Single shot to 20Hz
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### Receiver performance

Range	500m to >20km
Accuracy	+/- 5m

### Power

Average Input Power	< 200 W
Power Supply	28V DC

### Temperature

Full performance	-40°C to +55°C
Storage	-54°C to +85°C

## LASER CENTRE OF EXCELLENCE

The Selex ES Laser Centre of Excellence is a state-of-the-art facility, with the design based on extensive research into manufacturing best practice within the defence and commercial sectors.

This world leading facility produces a range of high and mid-energy laser systems for a range of military programmes including:

- F35 Joint Strike Fighter EOTS
- SNIPER Advanced Targeting Pod
- AH-64 Apache M-TADS
- LITENING G4 Laser Designation Pod.



INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION  
CLASS 4 LASER PRODUCT

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