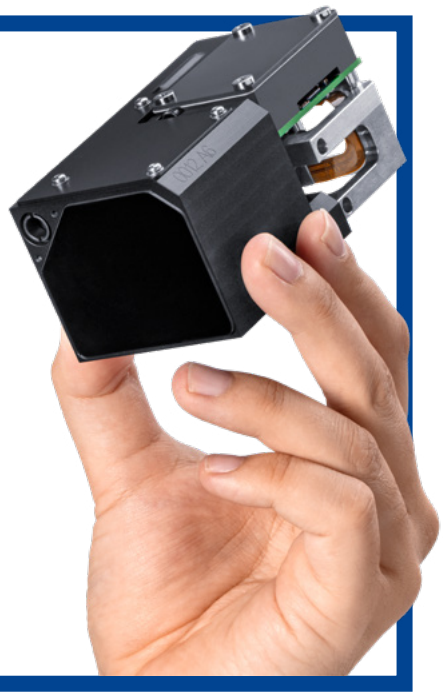
ULTI SENSE.

DATASHEET

LRF 6042

Fiber laser power.
Precise targeting.



The LRF 6042 is a high-performance laser rangefinder. A small frontal area allows for compact sensor system design. The advanced fiber laser technology of the LRF 6042 delivers excellent range performance of up to 25 km.

Advanced fiber laser technology

The Ultisense fiber laser technology is key to the precise targeting capabilities of the LRF 6042 and to its high efficiency with almost no energy loss. As a result, the range performance of the LRF 6042, the small frontal area and no maintenance requirements make it the ideal choice for a wide variety of applications. Safran Vectronix is one of the few manufacturers to master fiber laser technology.

Continuous measuring without interruption

Compared to other systems that have to charge and cool between pulses, the LRF 6042 measures continuously without interruption. It can achieve repetition rates of up to 20 Hz. This is ideal for tracking (e.g. people, vehicles) over an extended period of time.

Easy alignment with coaxial pointer

Sensor alignment is key for the overall performance of any electro-optical system. The optional 830 nm pointer of the LRF 6042 is coupled directly into the measuring fiber allowing for easy and precise system alignment and reliable target handover.

PRODUCT HIGHLIGHTS

- Tough 25 km laser rangefinder
- up to 8 km on 2.3 m × 2.3 m targets
- Advanced fiber laser technology for excellent performance
- Continuous measuring without interruption
- Repetition rates of up to 20 Hz
- Small frontal area allows for compact system design
- Patented Coaxial Pointer (optional)
- Rugged design for reliable performance – meets MIL-STD-810G
- Accurate time stamp for synchronization
- Maintenance-free

APPLICATIONS

- Electro-optical systems
- Fire control systems
- Remote weapon stations
- Observation and surveillance systems
- Coastguard and border protection

SAFRAN

LRF 6042

TECHNICAL DATA

PERFORMANCE

Maximum range	25 000 m
Range performance on beamfilling target reflectivity: 60 %, observer visibility 25 km	12 300 m
Range performance on 2.3 m × 2.3 m target size reflectivity: 30 %, observer visibility 25 km	8 000 m
Range performance on 1 m × 1 m target size reflectivity: 10 %, observer visibility 25 km	4 600 m
Measurement accuracy (1σ)	±1.0 m
Measurement accuracy (1σ) Worst case at extreme temperature and range	±1.5 m
Repetition rates full range performance approx. 90 % of full range performance approx. 80 % of full range performance approx. 70 % of full range performance For higher rates please contact Safran Vectronix	 1 Hz 3 Hz 5 Hz 10 Hz & 20 Hz
Multiple target detection	up to 5 targets
Wavelength	1550 nm
Divergence	0.5 mrad
Optional pointer wavelength	830 nm
Eye safety per IEC 60825-1	Laser Class 1
Pointer eye safety per IEC 60825-1	Laser Class 1 (Low Power Pointer) Laser Class 3B (High Power Pointer)

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	–35° C to +70° C
Storage temperature range	–40° C to +85° C
Shock (half sine) at 0.5 ms in z-direction (line of sight)	600 g
Shock (half sine) at 0.5 ms in x- and y-direction	500 g

PHYSICAL CHARACTERISTICS

Weight	300 g
Dimensions (length/width/height)	99 mm × 56 mm × 52 mm

INTERFACES

Hardware interface	Samtec LSHM
Communication interface	RS 232, RS 422
Power supply	8 V – 42 V
Mechanical interface	3 threaded holes, 2 positioning holes

Safran Vectronix AG, Max-Schmidheiny-Strasse 202, 9435 Heerbrugg, Switzerland
Phone +41 71 726 72 00, Fax +41 71 726 72 01, vectronix@safrangroup.com, **www.safran-vectronix.ch**