



# OEM FIBER LASER RANGEFINDER FOR LAND, AIRLAND AND NAVAL EO SURVEILLANCE AND FIRE CONTROL SYSTEMS

## LRF 1550 MR



### DESCRIPTION

The LRF 1550 MR is a compact OEM Fiber Laser Rangefinder designed for medium and long distance measurements to static or moving targets in dynamic environments.

It is the ideal system which fits the Size, Weight and Power (SWaP) requirements to be easily integrated into Land, Airland and Naval EO Surveillance and Fire Control solutions.

### DATASHEET

#### Optical specifications / Performances

Characteristics	Min.	Typ.	Max.	Units	Comments
Wavelength	-	1550	-	nm	
False Alarm Rate	-	1	-	%	
Extinction ratio	-	42	-	dB	1m x 1m cible @ 500 m; 85% reflectivity; 1% FA
Measurement rate	-	1	-	Hz	Class 1 (*)
	-	5	-		Class 1M (*)
	-	20	-		Class 3B (*)
Detection Range on human target	-	11	-	km	1 m x 1 m cible ; 20 % reflectivity ; 15 km visibility
Detection Range on NATO targets	-	14	-	km	2.3 m x 2.3 m cible ; 30 % reflectivity ; 15 km visibility
Min Detection Range	50	-	-	m	
Max Detection Range	-	-	30	km	
Accuracy	-	0.5	-	m	+/- 2σ, measured @ 5km on actual target
Divergence	0.2	-	0.3	mrad	
Multiple targets	1	-	5	-	3 different modes available on demands
Target discrimination	-	15	-	m	between echoes

#### Electrical specifications

Characteristics	Min.	Typ.	Max.	Units	Comments
Communication interface	-	-	-	-	USB, RS232 or RS422
Operating mode	-	-	-	-	Sleep, Ready-to-fire, Firing
Measurement mode	-	-	-	-	Single shot & Continuous mode
Supply voltage	12	-	32	V	
Sleep to Stand-By duration	-	0.5	-	s	
Stand-by to firing duration	-	100	-	μs	
Restitution duration	-	30	-	ms	
Consumption	-	0,05	-	W	Sleep mode
	-	3	-		Ready-to-fire mode
	-	5	-		Firing mode

#### Mechanical Specifications

Characteristics	Min.	Typ.	Max.	Units	Comments
Boresight alignment	-	1	-	mrad	Max deviation between mechanical references and optical axis
Architecture	-	-	-	-	OEM
Dimensions (W x H x D)	-	107 x 74 x 81	-	mm	without connectors
	-	112 x 80 x 81	-	mm	connectors included
Weight	-	680	-	g	

#### Boresight Module

Characteristics	Min.	Typ.	Max.	Units	Comments
Wavelength	-	635	-	nm	
Output power	-	0.4	-	mW	Class 1 (*)

#### Military Qualification

Characteristics	Min.	Typ.	Max.	Units	Comments
Military environment (**)	-	-	-	-	MIL-STD-810G: High/Low Tem, Thermal shock, Acceleration, Vibration, Shock AECTP-500: EMC NCE05, NCS07, NCS01, NRS02, NRE02
Mechanical qualification	-	-	-	-	*MIL-STD-810G: Acceleration 3,5g, Transport vibrations composite wheeled vehicle, Rotary wing aircraft - helicopter vibrations, Shocks 20g, 11ms
EMI qualification	-	-	-	-	AECTP-500: Conductivity NCE05, 30Hz - 150MHz ; radiated emission - electric field, 10kHz - 18GHz ; Conducted susceptibility on power leads low frequency

(\*) EN60825-1 v2014 standard

(\*\*) Qualification to be performed on production units