

LRX-25A Laser Rangefinder Module

Noptel

The compact, eye safe and highly integrated LRX rangefinder module is utilized in various applications from demanding military systems to handheld devices.

The module is delivered without enclosure enabling OEM-users to embed the module into their own system or device.



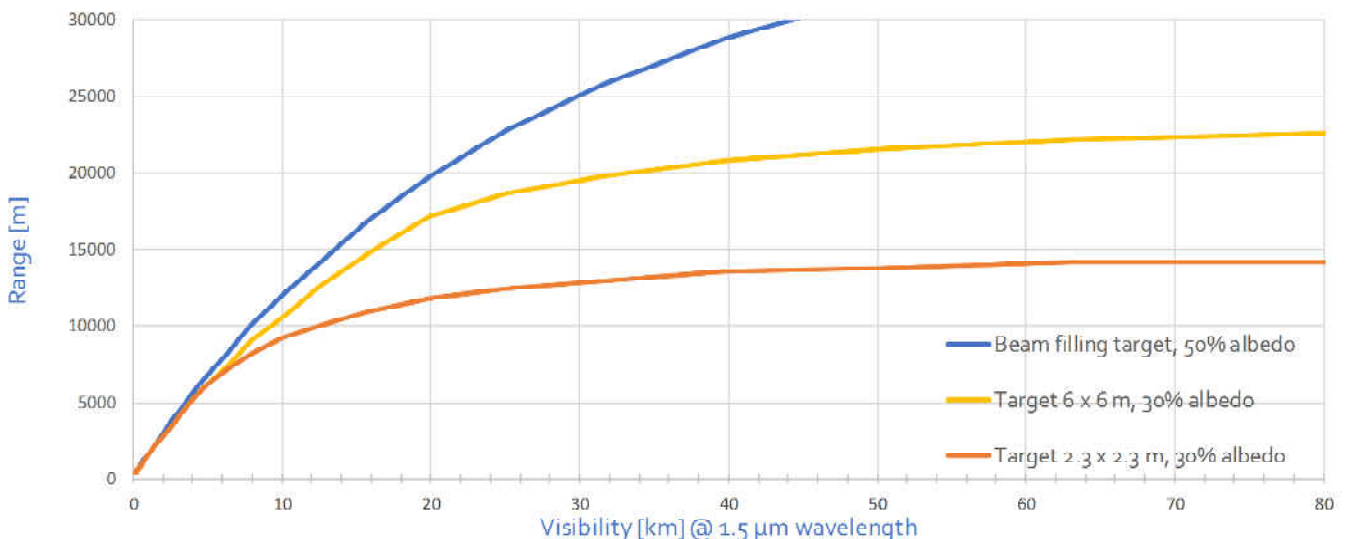
Features

- Compact and lightweight sensor
- Pulsed time-of-flight measurement
- Low power consumption
- Ranging capability beyond 30 km
- Diode laser 1.5 μm wavelength
- Military grade rangefinder module
- Eye safe Class 1

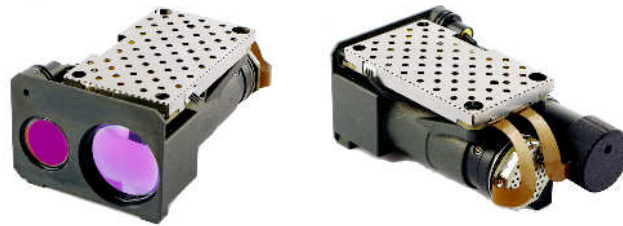
Applications

- Reconnaissance
- Observation & surveillance
- Target acquisition
- Fire control
- Naval systems
- Drones & UAVs
- Handheld devices
- Vehicle mounted systems

Performance as a function of visibility



Noptel LRX-25A Laser Rangefinder Module



Technical specifications

Performance Characteristics	Unit	LRX-25A	Note
Laser safety class	-	1	Eye safe
Wavelength	µm	1.5	
Ranging capability	m	50 - 32 000	Range selectable by gating feature (Default 32 km)
Measuring time in Single Measurement Mode (SMM)	s	0.8 / 1.45	At 10 km range setting depending on the strength of the echo. At 32 km range setting measuring time is 1 / 1.85 seconds. Measurement two times in ten seconds due to eye-safety.
Performance to standard NATO target (SMM)	m	10 000	Target size 2.3 x 2.3 m, visibility 15 km, target reflectivity 30%, detection probability >90%
Extinction ratio	dB	41	Beam filling target @ 500 m, visibility 23 km, target reflectivity 85%
Continuous Measurement Mode (CMM) rates	Hz	1, 4, 10, 20, 100, 200	Range performance depends on applied rate
Precision	m	0.5 - 1.5	Depending on the distance and target reflectivity
Beam divergence	mrad	0.35	
False detection rate	%	< 1	
Target discrimination	m	< 30	Depending on the received signal level
Range gating resolution	m	1	
Operating temperature	°C	-32 - +60	
Storage temperature	°C	-40 - +71	

Mechanical characteristics	Unit	LRX-25A	Note
Size (L/W/H)	mm	88 x 53 x 37	
Weight	g	136	
Alignment retention	mrad	0.2	Within operating temperature range
Alignment pointer	nm	635	Laser Class 1
IP Protection	-	N/A	

Electrical characteristics	Unit	LRX-25A	Note
Serial interface	-	RS422	Connector type: Molex 53261-1071 UART 3.3 V and RS232 available on request
Supply voltage	V	7 - 30	
Start-up time	s	< 0.1	
Power consumption during measurement	W	< 4	
Power consumption in Stand-by mode	W	< 0.2	Unit can be completely shut down by external signal to further minimize power consumption

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