

LRF125 Laser Rangefinder Module

The compact, eye safe and highly integrated laser rangefinder module is utilized in various commercial applications including small but advanced handheld devices.

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

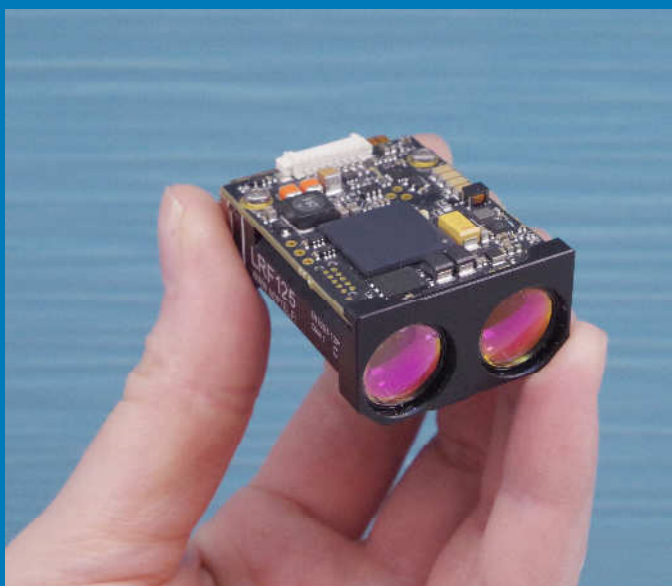
Noptel

Features

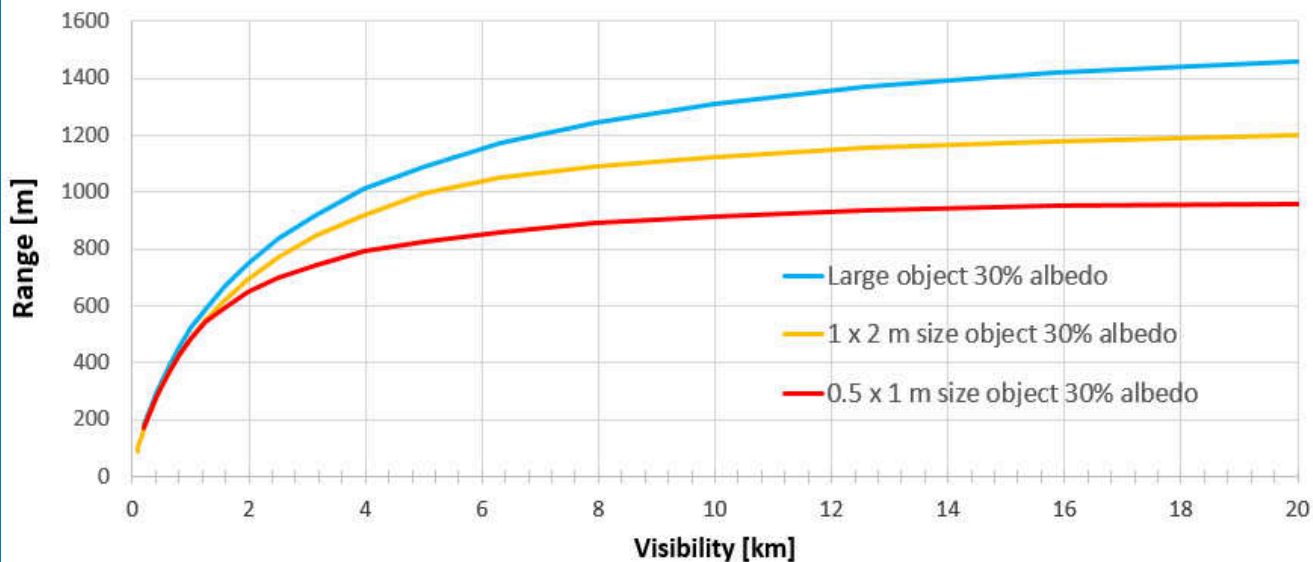
- Ultra compact and lightweight module
- Pulsed time-of-flight measurement
- Ranging capability up to 1500 m
- Low power consumption
- 905 nm wavelength
- Eye safe Class 1

Applications

- Speed violation control
- Tunneling & surveying
- Off shore rescue
- Law enforcement
- Border and port control
- Observation & surveillance
- Drone & UAV gimbals
- Handheld devices
- Hunting rifle sights



Performance as a function of visibility



LRF125 Laser Rangefinder Module



Technical specifications

Performance Characteristics	Unit	LRF125	Note
Laser safety class	-	1	Eye safe
Wavelength	nm	905	
Ranging capability	m	0 – 1500	Range selectable by gating feature
Measuring time in Single Measurement Modes (SMM)	s	0.25/0.65/1.1	Quick SMM 1/Quick SMM 2/SMM measurement
Continuous Measurement Mode (CMM) rates	Hz	1, 4, 10, 20, 100, 200	Range performance depends on applied rate
Precision	m	0.1 - 1	Depending on distance and object reflectivity
Beam divergence (H x V)	mrad	2.5 x 0.5	
False detection rate	%	< 1	
Object discrimination	m	< 30	Depending on the received signal level. Up to three (3) targets: First, Second and Last.
Range gating resolution	m	1	
Operating temperature	°C	-32 - +60	
Storage temperature	°C	-40 - +71	

Mechanical characteristics	Unit	LRF125	Note
Size (L/W/H)	mm	48 x 34 x 20	
Weight	g	26	
Alignment retention	mrad	± 0.4	Within operating temperature range
Alignment pointer	-	-	Not available
IP Protection	-	N/A	

Electrical characteristics	Unit	LRF125	Note
Serial interface	-	UART 3.3 V	Connector type: Molex 53261-0871 Firmware update via serial interface
Start-up time	s	< 0.1	Measurement readiness from power-up
Supply voltage	V	3 - 5.4	Voltage at the supply input of the LRF
Power consumption	W	< 1	
Power consumption in stand-by mode	W	< 0.2	Unit can be completely shut down by external signal to further minimize power consumption

Specifications are subject to change without notice. Doc.: M43769DE.