



Laser Rangefinders

Infiniti's LRF Options



TECHNOLOGY

About LRFs

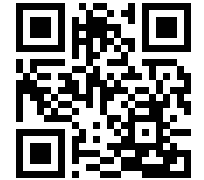
Our laser range finders use advanced technology developed for the military to accurately measure the distance to a target. LRFs work by pulsing laser light in the SWIR wavelengths towards a target. A receiver then detects the reflection of that light and accurately calculates the distance based on the time it took for the light to bounce back.

Infiniti uses weapons-grade LRFs that provide an accuracy as good as 100–200cm, with ranges up to 30km in ideal conditions. Our 1535nm solid state SWIR micro lasers provide short, high-pulse energy pulses, with diffraction-limited beam quality and low divergence, resulting in superior range and performance. Our eye safe laser rangefinders can operate in both single- and multi-pulse mode offering industry-leading SWaP (Size Weight and Power).

LRFs are used in a host of applications such as weapon targeting, advanced tracking, autonomous cars and geo locking surveillance. Our LRFs utilize low-noise, high-efficiency photoreceivers that have been designed and optimized for ranging. The customized electronics are designed to improve accuracy performance while reducing false reflections and echoes.

Note that while Infiniti uses high quality weapons-grade LRFs, they still suffer from the problems and limitations of the technology that affect all LRFs.

For more info, see our LRF Whitepaper:

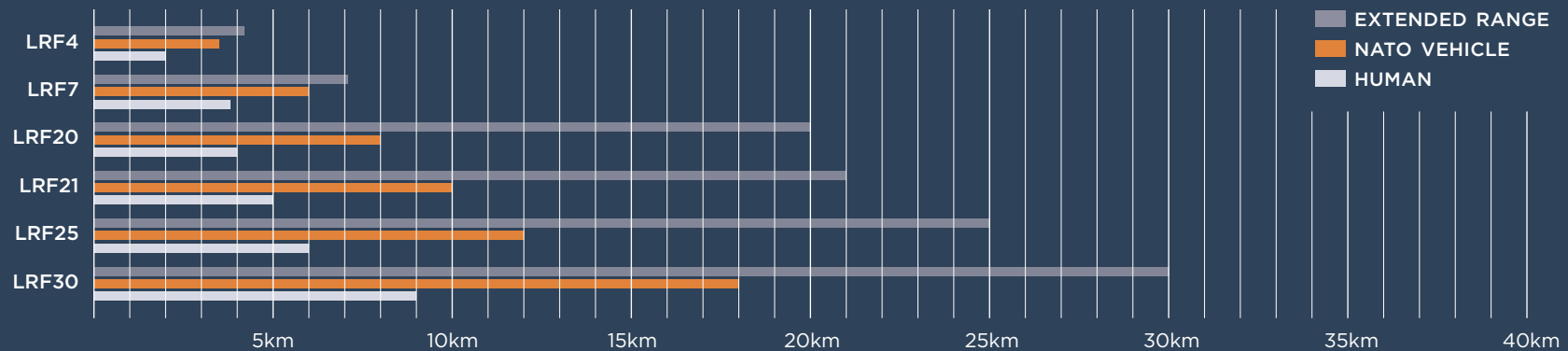


Specifications



	LRF4	LRF7	LRF20	LRF21	LRF25	LRF30
Extended Range	4.2km	7.1km	20km	21km	25km	30km
Range to NATO Vehicle (2.3 × 2.3m)*	3.5km	6km	8km	10km	12km	18km
Range to Human (0.5 × 1.8m)*	2km	3.8km	4km	5km	6km	9km
Wavelength	1530nm (±5)					
Single Measurement Time	< 0.03s		< 0.5s			
Continuous Measurement	1-10 Hz (adjustable)					
Precision**	0.1-1.5m		0.2-2.5m			
False Detection Rate	<1%					
Beam Divergence	0.035°	0.017°	0.02°	0.02°	0.017°	0.017°
Target Distinction	20m	50m	30m	30m	30m	30m
Range Gating Resolution	1m		0.1m			
Alignment Laser	Yes					
Laser Class	Class 1 (eye safe)					
Power Consumption	< 2W	< 4W	< 2W	< 2W	< 2.5W	< 3W
Lifetime MTBF†	At least 1500 hours		At least 1 million single measurements			
Serial Interface	UART (TTL 3.3V)		422/TTL			
Operating Temperature	-40°C to +70°C		-40°C to +65°C			
Weight	34g	60g	182g	281g	353g	412g
Dimensions	49 × 32 × 26mm	66 × 49 × 33mm	81 × 65 × 43mm	108 × 63 × 73mm	116 × 61 × 63mm	126 × 100 × 71mm

Specifications subject to change without notice. *Range performance is dependent on distance and target reflectivity. Target visibility 25km, maximum measuring time, target reflectivity 30%, detection probability 90%. Depending on received signal level. Up to three (3) targets: First, Second and Third. **LRF accuracy is based on ideal conditions. †Based on assumptions.





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