



**MORE LIGHT**

## Erbium Laser Rangefinder (ELEM)

The ELEM 30 and ELEM 45 revolutionize laser rangefinding with their compact, lightweight design and powerful performance. These next-generation, single-pulse Erbium glass laser rangefinders deliver long-range capabilities while being significantly smaller and lighter than previous models.

Their efficient, passively cooled design simplifies integration while offering an impressive maximum range of up to 50km with low beam divergence for precise targeting.

Thanks to their outstanding performance, they are perfectly suited for use in demanding handheld systems, high-performance drone gimbals, and surveillance and fire control systems.

### Typical applications:

- Electro-optic tracking systems (EOTS)
- Naval, army and airborne Multi-sensor platforms
- Long range handheld surveillance systems

### Your advantages:

- ✓ **Lightweight & Compact:** Starting at just 160 grams, experience enhanced performance without sacrificing portability. This makes it ideal for handheld applications or integration into space-constrained systems.
- ✓ **Long Range:** Gain early situational awareness with a maximum range of up to 50km.
- ✓ **Efficient Design:** The diode-pumped Erbium Glass laser design allows for air cooling, making it operationally efficient.
- ✓ **Rugged & Reliable:** Shockproof construction and a wide operating temperature range ensure reliable performance in even the most demanding environments.

# Specification Sheet

Model	ELEM 30		ELEM 45	
Measurement Principle			Single Pulse	
Wavelength (nominal at 20°C) [µm]			~ 1.54	
Laser Classification (IEC 60825-1:2014)			Laser class 1	
Modes of Operation			Single Measurement, Continuous Ranging: ≤ 1Hz	
Divergence [mrad]			~ 0.4	
Measurement Range [m]	50 ... 40,000		50 ... 50,000	
Range Gate Resolution [m]			1	
Measurement Resolution [m]			0.1	
Multiple Target Detection - Number of Targets			5	
Multiple Target Discrimination [m]			≤ 20	
Measurement Accuracy (1σ) [m]			≤ 3	
Typical measurement range [m]				
Small Target (0.75m x 0.75m, Albedo 30%, 25km Visibility)	8,000		11,000	
NATO Standard Target (2.3m x 2.3m, Albedo 30%, 25km Visibility)	12,000		17,000	
Extended Target (Beamfilling, Albedo 50%, 50km Visibility)	25,000		42,000	
Mechanical				
Weight [g]	≤ 160		≤ 250	
Dimensions (L x W x H) [mm]	95 x 25 x 55		100 x 40 x 80	
Environmental				
Operating Temperature [°C]			-40 ... +70	
Storage Temperature [°C]			-45 ...+75	
Protection Class			IP00	
Mechanical Shock			130g, 3.5 ms / 20g, 17ms	
Electrical and Communication				
Input Voltage Range [VDC]			5 ... 16	
Power Consumption Operational [W]			≤ 0.03	
Power Consumption During Measurement [W]			≤ 2 (@ 1Hz)	
Data Interface			UART (LVTTTL 3.3V)	
Interface Connector			Molex # 53261-1271 (mates with # 51021-1200)	

