



MORE LIGHT

Diode Laser Rangefinder (DLEM)

The Jenoptik DLEM Laser Rangefinders offer the very best accuracy and range.

The Jenoptik Rangefinders offer high performance on small targets. These are the key elements that the diode laser rangefinder (DLEM) family stands for. Our laser rangefinder modules efficiently measure distances to non-cooperative targets up to 20 kilometers away with very high precision. With their compact and robust design and very low weight starting at just 25 grams, they are the smallest and most lightweight modules in their performance class. They are perfect for integration into mobile handheld systems and portable observation devices. Their wavelength is invisible to the human eye and is not detectable by I²-based night vision equipment. Their proven robustness, MIL qualification, and exceptional operational temperature range make the DLEM sensor the ideal solution for tactical use.

All DLEM Series modules offer the same communication interface, so you can use the control software for your devices across different models, saving integration efforts when switching from one model to another

Your advantages:

- ✓ **Lightweight & Compact:** Enhanced performance comes without sacrificing size and weight
- ✓ **Efficient:** Fast start-up time and low power consumption ensure long mission times
- ✓ **Safe & Tactical:** Completely eye-safe and invisible to I²-based night vision devices
- ✓ **Fast & Accurate:** 25 Hz range enables tracking applications while 1 m accuracy supports high precision systems
- ✓ **Robust & Reliable:** Shockproof with wide operating temperature range supports integration into the most demanding systems
- ✓ **Advanced optical design:** Low divergence enables high range performance on small targets while providing uniform illumination of the target eliminating the need for preferred orientation

Diode Laser Rangefinder (DLEM)

Model	DLEM 17	DLEM 20	DLEM 20LE	DLEM 30	DLEM 45
General					
Wavelength (nominal at 20°C) [µm]	~ 1.55				
Laser Classification (IEC 60825-1:2014)	Laser class 1				
Modes of Operation	Single Measurement, Continuous Ranging 1 ... 25Hz				
Divergence [mrad]	~ 0.8			~ 0.7	
Measurement Range [m]	10 ... 8.000	10 ... 5.000	10 ... 8.000	10 ... 14.000	10 ... 20.000
Multiple Target Detection - Number of Targets	5				
Multiple Target Discrimination [m]	≤ 25	≤ 15		≤ 25	
Measurement Accuracy (1σ) [m]	≤ 1	≤ 0.5		≤ 1	
Typical range performance [m]					
Small Target (0.75m x 0.75m, Albedo 30%, 25km Visibility)	2.100		2.500	3.200	4.600
NATO Standard Target (2.3m x 2.3m, Albedo 30%, 25km Visibility)	3.300		4.000	5.300	7.400
Extended Target (Beamfilling, Albedo 50%, 50km Visibility)	5.400	5.000	6.900	10.500	17.000
Mechanical					
Weight [g]	≤ 25	≤ 30		≤ 95	≤ 160
Dimensions (L x W x H) [mm]	50 x 18 x 34	50 x 22 x 34		97 x 25 x 50	110 x 46 x 60
Environmental					
Operating Temperature [°C]	-40 ... +80				
Storage Temperature [°C]	-46 ... +85				
Mechanical Shock	1500g, 0.7ms			1000g, 1ms	500g, 1ms
Protection Class	IP00				
Electrical and Communication					
Input Voltage Range [VDC]	2 ... 5.5			4 ... 16	
Startup-time (off -> ready to measure) [ms]	≤ 85				
Power Consumption Operational [W]	≤ 0.01				
Power Consumption During Measurement [W]	≤ 2				
Data Interface	UART (LVTTTL 3.3V)				
Interface Connector	Molex # 503763 - 0691	Molex # 53261 - 0671	Molex # 503763 - 0691	Molex # 53261 - 0671	