



Er:Glass Laser Rangefinder ELEM 10k

Eyesafe, compact long range laser rangefinder module

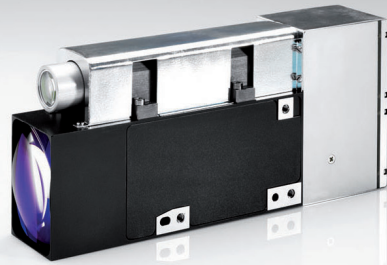


Photo: ELEM 10k side mount configuration

Description and Features

The ELEM 10k laser rangefinder measures distances of 10 km and more. It is intended for system integration, e.g. with daylight and night vision cameras.

ELEM 10k features an Er:Glass laser operating at an eyesafe wavelength of 1535 - 1554 nm. For alignment, a target-point LED diode is provided, working in the visible wavelength range.

Designed for usage in harsh environments

The laser emitter and the laser receiver with related electronics are designed to reliably operate within a wide temperature range and under high mechanical stress.

Benefits

- Compact and lightweight design
- Eyesafe operation
- Easy system integration
- Long distance measurements

Applications

The ELEM 10k rangefinder is intended for system integration:

- Optronic surveillance and reconnaissance
- Fire control systems for land and sea targets
- For determination of flight altitudes on airports
- To measure the distance of ships from the coast
- In observation outfits
- In general for applications of position determination

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Specifications

Measurement parameters

Measuring range ¹	≥ 10 km
Total measurement range	50 m ... 40,000 m
Measuring accuracy	± 5 m
Range gate	Full range
Multiple target detection	max. 5 targets are stored and transmitted
Measuring rate	max. 1 Hz max. 30 readings obtained in 90 sec
Target discrimination	20 m

Transmitter

Laser type	Flashlamp-pumped Er:Glass laser
Operating wavelength	1535 nm ... 1554 nm
Beam divergence ²	0.6 mrad ± 0.1 mrad
Post optics beam diameter	≤ 18 mm
Pulse energy	typ. 7 mJ
Laser classification	1M (EN 60825-1:2007)
Shot number lifetime	≥ 100,000 (flash lamp limited)
Alignment LED:	635 nm

¹) measured at standard target 2.3 m x 2.3 m, 10 % reflectance, visibility $V_n = 10$ km
²) incorporates 80 % beam energy of full angle

Receiver

Detector type	Avalanche photo diode
Receiver optics dimensions	38 mm x 58 mm

Communication interfaces

Data interface	standard on request	CAN-Bus 2.0B (10 kBaud ... 1 MBaud) RS485, RS232
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Electrical parameters

Power supply (external)	standard optional	24 V nominal voltage (according to VG96916) 12 V nominal voltage
Current consumption in stand-by	≤ 0.1 A	
Maximum current consumption:	3 A	

Mechanical Dimensions (approx., depending on actual device configuration)

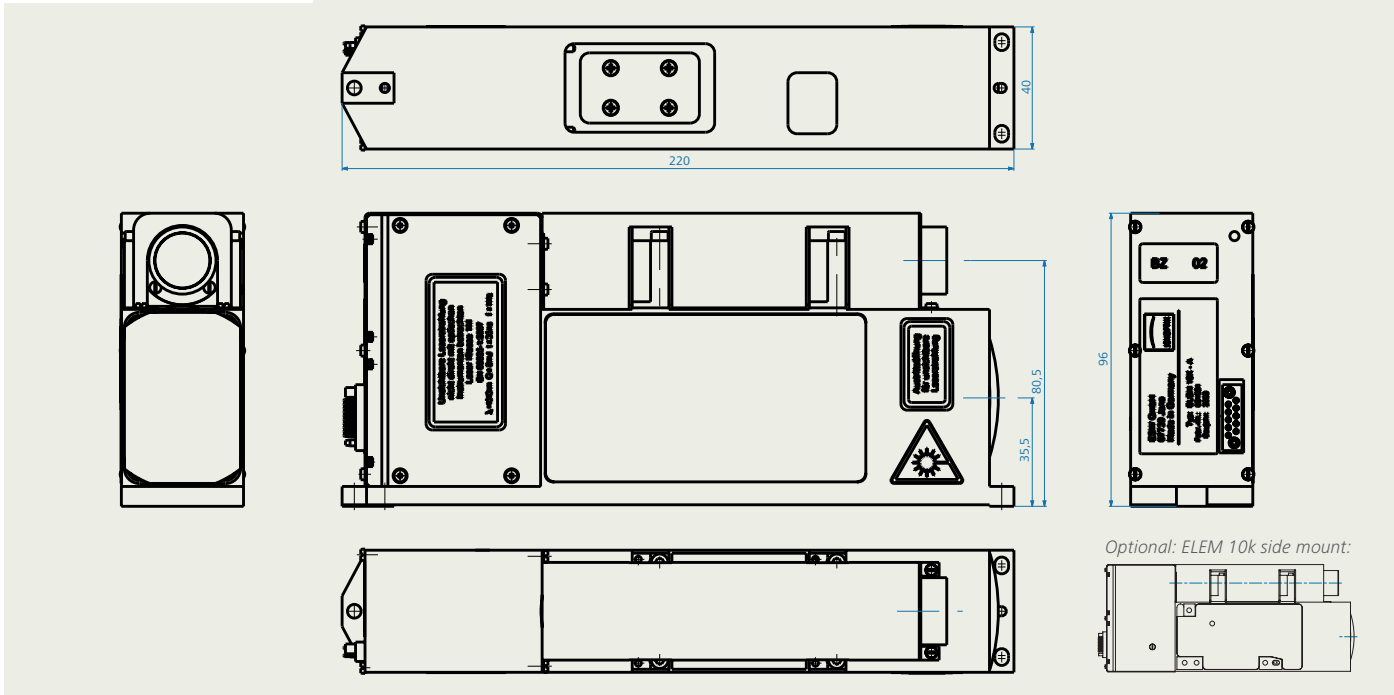
Weight	≤ 940 g
Dimensions (L x W x H)	210 mm x 40 mm x 90 mm

Ambient conditions

Operation temperature:	- 40 °C ... + 70 °C
Storage temperature:	- 55 °C ... + 70 °C

Module dimensions ELEM 10k

ELEM 10k is available in housing configurations either for standard bottom mount (see drawing) or for optional side mount.



It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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