



MORE LIGHT

Eyesafe, High Repetition Rate Long-Range Laser Rangefinder Module

## Er:Glass Laser Rangefinder ELEM-DP 10k

### Description and Features

ELEM-DP 10k is a compact Laser rangefinder for measuring distances of up to 40 kilometers with an accuracy of better than 5 meters. Based on a diode pumped Er:Glass Laser, the ELEM-DP 10k provides high pulse repetition rates of up to 20 Hz. Working at a wavelength of 1.54  $\mu\text{m}$ , the Laser spot is invisible to the human eye and not detectable by I<sup>2</sup>-based night vision equipment. It is eyesafe according to Laser class 1M.

### Robust and easy to integrate

The compact design allows for easy integration into various measuring systems. The rangefinder has a single interface for the power supply and different serial and bus communication interfaces. It is suited for usage under harsh environmental conditions. For co-alignment with other sensors, a red LED collimator is integrated.

### Benefits

- Compact and lightweight design
- Eyesafe operation
- High repetition rate
- Long distance measurements

### Applications

- Naval, army and airborne fire control systems (FCS)
- Target tracking systems and anti-aircraft systems
- Military surveillance
- Multi-sensor platforms
- Electro-optic tracking systems (EOTS)

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## Specifications

### Measurement parameters

Measuring performance <sup>1)</sup>	≥ 10 km
Total measurement range	50 m ... 40,000 m
Measuring accuracy	5 m
Measuring resolution	1 m
Multiple target detection	up to 5 targets
Target discrimination	20 m
Measuring rate	max. 10 Hz continuous operation 20 Hz burst operation

### Transmitter

Laser type	Diode-pumped Er:Glass Laser
Operating wavelength	~ 1.54 μm
Beam divergence <sup>2)</sup>	~ 0.5 mrad
Laser classification	1M (EN 60825-1:2014)
Guaranteed number of measurements	≥ 5,000,000
Alignment LED	~ 635 nm

<sup>1)</sup> measured at standard target 2.3 m x 2.3 m, 10 % albedo, visibility  $V_n = 10$  km | <sup>2)</sup> full angle, containing ≥ 80 % of the pulse energy

### Receiver

Detector type	Avalanche photo diode
Receiver optics diameter	50 mm

### Communication interfaces

Data interface	CAN-Bus, RS422, RS232
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### Electrical parameters

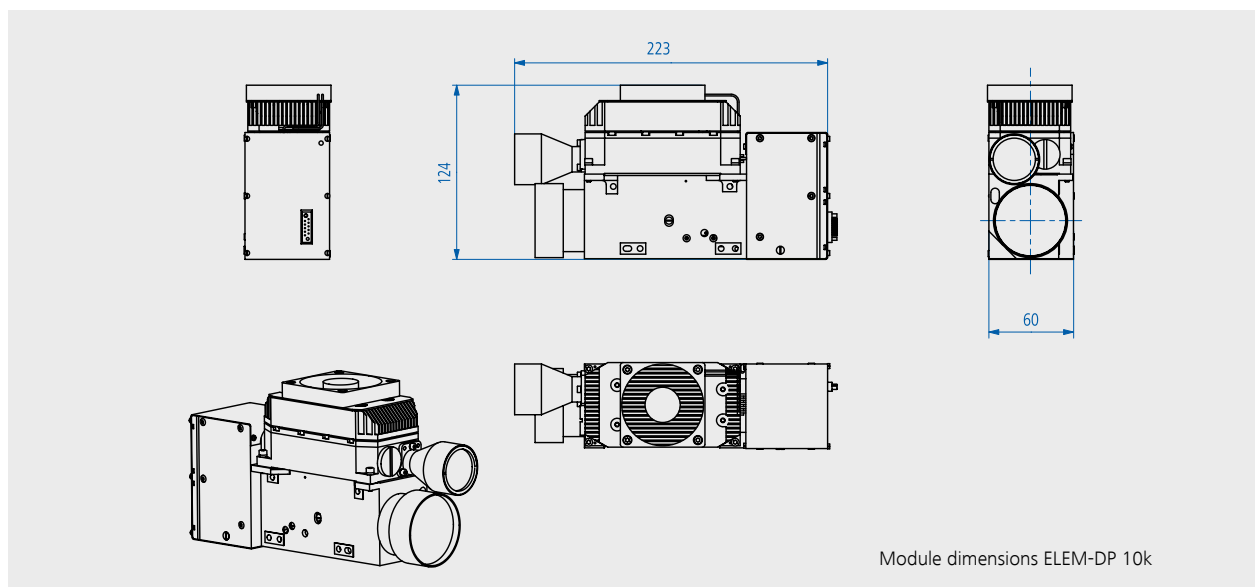
Input voltage range	18...32 VDC
Current consumption in stand-by	≤ 0.15 A
Maximum current consumption	8 A (@ 20 Hz repetition rate)

### Mechanical Dimensions

Weight	≤ 1600 g
Dimensions (L x W x H)	223 mm x 60 mm x 124 mm

### Ambient conditions

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



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