

15 pps ELRF (Eye-safe Laser Rangefinder)



Features

- Eye-safe range finding
- High repetition rate
- Compact design
- Biaxial optical system
(transmitter and receiver with LED-lighted reticle)
- Full performance from the first range-finding on
- Ruggedized, meets severe environmental conditions
- High reliability, low maintenance
- Integrated BITE-system



General

The 15 pps ELRF completes the line of successful eye-safe Laser Rangefinders designed and produced by Carl Zeiss Optronics GmbH.

The 15 pps ELRF fulfils as independant sensor unit the requirements of modern optronic reconnaissance and target tracking systems that require a high repetition rate of measured ranges from fast moving targets.

The 15 pps ELRF has already been successfully applied as component of an Electro-Optical Tracking System.

The 15 pps ELRF may be adapted optimally and cost-effectively to a multitude of applications by modification of the performance datas and/or the functions.

Technical data

Transmitter

Laser type	Nd:YAG, Raman shifted
Wavelength	1543 nm
Maximum pulse energy	30 mJ
Typical used pulse energy	< 20 mJ
Pulse width	5 ± 2 ns
Maximum pulse repetition rate	15 pps
On time	5 min
Duty cycle	1:11
Beam divergence (1/e ²)	0.65 mrad
Laser class acc. ANSI Z136.1:2000	3b
Nominal Ocular Hazard Distance (NOHD)	35 m

Receiver

Detector type	InGaAs APD
Field of view	1.1 mrad
Extinction	> 45 dB reflectance of 75% at a range of 500 m; Detection probability 99 %; (atmospheric transmission 88 % per km at operating wavelength)

Range data

Accuracy	± 5 m
Range	50 m to 39 995 m
Resolution	5 m
Multiple target discrimination	20 m
Logic	First-/last echo, selectable

Mechanical interface

Dimensions	266 mm x 152 mm x 355 mm
Weight	< 20 kg

Electrical interface

Power	20-32 V < 30 A at 28 V for 50 ms
Data interface	RS 422

Environmental conditions

Operating temperature	- 32 °C to +63 °C +63 °C to +80 °C (reduced performance)
Storage temperature	- 52 °C to 75 °C

Subject to changes in design and further technical development.

Carl Zeiss Optronics GmbH

Carl Zeiss Group
73446 Oberkochen
Germany

Phone: +49 73 64 20-65 30
Fax: +49 73 64 20-36 97
www.zeiss.com/optronics