



## 20 HZ LRF / D

High-repetition laser rangefinder and designator product family

- All-solid-state laser transmitter using Nd:YAG rod and OPO technology
- Low power consumption due to high-efficiency diode laser pumping
- High range performance due to the use of highly sensitive TE cooled In-GaAs APD
- LED collimator for adjustment; flexible in wavelength and pattern; brightness adjustable; modular design; sealed housing
- Compact design (volume < 1.5 l)
- Designation acc. to STANAG 3733 LAS or externally codable
- LRF can be operated with 25 Hz continuously
- Conduction cooling only
- High range resolution of 1 m
- Range accuracy (1s) app  $\pm 2$  m for target ranges up to 5 km



## 20 HZ LRF/D

Rangefinding			
Products	LRF 20 Hz	LRD 20 Hz - A**	LRD 20 Hz - B***
Laser transmitter	Nd:YAG; OPO shifted	Nd:YAG; OPO shifted	Nd:YAG; OPO shifted
Pump type	Diode laser pumped	Diode laser pumped	Diode laser pumped
Wavelength	1570 nm	1570 nm	1570 nm
Cooling	Conduction cooling	Conduction cooling	Conduction cooling
Pulse rate	≤ 25 Hz	≤ 25 Hz*	≤ 25 Hz*
Divergence (63 % of energy)	< 0.6 mrad	< 0.6 mrad	< 0.6 mrad
Receiver	InGaAs APD; TE cooled	InGaAs APD; TE cooled	InGaAs APD; TE cooled
Range resolution	1 m	1 m	1 m
Range accuracy	± 2 m up to 5,000 m	± 2 m up to 5,000 m	± 2 m up to 5,000 m
Range gate	50 m to 40,000 m	50 m to 40,000 m	50 m to 40,000 m
Duty cycle	Continuous operation	Continuous operation	Continuous operation
Laser class	1M	1 or 1M (see remark)	1 or 1M (see remark)
Configuration	Coaxial for RX and TX	Coaxial for RX and TX	Coaxial for RX and TX
Integrated Bite	Available through RS 422	Available through RS 422	Available through RS 422
Designation			
Laser transmitter		Nd:YAG	Nd:YAG
Wavelength		1064 nm	1064 nm
Pulse rate		8 - 20 Hz	8 - 20 Hz
Pulse energy		> 80 mJ	> 120 mJ
Pulse duration		14 ± 6 ns	14 ± 6 ns
Divergence (90 % of energy)		< 250 µrad	< 250 µrad
Range resolution		1 m	1 m
Range accuracy		± 2 m up to 5,000 m	± 2 m up to 5,000 m
Range gate		50 m to 40,000 m	50 m to 40,000 m
Mechanical data			
Mass	< 3 kg	< 3 kg	< 3.5 kg
Dimensions (LxHxW)	app. 114 x 170 x 75 mm	app. 114 x 170 x 75 mm	app. 114 x 170 x 75 mm
Current	Typ 4 A (peak); max. 6.5 A (peak)	Typ 4 A (peak); max. 6.5 A (peak)	Typ 6 A (peak); max. 10 A (peak)
Voltage	24 ± 6 V	24 ± 6 V	24 ± 6 V

\* To achieve Laser class 1 the pulse rate has to be limited; at a pulse rate of 25 Hz the unit is classified as a class 1M device

\*\* Currently under development

\*\*\* Planned development



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