



LASE 1000T Green-Line

Laser-Distance measuring by
"triangulation" technology

LASE
Industrielle Lasertechnik GmbH



General characteristics:

- Contactless distance measuring
- Measuring area up to 2000mm
- Ranges up to 4000mm
- Highest accuracy also in the μm -area , high resolution
- High measuring rate (up to 10 kHz)
- Synchronized Thickness measuring with 2 sensors
- Serial, analog and Ethernet interfaces
- Suitable for almost all surfaces
- Rugged construction, IP65
- Simple installation in each installation position
- Median filter
- Optimized Closed-loop control of the light intensity
- Measurement of hot objects to max. 2.200°C !

Short description:

The distance sensors of the LASE 1000T series are optical measuring instruments, which work according to the triangulation principle. This procedure ensures highest accuracies within μm the range.

Preferably the sensors are used for the contact less distance and thickness/width measurement. The sensor produces thereby a visible laser point on an object. The point is taken up by highly dissolving CCD lines camera.

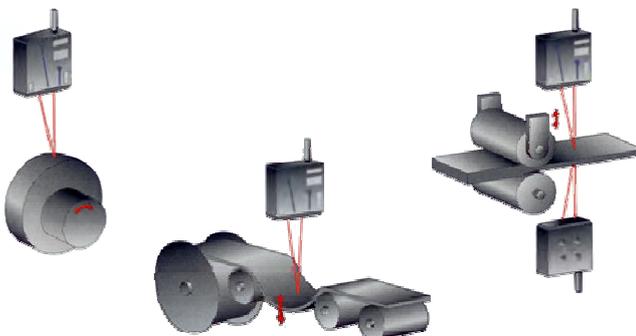
From the position of the point on the CCD line, the distance is computed to the object. By the GreenLine series, the procedure permits an accuracy of up to $\pm 0,01\text{mm}$ depending its measuring range. The range on natural surfaces amounts to max. 4000 mm. The sensors have an inserted automatic regulation of the light intensity and obtain thereby unsurpassed measuring characteristics.

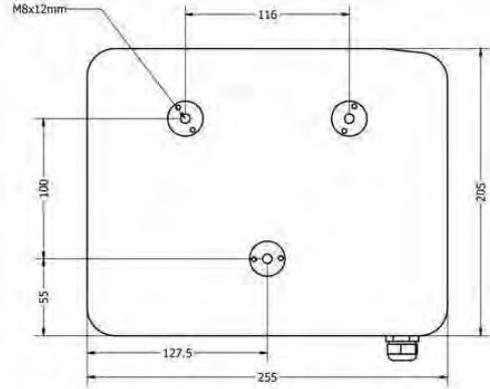
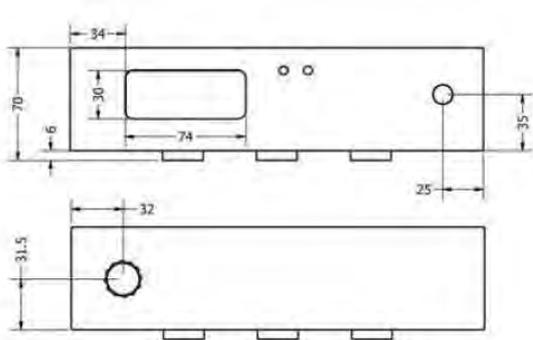
LASE 1000T sensors form a compact unit. The optical elements are closely integrated with the electronic components in a durable steel housing. The sensors contain no mobile parts and are appropriate for the work in heavy-industrial environment!

The LASE 1000T Black-Line series offers smaller measuring ranges to you with even higher accuracies!

The complete LASE 1000T series is used, where the precision demands are below 1 mm, e.g. by thickness measurements or quality controls:

- Measurement of length, width, height, level and situation of objects and environments
- Positioning of machine parts
- Control of qualities by paper-, steel- or aluminum coils
- Measurement of slab widths and thickness
- Measuring of liquid level and firm materials
- Position collection of glowing objects in furnaces
- Measurement and regulation of slack





Technical Data LASE 1000T Green-Line Series:

Modell	LASE 1000T-500	LASE 1000T-505	LASE 1000T-700	LASE 1000T-925	LASE 1000T-950	LASE 1000T-1100	LASE 1000T-1150	LASE 1000T-1400	LASE 1000T-1950	LASE 1000T-3000
Measuring range	400-600 mm	450-550 mm	600-800 mm	600-1250 mm	850-1050 mm	1000-1200 mm	700-1600 mm	700-2100 mm	1500-2400 mm	2000-4000 mm
Center distance	500 mm	500 mm	700 mm	925 mm	950 mm	1100 mm	1150 mm	1400 mm	1950 mm	3000 mm
Resolution *)	0,05mm	0,01mm	0,05mm	0,1mm	0,05mm	0,05mm	0,1mm	0,3mm	0,2mm	0,5mm
Linearity *)	± 0,10mm	± 0,05mm	± 0,10mm	± 0,3mm	± 0,1mm	± 0,1mm	± 0,4mm	± 0,7mm	± 0,5mm	± 1,0mm
Reproducibility *)	± 0,05mm	± 0,01mm	± 0,05mm	± 0,1mm	± 0,05mm	± 0,05mm	± 0,1mm	± 0,3mm	± 0,2mm	± 0,5mm
Size of light spot	Ø 2 mm	Ø 1 mm	Ø 2 mm	Ø 4 mm	Ø 2 mm	Ø 2 mm	Ø 4 mm	Ø 5 mm	Ø 5 mm	Ø 5 mm
Updating frequency	1000 Hz									
Temperature deviation	± 0,03 % of FS/°C									
Light source	Visible Laser (670 nm)									
Laser protection class	IEC 2									
Interfaces: digital analog	Standard RS 232- optional RS422 – optional Ethernet 1-9 VDC or 4-20 mA / 14 Bit									
Supply voltage	24 VDC ± 10 %									
Power consumption	Max. 4,5 W									
Operating temperature	0 bis +45 °C									
Degree of protection	IEC IP 65									
Dimensions in mm	255 x 205 x 70									
Weight	4500 g									

*) Resolution, Reproducibility and Linearity valid for static measurement on white paper. Slight tolerances are possible on other surfaces. FS: Full Scale

Scope of delivery:

- Sensor, Operation manual, Configuration- und Visualisation software

Options:

- All models are available as **HT-Versions**, **VHT-Versions** and **WHT-Versions** as well
(for measurements on hot surfaces up to 1000, 1500 and 2200°C) - The standard version is useable only for a surface temperature of approx. 500 °C
- All models are available with 2-Select-Option (**2 kHz**)
- All models are available with 5-Select-Option (**5 kHz**)
- All models are available with 10-Select-Option (**10 kHz**)
- All models are available with **RS-422** interface (Series by 5 and 10 kHz)
- All models are available with an optional **Ethernet** interface. The Ethernet interface can be used for distance measurement only, not for an internal thickness measurement.
- All models are available with laserclass **3R** and **3B** (Series by 5 and 10 kHz and all VHT-devices)

Accessories (optional):

- Cool- and protection housing
ODS Kü02, or **ODS Kü03 -series**



CONTACT



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