

목록

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System parameter	SL 04/A	SL 04/B
Beam polarisation	single linearly polarized longitudinal mode	
Wavelength	632,991234 ±0,0002 nm	
Output power	≥1,2 mW (typ. 1,5 mW)	≥1,5 mW
Amplitude noise (30 Hz - 10 MHz)	<0,2 %	
Beam diameter (TEM00)	0,63 mm	
Beam divergence (TEM00)	1,3 mrad	
Warm-up time to achieve stable operation	≤10 min	
Frequency control: Frequency stability 1 min/ 1h/ 24h relatively or absolutely after 40 min warm-up Amplitude stability t 1 min/ 1 h	$\pm 2 \cdot 10^{-9} / \pm 2 \cdot 10^{-9} / \pm 5 \cdot 10^{-9}$ ca. ±1 MHz/ ±1 MHz/ ±2,5 MHz <1 %/ <2 %	
Amplitude control: Amplitude stability 1 min/ 24 h	<0,2 %/ <0,5 %	none -
Max. tolerated optical feedback	<1·10 <sup>-4</sup>	
Operating temperature range	+15...+30 °C	
Storage temperature range	-40...+50 °C	
Typical life time	>25.000 h	
<b>Geometric data</b>		
Dimensions (L x W x H): Laser head Electronics unit	Ø45 mm x 314 mm 172 mm x 60 mm x 230 mm	
Mass: Laser head Electronics unit	900 g 1.600 g t	
Internal thread	1"-32 (C-Mount)	
Length of cable connecting laser head and electronics unit	2 m	
<b>Electrical daten</b>		
Power supply	100...240 VAC / 47...63 Hz	
Power consumption during stabilization	<20 W	
Laser safety class according to DIN EN 60825-1:2014 ANSI Z136.1 (CDRH)	3R IIIa	

09/2019 · Änderungen vorbehalten.



# SL Series

*Product information*

Stabilized HeNe lasers as measuring standard for laser-optical measuring technology and as frequency standard

# Frequency and amplitude stabilized lasers

## SL SERIES

Our stabilized HeNe lasers with a wavelength of 632.8 nm are used as a highstable measurement standard and as a frequency standard. The stabilization technique provides high frequency and amplitude stabilities, low optical feedback, and short warm-up time.

Optical assemblies and fiber-optic coupling devices can be coupled to the lasers via a screw-in thread.

## Options

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- Frequency connection to a traceable frequency standard with issue of a factory calibration certificate
- Marking indicating the beam's plane of polarization
- Fiber coupler installation and alignment
- Extended or adjustable operating temperature range
- Installation and alignment of Faraday isolator in order to eliminate back reflections

## Ideal for

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- Light sources in laseroptical measuring technology
- Science/research
- Frequency standard
- OEM applications



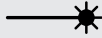
### Stabilized HeNe Laser model SL 02

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- compact design with integrated stabilization electronics and small plug-in power supply
- available with one or two polarized longitudinal modes
- fibre coupling on request



2.5 MHz / 1 h



≥ 1.2 mW (1 mode)  
≥ 2.4 mW (2 modes)



50 mm

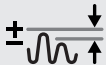


410 mm

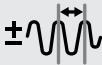
### Stabilized HeNe Laser model SL 04

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- amplitude or frequency stabilization as operating modes
- fibre coupling on request
- external supply unit enables max. variation of technical specifications



< 0.3%



1 MHz / 1 h



≥ 1.2 mW



45 mm

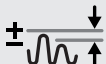


314 mm

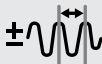
### Stabilized HeNe Laser model SL 03 mini

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- frequency stabilized
- compact stabilization electronics and power supply
- fibre coupling on request
- ideal for OEM applications as a built-in system



< 0.2%



1 MHz / 1 h



≥ 0.7 mW



32 mm



180 mm

We develop and manufacture laser interferometric measurement technology and precision measuring instruments for calibration and nano metrology.



Length Measurement Systems



Length and Angle  
Measurement Systems



Calibration Systems



Vibration  
Measurement Systems



Gauging Probe



Nanopositioning



Measurement and  
Calibration systems



Stabilized HeNe Lasers



Climate Measuring Station



Measurement Software



For customer-specific versions, OEM applications or integration in special measurement stations, please contact us.

We will be happy to personally assist you in finding solutions for your measuring tasks.

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