

목록

sl02_datasheet.....	1
sl02_flyer.....	2

System parameter	SL 02/1	SL 02/2
Beam polazation	single linearly polarized longitudinal mode	two mutually orthogonal linearly polarized modes
Wavelength	632.8 nm	
Output power	≥1,2 mW (typ. 1.5 mW)	≥2,4 mW (typ. 3 mW)
Amplitude noise (30 Hz - 10 MHz)	<0.5 %	
Beam diameter (TEM ₀₀)	0.63 mm	
Beam divergence (TEM ₀₀)	1.3 mrad	
Warm-up time to achieve stable operation	≤10 min	
Frequency stability 1min/ 1h/ 24h relatively or absolutely after 40 min warm-up	±2·10 ⁻⁹ / ±5·10 ⁻⁹ / ±10·10 ⁻⁹ ca. ±1 MHz/ ±2,5 MHz/ ±5 MHz	
Max. thermal frequency drift	<2 MHz/K	
Max. tolerated optical feedback	<1·10 ⁻⁵	
Operating temperature range	+15...+30 °C	
Storage temperature range	-40...+50 °C	
Typical life time	>25,000 h	
Geometric data		
Dimensions (L x W x H): Laser head Power supply	Ø20 mm x 410 mm 105 mm x 68 mm x 39 mm	
Mass: Laser head Power supply	900 g 350 g	
Internal thread standard/ optional	1.000"-32 / 1.279"-32	
Length of cable connecting laser head and power supply	1.5 m, optional bis 3 m	
Electrical data		
Input voltage	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	

05/2023 · Subject to change.



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

- 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

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

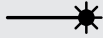


Stabilized HeNe Laser model SL 02

- 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)



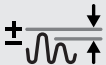
50 mm



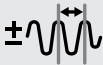
410 mm

Stabilized HeNe Laser model SL 04

- 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



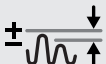
45 mm



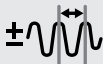
314 mm

Stabilized HeNe Laser model SL 03 mini

- 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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