

LASOS

For worldwide photonics

LASOS[®] He-Ne laser series



Helium-Neon laser modules
Helium-Neon laser tubes
Helium-Neon laser power supplies



He-Ne laser modules



He-Ne laser tubes



LASOS® He-Ne laser series

The LASOS® Helium Neon laser tubes and modules have a robust mechanical design, excellent beam quality and long service life of up to 30,000 hours. Standard and customized models are available in a large variety in the spectral range red, green and yellow with output powers between 0.5 and 20 mW. Options are single mode or multimode, randomly or linear polarized and Brewster window tubes for educational and scientific purposes.

All laser models can be provided with adequate OEM and laboratory power supplies, meeting the European and American standards with the availability of approvals and certificates CDRH, IEC, CSA, CE, TÜV, UL.

The Helium Neon lasers are designed for multipurpose applications such as confocal laser scanning microscopy, spectroscopy, digital imaging, metrology, industrial measurement, positioning, alignment, aiming, testing, code scanning, medical, basic research, education or entertainment.

Customized solutions for specific applications can be provided.

- Designed for long life, low noise and high stability

- Excellent beam quality and pointing stability

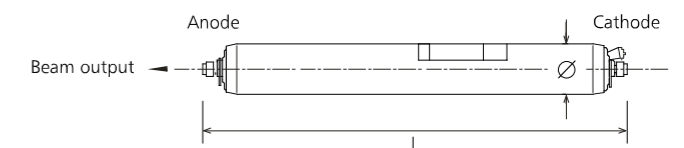
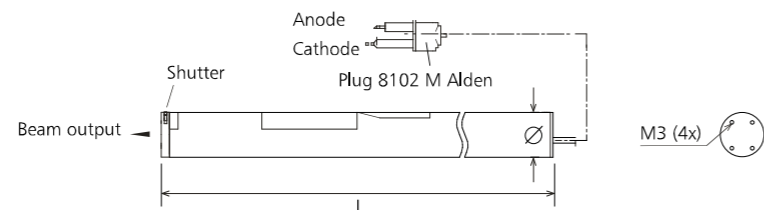
- Options:
- OEM power supplies
- Laboratory power supplies
- Fiber coupling
- He-Ne tubes with Brewster windows for educational purposes
- Customized modifications

Model	[nm]	P [mW] TEM ⁰⁰		Beam Diameter [mm]	Operating Voltage [V]	Operating Current [mA]	Dimension Ø x L [mm]	Model	Dimension Ø x L [mm]	Power Supply				
▶	632.8	0.5		0.34	1050	2.8		LGR 7656 ¹	22.5 x 118.6	106T-1200-3.0-TTL 5	106T-1200-3.5-TTL 5			
▶	LGK 7650-2	632.8	0.5	polarized	0.49	1300	3.5	35 x 170	LGR 7650 ¹	25.25 x 146	LGN 7467 A	LGN 7465	SAN 7467 A	SAN 7467 AJ
▶	LGK 7655	632.8	0.6		0.49	1300	3.5	35 x 170	LGR 7655	25.25 x 146	LGN 7467 A	LGN 7465	SAN 7467 A	SAN 7467 AJ
▶	LGK 7655 S	632.8	1		0.49	1300	3.5	35 x 170	LGR 7655 S	25.25 x 146	LGN 7467 A	LGN 7465	SAN 7467 A	SAN 7467 AJ
▶	LGK 7608	632.8	1.5		0.63	1700	4.9	31.7 x 241.3	LGR 7608	22.6 x 213.3	LGN 7461 A	LGN 7463	SAN 7461 A	SAN 7461 AJ
▶	LGK 7610	632.8	2		0.63	1700	4.9	31.7 x 241.3	LGR 7610	22.6 x 213.3	LGN 7461 A	LGN 7463	SAN 7461 A	SAN 7461 AJ
▶	LGK 7610 H ¹	632.8	2		0.63	1700	4.9	31.7 x 241.3	LGR 7610 H ²	22.6 x 213.3	LGN 7461 A	LGN 7463	SAN 7461 A	SAN 7461 AJ
▶	LGK 7672	632.8	2		0.75	1300	5.0	35 x 280	LGR 7621 S	30 x 255	LGN 7461 A	LGN 7463	SAN 7461 A	SAN 7461 AJ
▶	LGK 7634	632.8	2	polarized	0.75	1500	5.0	35 x 280	LGR 7634	30 x 255	LGN 7461 A	LGN 7463	SAN 7461 A	SAN 7461 AJ
▶	LGK 7627-8	632.8	5		0.8	2400	6.5	45 x 388	LGR 7627 ³	36.5 x 350	LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7628	632.8	5	polarized	0.8	2400	6.5	45 x 400	LGR 7628	36.5 x 350	LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7621 MM	632.8	5	multimode	1.4	1650	6.5	35 x 280	LGR 7621 MM	30 x 255	LGN 7460 A	SAN 7460 A1		
▶	LGK 7627 MM	632.8	10	multimode	0.7	3000	6.5	45 x 400	LGR 7627 MM	36.5 x 350	LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7653-8	632.8	10		0.7	3000	6.5	45 x 505			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK 7654-8	632.8	10	polarized	0.7	3000	6.5	45 x 505			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK 7654-13	632.8	10	polarized	0.7	3000	6.5	44.25 x 490			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK 7665	632.8	15		1.0	3700	7.0	45 x 637			LGN 7470 A	SAN 7470 A	SAN 7470 AJ	
▶	LGK 7665 P	632.8	15	polarized	1.0	3700	7.0	45 x 637			LGN 7470 A	SAN 7470 A	SAN 7470 AJ	
▶	LGK 7665-18	632.8	18		1.0	3700	7.0	45 x 637			LGN 7470 A	SAN 7470 A	SAN 7470 AJ	
▶	LGK 7665 P18	632.8	18	polarized	1.0	3700	7.0	45 x 637			LGN 7470 A	SAN 7470 A	SAN 7470 AJ	
▶	LGK 7665-20	632.8	20		1.0	3700	7.0	45 x 637			LGN 7470 A	SAN 7470 A	SAN 7470 AJ	
▶	LGK 7512 P	594	2	polarized	0.79	2400	6.5	45 x 537			LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7786 P50	543	0.5	polarized	0.85	2400	6.5	45 x 485			LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7786 P75	543	0.75	polarized	0.85	2400	6.5	45 x 485			LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7786 P100	543	1	polarized	0.85	2400	6.5	45 x 485			LGN 7460 A	LGN 7462	SAN 7460 A	SAN 7460 AJ
▶	LGK 7785-100	543	1		0.88	2800	6.5	45 x 537			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK 7785-150	543	1.5		0.88	2800	6.5	45 x 537			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK 7785-200	543	2		0.88	2800	6.5	45 x 537			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	
▶	LGK7785-250 ²	543	1.5		0.88	2800	6.5	45 x 537			LGN 7470 A4	SAN 7470 A4	SAN 7470 A4J	

*1 With heater, *2 On request

All models available and technical modifications reserve *1 Output at cathode side, *2 With heater, *3 Available with Brewster window termination

Availability and technical modifications reserved.





Special Selected Models

LASOS Model Selection Type	P [mW] TEM ⁰⁰	Beam Diameter [mm]	Selection Criteria**	Dimension Ø x L [mm]
▶ LGR 7607	> 2.0	0.7	PS, SL, LM	22.6 x 193
▶ LGK 7607	> 2.0	0.7	PS, SL, LM	31.7 x 241.3
▶ LGR 7609	> 2.0	0.56		23.6 x 189.5
▶ LGR 7609-01	> 2.5	0.56		23.6 x 189.5
▶ LGR 7609-02	> 2.0	0.56	PS, SL	23.6 x 189.5
▶ LGR 7609-03	> 2.5	0.56	PS, SL	23.6 x 189.5
▶ LGR 7609-S01	> 2.0	0.56	PS, SL, MF	23.6 x 189.5
▶ LGR 7608 P	> 1.5	0.63	SL	22.6 x 213.3
▶ LGR 7610 P	> 2.0	0.63	SL	22.6 x 213.3
▶ LGK 7608 P	> 1.5	0.63	SL	31.7 x 241.3
▶ LGK 7610 P	> 2.0	0.63	SL	31.7 x 241.3
▶ LGR 7637	3.5...3.8	0.49	SL	30 x 255
▶ LGK 7637	3.5...3.8	0.49	SL	35 x 280
▶ LGR 7695	> 0.75	0.49	SF random	22.6 x 130
▶ LGR 7695-01	> 0.75	0.49	SF 1,5-2,3 MHz	22.6 x 130
▶ LGR 7695-02	> 0.75	0.49	SF 2,3-2,8 MHz	22.6 x 130
▶ LGR 7695-03	> 0.75	0.49	SF 2,8-3,8 MHz	22.6 x 130
▶ LGR 7695-04	> 0.75	0.49	SF >3,8 MHz	22.6 x 130

Glossary of terms

Side lines (SL):

Unwanted emission besides the nominal wavelength value, often disturbing in spectroscopy and interferometry. Can be suppressed by special mirror technology.

Polarization switching (PS):

Sudden changes of the polarization of different modes especially in short tubes. Particularly disturbing when He-Ne laser tubes are used in frequency stabilized operation. Can be eliminated by special selection process.

Two longitudinal modes (LM):

Tube supports exact two orthogonally polarized longitudinal modes. Required for special methods of frequency stabilization.

Magnetic field stability (MF):

The above characteristics are also guaranteed in the presence of a strong magnetic field up to 3 G

Split frequencies (SF):

Frequency split of He-Ne laser modes in the presence of a strong magnetic field (> 200 G). Can be used for obtaining extremely high frequency stability. LASOS® has been successful in developing tubes with specific split frequencies for defined magnetic fields.

Special models

LGR 7627 BF / LGR 7660 BF01

LG series

Laser tube with Brewster window termination for operation with external mirrors

Laser module with integrated power supply 0.5...1 mW output power

Suitable for easy setup in measurement, science or education.

1 mW / 5 mW output power with appropriate mirrors.
Single mode and multimode operation possible.

Applicable for science and education



He-Ne laser power supplies

Model	Input [V]	Output [kVDC]	Operating Current [mA]	Dimensions L x W x H [mm]	Design	
LGN 7462	12	2.2-2.5	6.5	101.6 x 38.1 x 25.4	B	DC input
LGN 7463	12	1.25-1.75	5	101.6 x 38.1 x 25.4	B	
LGN 7465	12	1.2-1.6	3.5	95.25 x 38.1 x 25.4	B	
LGN 7460 A	115/230	2.2-2.6	6.5	107.95 x 76.2 x 30.48	A	AC input
LGN 7460 A1	115/230	1.5-2.1	6.5	107.95 x 76.2 x 30.48	A	
LGN 7461 A	115/230	1.25-1.75	5	107.95 x 76.2 x 30.48	A	
LGN 7466 A	115/230	1.0-1.6	2.8	107.95 x 76.2 x 30.48	A	
LGN 7467 A	115/230	1.2-1.7	3.5	107.95 x 76.2 x 30.48	A	
LGN 7470 A	115/230	3.5	7	177.8 x 60.96 x 35.56	C	
LGN 7470 A4	115/230	2.5-3.1	6.5	177.8 x 60.96 x 35.56	C	
SAN 7460 A	115/230	2.2-2.6	6.5	231 x 212 x 70	D	
SAN 7460 A1	115/230	1.5-2.1	6.5	231 x 212 x 70	D	
SAN 7461 A	115/230	1.25-1.75	5	231 x 212 x 70	D	
SAN 7467 A	115/230	1.2-1.7	3.5	231 x 212 x 70	D	
SAN 7470 A	115/230	3.5	7	231 x 212 x 70	D	
SAN 7470 A4	115/230	2.5-3.1	6.5	231 x 212 x 70	D	
SAN 7460 AJ	100	2.2-2.6	6.5	231 x 212 x 70	D	
SAN 7461 AJ	100	1.25-1.75	5	231 x 212 x 70	D	
SAN 7467 AJ	100	1.2-1.7	3.5	231 x 212 x 70	D	
SAN 7470 AJ	100	3.1-3.7	7	231 x 212 x 70	D	
SAN 7470 A4J	100	2.5-3.1	7	231 x 212 x 70	D	

Availability and technical modifications reserved.

