

Helium-Neon (HeNe) Lasers

RED 633 NM



Dimensions and shapes vary depending on models

Helium-Neon Laser Advantages

- Wide selection of power levels ranging 0.5 – 35 mW
- Optimized cavity mirror performance and quality
- Excellent power and thermal stability due to robust tube design
- Low beam pointing drift (after 20 minute warm-up)
- Power supply included
- CE compliant (except for the 35 mW laser)

APPLICATIONS

- Laser alignment
- Metrology
- Particle measurement
- Velocimetry
- Flow Cytometry
- Confocal microscopy



Newport offers a complete line of Helium-Neon (HeNe) Laser products, at the wavelengths of 543 nm, 594 nm, 633 nm, 1.52 μm , and 3.39 μm , that combine both high performance and affordability. All Newport HeNe lasers are CE compliant except Tunable and 35mW. The red HeNe laser product family offers TEM₀₀ mode at 633 nm. All are available in either linear or random polarization. With an emphasis on satisfying a variety of applications and budgetary needs, we offer a variety of power levels ranging from 0.5 mW to 35 mW. 35 mW HeNe laser is one of the most powerful commercial HeNe lasers available. This product family offers some of the highest power levels available in production HeNe lasers. Utilizing enhanced designs and superior optical components these lasers deliver unsurpassed operational stability and lifetimes. The mirror quality and performances are optimized to result in the highest quality HeNe lasers available in the market. These high-performance lasers are supported by a one-year warranty and are available off-the-shelf.

Newport also offers a Helium-Neon frequency and intensity stabilized laser.

Polarization

We have models whose outputs are either polarized or randomly polarized. Due to the random fluctuation of the polarization state of the beam, it is not recommended to use a polarizer with a random polarization laser for applications where polarized light is required.

Mounts (Sold separately)

Laser Mounts provide convenient mounting of cylindrical lasers to positioners, rods, and tables.



35 mW HeNe laser head

Helium-Neon (HeNe) Lasers

Specifications

Model	R-31008	R-31007	R-31005	R-30025	R-30988	R-30989
Min Output Power	0.5 mW	0.8 mW	1.5 mW		2.0 mW	
Spatial Mode	TEM ₀₀		TEM ₀₀		TEM ₀₀	
Polarization	Random	500:1	Random	500:1	Random	500:1
Beam Diameter, Max @ 1/e ² (mm)	0.57		0.57	0.64	0.81	
Beam Divergence Full Angle (mrad)	1.41		1.41	1.25	1.0	
Longitudinal Mode (MHz)	1082		1082	714	566	
Noise (%)	1.0		1.0	5	1.0	
Beam Drift, Long Term (mrad)	<0.05		<0.05	<0.2	<0.05	
Laser Head Size [in. (mm)]	7.00 L x 1.75 D (177.8 x 44.5)		7.00 L x 1.75 D (177.8 x 44.5)	9.50 L x 1.75 D (241.3 x 44.5)	13.00 L x 1.75 D (330.2 x 44.5)	
Power Supply Size (WxHxD) [in. (mm)]	4.125 x 1.5 x 6.5 (104.8 x 38.1 x 165.1)		4.125 x 1.5 x 6.5 (104.8 x 38.1 x 165.1)		4.125 x 1.5 x 6.5 (104.8 x 38.1 x 165.1)	
Suggested Laser Mount	ULM or ULM-TILT		ULM or ULM-TILT		ULM or ULM-TILT	
Power Requirements	120/240 VAC, 50/60 Hz		120/240 VAC, 50/60 Hz		120/240 VAC, 50/60 Hz	
CDRH Class	IIIa		IIIa		IIIa	
CE Compliant	Yes		Yes		Yes	
CE Class	3R		3R		3R	

Model	R-30990	R-30991	R-30992	R-30993	R-39635	R-30995	R-31425	R-32413
Min Output Power	5.0 mW		12.0 mW		17.0 mW		35.0 mW	
Spatial Mode	TEM ₀₀		TEM ₀₀		TEM ₀₀		TEM ₀₀	
Polarization	Random	500:1	Random	500:1	Random	500:1	500:1	500:1
Beam Diameter (1/e ²) (mm)	0.80		0.88		0.98		0.98	
Beam Divergence Full Angle (mrad)	1.01		0.92		0.82		0.66	
Longitudinal Mode (MHz)	441		316		252		163	
Noise (%)	1.0		1.0		1.0		1.0	
Beam Drift, Long Term (mrad)	<0.05		<0.05		<0.05		<0.05	
Laser Head Size [in. (mm)]	16.75 L x 1.75 D (425.5 x 44.5)		21.00 L x 1.75 D (533.4 x 44.5)		26.00 L x 1.75 D (660.4 x 44.5)		3.75 x 3.75 x 40.16 (95.3 x 95.3 x 1020)	
Power Supply Size (WxHxD)[in.]	4.125 x 1.5 x 6.5		4.125 x 1.5 x 6.5		4.125 x 1.5 x 6.5		3.75 x 3.75 x 12	
Suggested Laser Mount	ULM or ULM-TILT		ULM or ULM-TILT		ULM or ULM-TILT		N/A	
Power Requirements	120/240 VAC, 50/60 Hz		120/240 VAC, 50/60 Hz		120/240 VAC, 50/60 Hz		115 VAC, 50/60 Hz	230 VAC, 50/60 Hz
CDRH Class	IIIb		IIIb		IIIb		IIIb	
CE Compliant	Yes		Yes		Yes		No	
CE Class	3B		3B		3B		N/A	



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