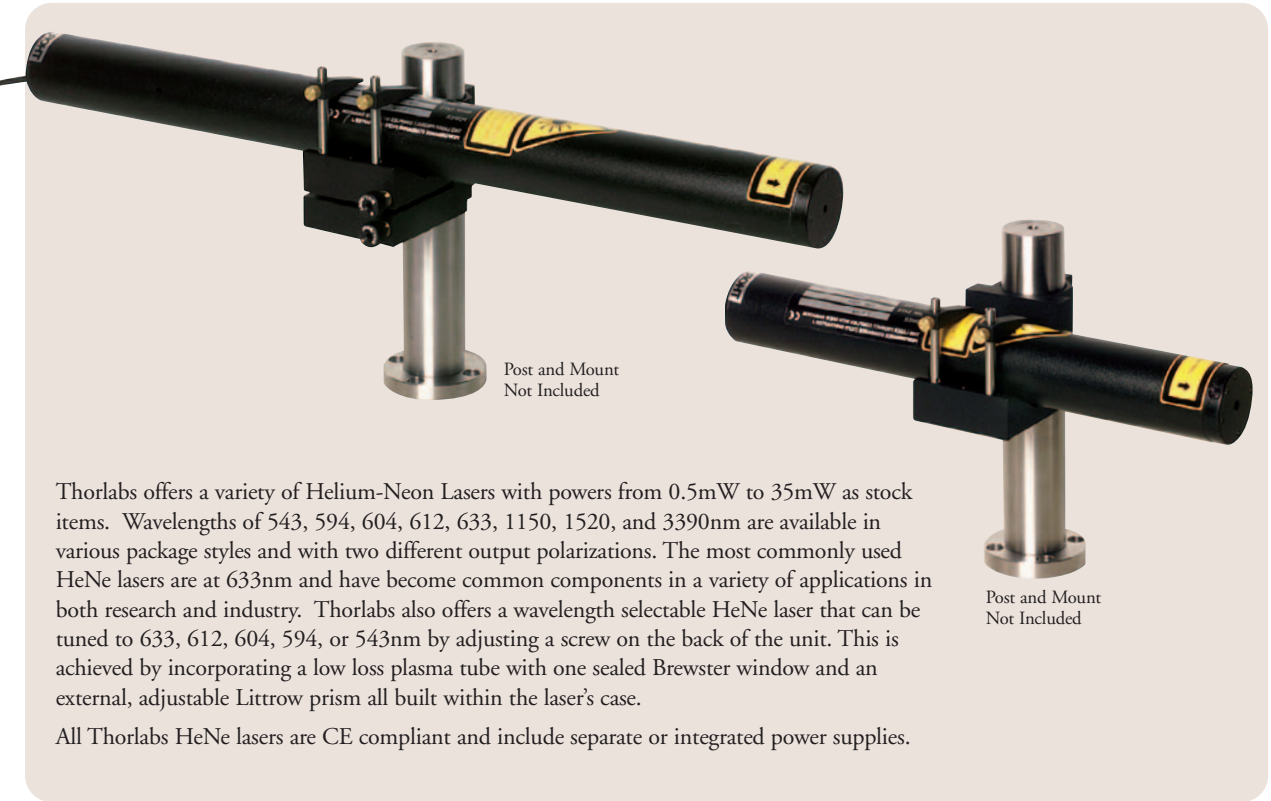


HeNe LASERS SELECTION GUIDE

Wavelengths at 543, 594, 604, 612, 633, 1150, 1520, & 3390nm



Thorlabs offers a variety of Helium-Neon Lasers with powers from 0.5mW to 35mW as stock items. Wavelengths of 543, 594, 604, 612, 633, 1150, 1520, and 3390nm are available in various package styles and with two different output polarizations. The most commonly used HeNe lasers are at 633nm and have become common components in a variety of applications in both research and industry. Thorlabs also offers a wavelength selectable HeNe laser that can be tuned to 633, 612, 604, 594, or 543nm by adjusting a screw on the back of the unit. This is achieved by incorporating a low loss plasma tube with one sealed Brewster window and an external, adjustable Littrow prism all built within the laser's case.

All Thorlabs HeNe lasers are CE compliant and include separate or integrated power supplies.

HeNe Laser Selection Guide

WAVELENGTH (nm)	CW OUTPUT POWER (mW)	1/e ² BEAM DIAMETER (mm)	BEAM DIVERGENCE (mrad)	LONGITUDINAL MODE SPACING (MHz)	MODE STRUCTURE	LASER HEAD LENGTH (inch/mm)	POLARIZATION RATIO	ITEM #	PAGE
543	0.5	0.72	0.96	416	TEM ₀₀ >99%	16.75/425.5	500:1	HGP005	573
543	0.5	0.64	1.07	566	TEM ₀₀ >99%	13/330.2	Random	HGR005	573
543	2.0	0.83	0.84	303	TEM ₀₀ >99%	21/533.4	Random	HGR020	573
594	2.0	0.74	1.03	416	TEM ₀₀ >99%	16.75/425.5	500:1	HYP020	573
633	0.5	0.57	1.41	1082	TEM ₀₀ >99%	7.0/177.8	Random	HRR005	571
633	0.8	0.57	1.41	1082	TEM ₀₀ >99%	7.0/177.8	500:1	HRP008	571
633	1.5	0.64	1.25	714	TEM ₀₀ >99%	9.5/241.3	500:1	HRP015	571
633	1.5	0.57	1.41	1082	TEM ₀₀ >99%	7.0/177.8	Random	HRR015	571
633	2.0	0.81	1.00	566	TEM ₀₀ >99%	13/330.2	500:1	HRP020	571
633	2.0	0.81	1.00	566	TEM ₀₀ >99%	13/330.2	Random	HRR020	571
633	5.0	0.80	1.01	441	TEM ₀₀ >99%	16.75/425.5	500:1	HRP050	572
633	5.0	0.80	1.01	441	TEM ₀₀ >99%	16.75/425.5	Random	HRR050	572
633	12.0	0.88	0.92	316	TEM ₀₀ >99%	21/533.4	500:1	HRP120	572
633	12.0	0.88	0.92	316	TEM ₀₀ >99%	21/533.4	Random	HRR120	572
633	17.0	0.98	0.82	252	TEM ₀₀ >99%	26/660.4	500:1	HRP170	572
633	17.0	0.98	0.82	252	TEM ₀₀ >99%	26/660.4	Random	HRR170	572
633	35.0	1.22	0.66	163	TEM ₀₀ >99%	3.75"sq.	500:1	HRP350	572
1523	1.0	1.36	1.43	316	TEM ₀₀ >99%	21/533.4	500:1	H152P1	573
3392	2.0	2.02	2.13	316	TEM ₀₀ >99%	21/533.4	500:1	H339P2	573

Wavelength Selectable HeNe Laser - See Page 573

WAVELENGTH (nm)	MODE STRUCTURE	MINIMUM POWER (mW)	BEAM DIAMETER (mm)	DIVERGENCE (mrad)	POLARIZATION RATIO	LONGITUDINAL MODE SPACING (MHz)
633	TEM ₀₀ >99%	4.0	0.77	1.05	500:1	428
612	TEM ₀₀ >99%	2.5	0.76	1.03	500:1	428
604	TEM ₀₀ >99%	0.5	0.75	1.02	500:1	428
594	TEM ₀₀ >99%	0.6	0.74	1.02	500:1	428
543	TEM ₀₀ >99%	0.3	0.71	0.97	500:1	428

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3B LASER PRODUCT
543-700nm <5mW
IEC 60825-1 EDITION 1.2 2001-08

INVISIBLE LASER RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
700-800nm <50mW
IEC 60825-1 EDITION 1.2 2001-08

LASER RADIATION
DO NOT VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS!
CLASS 1M LASER PRODUCT
1500-3500nm <50mW
IEC 60825-1 EDITION 1.2 2001-08

Self-Contained Red (632.8nm) Helium-Neon Lasers

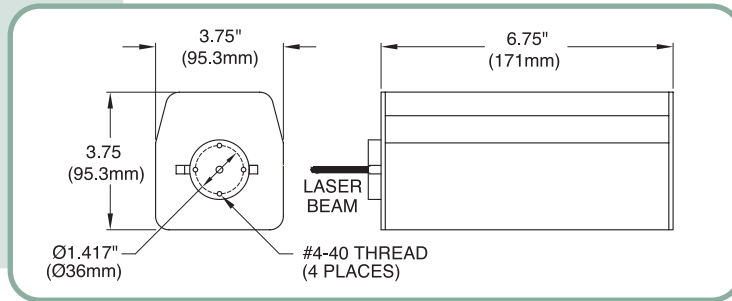
These compact, self-contained Helium-Neon lasers integrate a red (632.8nm) HeNe laser tube with a built-in switchable power supply. They are the ideal choice for applications, such as alignments, that require a small, low-power laser. The rugged enclosure includes four #4-40 mounting holes for easy attachment of accessories.



Features

- Ideal for Alignment Applications
- Available in Polarized and Random Polarization Versions
- Built-In Switchable Beam Block
- Built-In Switchable Power Supply & CE Compliant
- Improved Start-Up Circuit
- Four #4-40 Tapped Mounting Holes for Easy Attachment of Accessories

**SWITCHABLE
(110/230VAC) POWER
SUPPLY INCLUDED**



- Tunable Lasers
- Femtosecond Laser
- WDM Laser Sources
- Benchtop Laser Sources
- HeNe Lasers**
- ASE Sources
- Terahertz
- Electro-Optic Modulators

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
543-700nm <5mw
IEC 60825-1 EDITION 1.2.2001-08

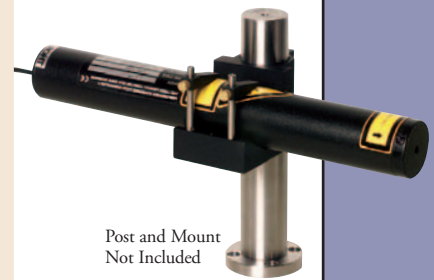
ITEM #	λ	\$	£	€	RMB	POWER	DESCRIPTION	POLARIZATION
HRP005S	632.8nm	\$ 720.00	£ 453.60	€ 669.60	¥ 6,876.00	0.5mW	HeNe Laser System, 633nm, 0.5mW, Polarized	Linear >500:1
HRR005S	632.8nm	\$ 650.00	£ 409.50	€ 604.50	¥ 6,207.50	0.5mW	HeNe Laser System, 633nm, 0.5mW, Random	Random
HRR008S	632.8nm	\$ 720.00	£ 453.60	€ 669.60	¥ 6,876.00	0.8mW	HeNe Laser System, 633nm, 0.8mW, Random	Random

Low-Power, Compact, Red (632.8nm) Helium-Neon Lasers 0.5mW to 2.0mW

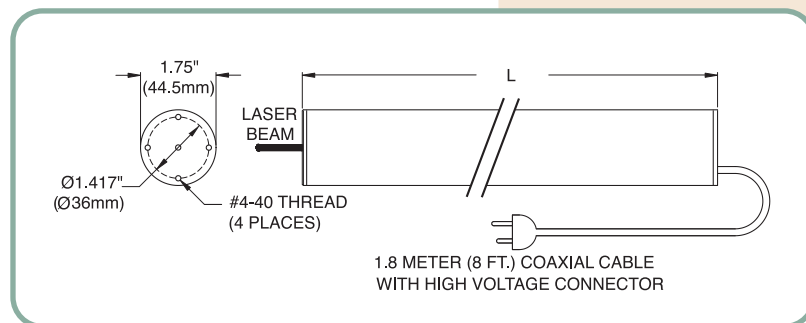
These cylindrical, low-power, red (632.8nm) Helium-Neon lasers range in power from 0.5mW to 2.0mW. The classic tube design makes it easy to mount in nearly any optical system. The HeNe laser comes with a built-in Interlock for safety. Thorlabs offers the 632.8nm laser with either linear (>500:1) or random polarization, and beam divergences ranging from 1.00mrad – 1.41mrad.

Low Power & Compact HeNe Laser Features

- Cylindrical Tube Mounts Easily Into Optical Systems
- Four #4-40 Tapped Mounting Holes for Easy Attachment of Accessories
- Keyed Power Supply With Built-In Interlock
- Separate Power Supply Included
- CE Compliant



Post and Mount Not Included



**SWITCHABLE
(110/230VAC) POWER
SUPPLY INCLUDED**

Post and Mount Not Included

ITEM #	POWER	POLARIZATION	L	\$	£	€	RMB	1/e ² BEAM DIAMETER	BEAM DIVERGENCE	LONGITUDINAL MODE SPACING
HRR005	0.5mW	Random	7.00"	\$ 890.00	£ 560.70	€ 827.70	¥ 8,499.50	0.57mm	1.41mrad	1082MHz
HRP008	0.8mW	Linear >500:1	7.00"	\$ 930.00	£ 585.90	€ 864.90	¥ 8,881.50	0.57mm	1.41mrad	1082MHz
HRP015	1.5mW	Linear >500:1	9.50"	\$ 960.00	£ 604.80	€ 892.80	¥ 9,168.00	0.64mm	1.25mrad	741MHz
HRR015	1.5mW	Random	7.00"	\$ 930.00	£ 585.90	€ 864.90	¥ 8,881.50	0.57mm	1.41mrad	1082MHz
HRP020	2.0mW	Linear >500:1	13.00"	\$ 950.00	£ 598.50	€ 883.50	¥ 9,072.50	0.81mm	1.00mrad	566MHz
HRR020	2.0mW	Random	13.00"	\$ 910.00	£ 573.30	€ 846.30	¥ 8,690.50	0.81mm	1.00mrad	566MHz