

Green, Yellow, and IR Helium-Neon Lasers

Thorlabs offers a selection of HeNe lasers with output at 543 nm, 594 nm, 1523 nm, or 3392 nm. These HeNe Lasers have power levels ranging from 0.5 to 2.0 mW. The HGP005, HYP020, H152P1, and H339P2 are polarized models, whereas the HGR005 and HGR020 exhibit random polarization.

Features

- Output at 543, 594, 1523, or 3392 nm
- Long Lifetimes
- Ideal for Alignment Applications and Precision Metrology

Specifications	Operating	Storage
Temperature Range (°C)	-20 to 70	-40 to 80
Maximum Altitude (m)	0 to 3000	0 to 6000
Humidity	≤80%	≤95%
Shock	15 g for 11 ms	
Startup Voltage	<10 kV DC	
Beam Drift (After 20 min Warm-up)	<0.2 mrad	
Long-Term Beam Drift	<0.05 mrad	
Noise (30 Hz to 10 MHz)	<1% RMS	



ITEM#	POWER	WAVELENGTH	L	\$	£	€	RMB	1/e ² BEAM DIAMETER	BEAM DIVERGENCE	POLARIZATION
HGP005	0.5 mW	543 nm	16.75"	\$ 1,487.00	£ 1,031.00	€ 1,320.00	¥ 12,557.00	0.72 mm	0.96 mrad	Linear >500:1
HGR005	0.5 mW	543 nm	13.00"	\$ 1,265.00	£ 877.00	€ 1,123.10	¥ 10,682.00	0.64 mm	1.07 mrad	Random
HGR020	2.0 mW	543 nm	21.00"	\$ 1,995.00	£ 1,383.00	€ 1,771.00	¥ 16,846.00	0.83 mm	0.84 mrad	Random
HYP020	2.0 mW	594 nm	16.75"	\$ 2,079.00	£ 1,441.00	€ 1,846.00	¥ 17,556.00	0.74 mm	1.03 mrad	Linear >500:1
H152P1	1.0 mW	1523 nm	21.00"	\$ 2,498.00	£ 1,731.50	€ 2,217.50	¥ 21,094.00	1.36 mm	1.43 mrad	Linear >500:1
H339P2	2.0 mW	3392 nm	21.00"	\$ 3,035.00	£ 2,104.00	€ 2,694.50	¥ 25,628.00	2.02 mm	2.13 mrad	Linear >500:1

Wavelength-Selectable Helium-Neon Laser

- Output at 633, 612, 604, 594, or 543 nm
- Excellent Power, Beam Pointing, and Thermal Stability

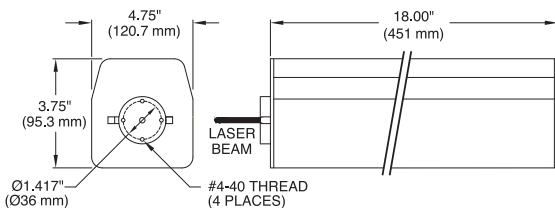
Thorlabs offers a line of selectable-wavelength, five-color, HeNe laser systems that can switch between all of the main visible neon laser transitions (543 nm, 594 nm, 604 nm, 612 nm, and 633 nm), making the system a versatile and economical research tool.

HTPS



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

The HTPS and HTPS-EC HeNe Lasers incorporate a low-loss plasma tube with one sealed Brewster Window and an external Littrow Prism. By adjusting the angle of the Littrow Prism using the micrometer adjustments on the rear panel, the user can select among the visible neon laser transitions. A power supply is housed internally in the laser, making the unit completely self-contained. Choose the HTPS for 110 V operation and the HTPS-EC for 230 V operation.



Please refer to our website for complete models and drawings.

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Humidity	≤80%	≤95%
Shock	15 g for 11 ms	
Startup Voltage	<10 kVDC	
Beam Drift (After 20 min Warm-up)	<0.2 mrad	
Long-Term Beam Drift	<0.05 mrad	
Noise (30 Hz to 10 MHz)	<1% RMS	

ITEM#	λ(nm)	\$	£	€	RMB	POWER	DESCRIPTION	POLARIZATION
HTPS	543-633	\$ 5,678.00	£ 3,937.00	€ 5,041.00	¥ 47,946.00	0.3-4.0 mW	Wavelength-Selectable, Five-Color HeNe Laser, 110 VAC	Linear >500:1
HTPS-EC	543-633	\$ 5,678.00	£ 3,937.00	€ 5,041.00	¥ 47,946.00	0.3-4.0 mW	Wavelength-Selectable, Five-Color HeNe Laser, 230 VAC	Linear >500:1