



INFRARED CYLINDRICAL LASER HEADS

Research Electro-Optics, Inc. (REO) has been a leader in the field of high performance and high reliability Helium-Neon lasers for over twenty years. The vast majority of our laser tubes manufactured over the years have been incorporated into medical, scientific and critical manufacturing instruments. This experience, combined with our on-staff technical expertise and flexible manufacturing structure, makes REO uniquely suited to supplying Helium-Neon lasers for performance critical applications.

REO's primary strength in the Helium-Neon laser market is our in-house optical fabrication and coating capability. It is widely acknowledged that mirror performance is one of the most critical factors in maintaining consistently long laser life. Manufacturing these components in-house is the best way to develop insight into the technical factors affecting mirror performance and to ensure consistent mirror quality. Our technical insight into optimizing mirror performance provides our laser products with competitive advantages in terms of output power and laser lifetimes. Utilizing enhanced designs and superior components, these lasers deliver unsurpassed operational stability and longer laser lifetimes.

REO's historical emphasis has been on meeting the needs of the OEM customer. Our long history with laser manufacturing, our in-house control of critical components, and our advanced quality system endow REO with all of the desired attributes of a critical OEM vendor. REO's focus on the high performance segment of the Helium-Neon market has enabled us to maintain a flexible, performance-oriented manufacturing structure that can be easily adapted to meet custom requirements when an OEM application demands it.

REO reinforces our quality statement by offering a one-year warranty on all Helium-Neon lasers.



Features:

- Longer Lifetimes
- Higher Output Powers
- Power Stability
- Thermal Stability
- Beam Pointing Stability

Applications:

- Interferometry
- Wavelength Reference
- Fiber Optic Telecommunications Testing
- Scientific Research

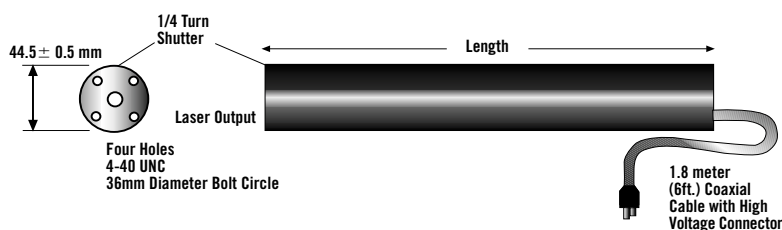
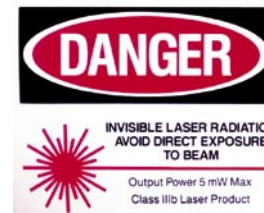
INFRARED CYLINDRICAL LASER HEADS

Model Number	Mode Structure	Wave-length (μm)	Mini-mum Output Power (mW)	Beam Diam-eter (mm)	Beam Divergence (mrad)	Polar-ization Ratio	Longitu-dinal Mode Spacing (MHz)	CDRH Class	Recom-mended Power Supply	Length (mm) $\pm 1\text{mm}$
LHIP-0201-115	TEM ₀₀	1.15	2.0	1.09	1.34	500:1	375	IIIb	LPS-H1	482.6
LHIP-0101-152	TEM ₀₀	1.52	1.0	1.36	1.43	500:1	316	IIIb	LPS-H1	533.4
LHIP-0201-339	TEM ₀₀	3.39	2.0	2.03	2.13	500:1	316	IIIb	LPS-H1	533.4
LHIP-0501-115/339	TEM ₀₀	1.15/3.39	2.0/3.0	0.90/1.55	1.62/2.78	500:1	316	IIIb	LPS-H1	533.4
LHIRP-0101-152/633	TEM ₀₀	1.52/0.633	0.8/1.0	1.36/0.87	1.42/0.92	500:1	316	IIIb	LPS-H1	533.4

REO offers infrared Helium-Neon lasers with output wavelengths of 1.15 μm , 1.52 μm and 3.39 μm . These lasers have applications in infrared interferometry, as infrared wavelength references and in fiber optics testing for telecommunications.

The models LHIP-0501-115/339 and LHIRP-0101-152/633, which are dual output wavelength lasers, are particularly useful for far infrared applications. The two output beams are precisely collinear, a feature that makes the shorter wavelength beam a useful alignment guide for the longer wavelength beam. For the model LHIP-0501-115/339 an optional output filter is available that allows selection of simultaneous output at 1.15 μm and 3.39 μm , or either wavelength independently.

	Operating	Non-Operating
TEMPERATURE (C°)	-20° TO +70°	-40° TO +80°
ALTITUDE (meters)	0 TO 3,000	0 TO 6,000
HUMIDITY	$\leq 80\%$	$\leq 95\%$
SHOCK	15 g for 11 msec	
STARTING VOLTAGE	< 10 kVDC	
BEAM DRIFT AFTER 20 MINUTE WARM UP	< 0.2 mrad	
LONG TERM BEAM DRIFT	< 0.05 mrad	
NOISE (30Hz - 10MHz)	< 1% rms	
NOISE (30Hz - 10MHz)	< 20% rms for LHIP-0501-115/339	
	< 20% rms for LHIRP-0101-152/663	



Research Electro-Optics, Inc.