



HIGH-POWER 633nm HELIUM-NEON LASER SYSTEM

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:

- Scientific Research
- Biomedical Instrumentation
- Flow Cytometry
- Image Recording

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Model Number	Mode Structure	Minimum Output Power (mW)	Beam Diameter (mm)	Beam Divergence (mrad)	Polarization Ratio	Longitudinal Mode Spacing (MHz)	CDRH Class
LSRP-3001	TEM ₀₀	30.0	1.22	0.66	500:1	163	IIIb
LSRP-3501	TEM ₀₀	35.0	1.22	0.66	500:1	163	IIIb

REO's high power 633nm laser systems offer a completely modern design strategy to large frame Helium-Neon lasers. Based on a novel extension of the hard sealed technology that has been refined over the past twenty years with our cylindrical lasers, these laser systems bring to high power applications the reliable, long-lived operation proven with our cylindrical head lasers. The innovative construction of REO's high power system includes a rigid outer housing to maintain mirror alignment, providing a much lighter laser that is less susceptible to misalignment during shipment and installation than older designs common with competitive systems.

	Operating	Non-Operating
TEMPERATURE (C°)	-20° TO +70°	-40° TO +80°
ALTITUDE (meters)	0 TO 3,000	0 TO 6,000
HUMIDITY	≤ 80%	≤ 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	

