



REO[™]
precision optical solutions

Covering the full spectrum of your photonics needs.

Think **REO**

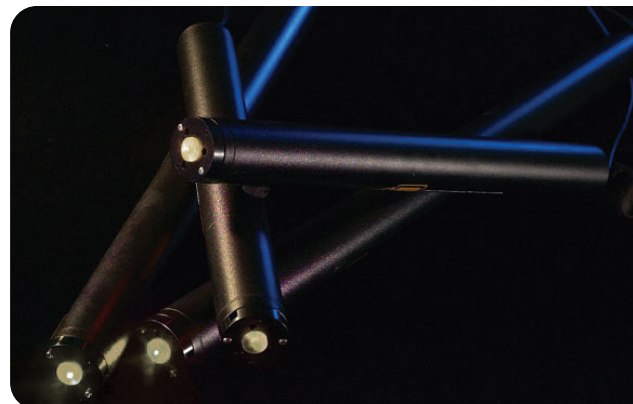
Infrared Cylindrical Helium-Neon Lasers

REO has been building lasers for over 20 years, and is now the world's leading manufacturer of high performance Helium-Neon lasers for applications such as confocal microscopy, ellipsometry, particle counting, food sorting and other demanding instrumentation applications.

REO has achieved this leadership position because we possess a combination of design and fabrication capabilities that are unique in our industry. For example, we are the only HeNe manufacturer to polish and coat its own laser mirrors in-house. This allows us to employ a variety of specialized techniques in both substrate polishing and thin film coating that minimize scatter and absorption, and yield very high reflectivity. Since the mirrors are the most critical components in a HeNe laser resonator, the result is maximum power for a given laser size, long operational lifetime, high stability and outstanding reliability.

In addition to providing a technically superior product, we're also focused on meeting the practical needs of OEM customers. This means supplying a product that meets a customer's specific needs in terms of packaging, performance, functionality, delivery schedule and cost. We accomplish this by leveraging the extensive technical expertise of our design and fabrication staffs, together with the use of flexible manufacturing processes.

If you need Helium-Neon lasers for performance critical applications, then **think REO.**



Features:

- Long Lifetime
- Superior Beam Pointing Stability
- Excellent Power Stability
- High Thermal Stability



Infrared Cylindrical Helium-Neon Laser Head Specifications

	40136	33141	32172	40138	40137
Optical					
Wavelength (μm)	1.15	1.52	3.39	1.15 3.39	1.52 0.633
Maximum Output Power (mW)	1	1	2	2.0 3.0	0.8 1.0
Maximum Output Power (mW)	5.0	5.0	5.0	10.0	5.0
Power 3 Seconds After Turn-On (%)	> 75				
Linear Polarization	500:1				
Mode Structure	TEM ₀₀ > 99%				
Beam Diameter (mm)	1.09	1.36	2.02	0.90 1.55	1.36 0.87
Beam Divergence (mrad)	1.34	1.43	2.13	1.62 2.78	1.42 0.82
Longitudinal Mode Spacing (MHz)	316	316	316	316	316
Beam Drift After 20 Minute Warm-Up (mrad)	< 0.2				
Long Term Beam Drift (mrad)	< 0.05				
RMS Noise (30 Hz - 10 MHz)	<1%	<1%	<5%	<20%	<20%
CDRH/CE Classification	IIIb/3B				
Electrical					
Starting Voltage (kVDC)	< 10				
Operating Voltage (VDC)	2700	2800	2800	2800	2800
Series Resistors in Housing (kΩ)	94				
Operating Current (mA)	6.50				
Recommended Power Supply	32882				
Mechanical					
Weight (grams)	700	750	750	750	750
Shock	15 g for 11 msec				
Operating Temperature (°C)	-20 to +70°				
Non-Operating Temperature (°C)	-40 –to +80°				
Operating Humidity (%)	≤80				
Non-Operating Humidity (%)	≤95				
Operating Altitude (m)	0 to 3,000				
Non-Operating Altitude (m)	0 to 6,000				

	Length		Diameter	
	mm	inches	mm	inches
40136	533.4 ±1.0	21.00±0.04	44.5±0.5	1.75±0.02
33141	533.4 ±1.0	21.00±0.04		
32172	533.4 ±1.0	21.00±0.04		
40138	533.4 ±1.0	21.00±0.04		
40137	533.4 ±1.0	21.00±0.04		

