



**REO**<sup>™</sup>  
precision optical solutions

*Covering the full spectrum of your photonics needs.*

Think **REO**

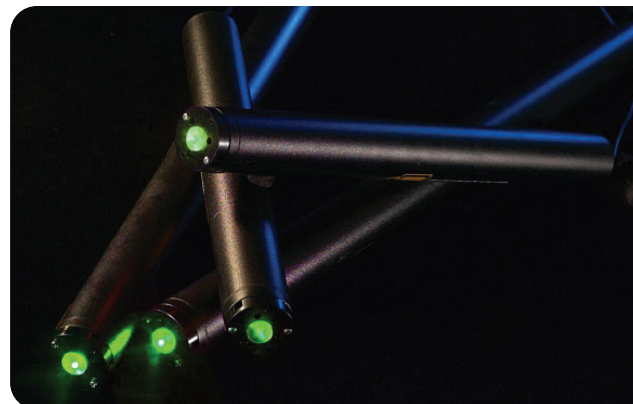
## Green (543 nm) Cylindrical Helium-Neon Lasers

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



## Green (543 nm) Cylindrical Helium-Neon Laser Head Specifications

	40141	30967	30968	39581	33361	30972
<b>Optical</b>						
Minimum Output Power (mW)	0.5	0.5	0.5	1.0	1.5	2
Maximum Output Power (mW)	5.0	2.0	5.0	5.0	5.0	5.0
Power 3 Seconds After Turn-On (%)	> 75					
Polarization						
Random		•				•
Linear > 500:1	•		•	•	•	
Mode Structure	Multimode		TEM <sub>00</sub> > 99%			
Beam Diameter (mm)	~1.62	0.64	0.72	0.83	0.83	0.83
Beam Divergence (mrad)	~4.02	1.07	0.96	0.84	0.84	0.84
Longitudinal Mode Spacing (MHz)	566	566	416	303	303	303
Beam Drift After 20 Minute Warm-Up (mrad)	< 0.2					
Long Term Beam Drift (mrad)	< 0.05					
RMS Noise (30 Hz - 10 MHz)	< 1%					
CDRH/CE Classification	IIIa/3R					
<b>Electrical</b>						
Starting Voltage (kVDC)	< 10					
Operating Voltage (VDC)	1800	1800	2200	3200	3200	3100
Series Resistors in Housing (kΩ)	94					
Operating Current (mA)	5.25					
Recommended Power Supply	32880	32880	32880	32881	32881	32881
<b>Mechanical</b>						
Weight (grams)	600	600	650	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
40141	330.2 ±1.0	13.00±0.04		
30967	330.2 ±1.0	13.00±0.04		
30968	425.5 ±1.0	16.75±0.04		
39581	533.4 ±1.0	21.00±0.04	44.5±0.5	1.75±0.02
33361	533.4 ±1.0	21.00±0.04		
30972	533.4 ±1.0	21.00±0.04		

