



HNL020L

Description

Thorlabs' cylindrical, low-power, red (632.8 nm) Helium-Neon gas lasers are available with output powers from 0.8 to 2.0 mW. Thorlabs offers these 632.8 nm lasers with either linear (>500:1) or random polarization and beam divergences ranging from 1.3 to 1.7 mrad.

Specifications

General	
Wavelength	632.8 nm
Minimum Output Power (TEM ₀₀ , 633 nm)	2.0 mW
Minimum Polarization Ratio	500:1
Beam Diameter (TEM ₀₀ , 1/e ² points + 3%)	0.63 mm
Beam Divergence (TEM ₀₀ , +3%)	1.3 mrad
Mode Purity (TEM ₀₀)	>95%
Longitudinal Mode Spacing	730 MHz
Maximum Noise (RMS) (30 Hz to 10 MHz)	0.1%
Maximum Drift*	±2.5%
Maximum Mode Sweeping Contribution	3%
Beam Pointing Stability (25 °C)	
-From Cold Start	<0.10 mrad
-After 15 minute Warm-Up	<0.02 mrad
Operating Voltage (±100 V)	1800 VDC
Operating Current (±0.1 mA)	6.5 mA
Max Starting Voltage	10 kVDC

*With respect to Mean Power over 8 hrs

Physical/Mechanical Characteristics	
Maximum Warm-Up Time (95% Power)	10 minutes
Expected Operating Lifetime	>30,000 hrs
Storage Lifetime	Indefinite (Hard-Sealed)
Static Alignment	Center to Outer Cylinder within ±0.01" Parallel to Outer Cylinder within ±1 mR
Laser Head Weight	0.92 lbs (0.42 kg)



Specifications, cont.

Environmental	
Operating Temperature	-40 to 70 °C
Non-Operating Temperature	-40 to 150 °C
Operating Altitude	0 to 10,000 feet
Non-Operating Altitude	0 to 70,000 feet
Relative Humidity (Non-Condensing)	0 to 100%
Shock	25 g for 11 ms; 100 g for 1 ms

Safety	
CDRH/IEC 60825-1 Class	IIIa/3R

Drawings

