

# 13 mW 632.8nm (RED) HELIUM NEON LASER

## MODEL: 05-LHP-991-529

### OUTPUT SPECIFICATIONS

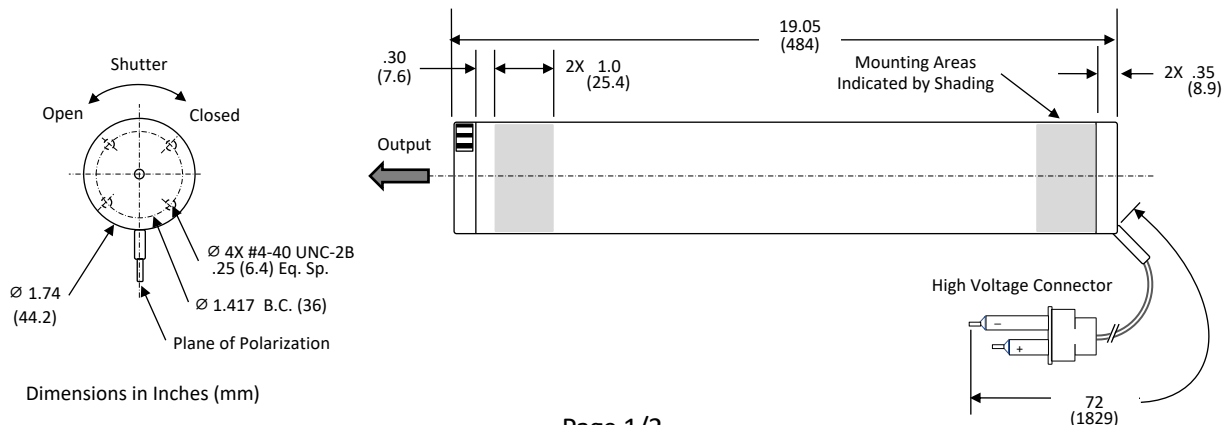
Minimum CW Power Output (mW)	13.0
Wavelength (nm)	632.8
Transverse Mode	> 90% TEM <sub>00</sub>
Polarization	Linear >500:1
Beam Diameter at 1/e <sup>2</sup> Points	0.65 ± 5%
Beam Divergence (mrad)	1.24 ± 5%
Longitudinal Mode Spacing (MHz)	341
Mode Sweeping	< 2%
Long Term Power Drift (8 hrs)	< 5%
Amplitude Noise, 30 Hz to 30 MHz (peak-to-peak)	< 2.8%
Warmup to > 95% of Maximum Power (minutes)	< 15
Beam Concentricity with Respect to Housing (mm)	± 0.25
Beam Parallelism with Respect to Housing (mrad)	< 1

### ELECTRICAL SPECIFICATIONS

Start Voltage (kVdc)	< 10		
Recommended Operating Current (mA)	6.5 ± 0.2		
Operating Voltage (VDC)	2640 ± 100		
Recommended Power Supply	Laboratory	OEM (AC)	OEM (DC)
	05-LPL-915-065	05-LPM-915-065	05-LPM-824-065

### ENVIRONMENTAL SPECIFICATIONS

	OPERATING	NON-OPERATING
Temperature (°C)	-20 to +40	-40 to +80
Altitude (meters)	0 to 3000	0 to ∞
Relative Humidity (% , non-condensing)	0 to 99%	0 to 99%
Mechanical Shock (g)	< 1 for < 11 msec	< 25 for < 11 msec < 100 for < 1 msec



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**LASER CLASSIFICATION**

US 21 CFR 1040.10	Compliant [See Conditions of Acceptability Below]	Class IIIb
IEC 60825-1:2014	Compliant [See Conditions of Acceptability Below]	Class 3B
US FDA Accession Number		8010237

**REGULATORY COMPLIANCE**

Laser Safety		IEC 60825-1:2014
Electrical Safety		IEC 61010-1:2010 + A1
Certifying Body		TUV Rheinland
RoHS 3		EU 2015/863
Product Markings		cTUVus, CE, WEEE

**EXPORT INFORMATION**

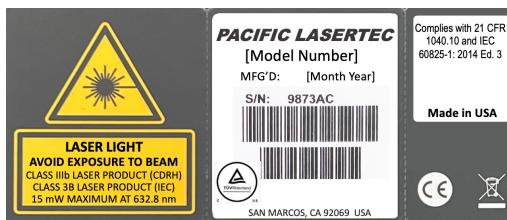
**LASER**

**POWER SUPPLY\***

ECCN	EAR99	EAR99
HTTS	9013.20.0000	8504.40.9510
Country of Origin	United States	Contact Factory

*THESE PRODUCTS ARE SOLD IN ACCORDANCE WITH UNITED STATES EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAWS IS PROHIBITED.*

\* Power Supply is Sold Separately



**CONDITIONS OF ACCEPTABILITY :**

1. For component type devices, the following requirements shall be followed at end use.
2. The laser power supply at end use shall have negative output terminal reliably connected to earth. The maximum output current of the power supply shall not exceed 2.5A under normal and fault conditions.
3. Safety interlock switch, key switch, controls, laser housing and laser beam attenuator, as appropriate for each laser Class, must be present in accordance with Laser safety standards, IEC/EN 60825-1:2014.
4. A visual or audio indicator, in accordance to Laser safety standards, shall be provided in the end product.
5. The unit's thermal circuitry shall be evaluated in the end product.
6. The end user must provide their own safety monitoring mechanism to shut down a power supply if it fails to start the laser after several seconds.
7. IEC/EN 60825-12 shall be considered if the end system is a free space optical communication system used for transmission of information.

Information contained herein is for reference only and subject to change without notice.