

CHROMALASE 532TM

**532nm Laser Module
20mW Output Power**

**With
Integrated Drive,
Temperature Stabilization
& Control Electronics**



Performance

The Blue Sky Research CHROMALASE 532TM laser module features a high output DPSS laser with a thermoelectric cooler (TEC) and integrated drive, and protection electronics in a compact, easy to use package. Standard features include a SLEEP option, a manual shutter, low optical power alignment control, and 5V dc operation. The CHROMALASE 532TM package measures 82x40x34 mm, and is a complete laser system, which requires no external power conditioning, control boxes, or fan cooler systems.

The CHROMALASE 532TM module makes use of proprietary technology to deliver a steady low noise output with high power stability. Power out to 20 mW CW is available. The output beam is collimated and provides a beam quality comparable to that of a fiber coupled system with excellent pointing stability. The proven DPSS technology boasts high reliability - the CHROMALASE 532TM obsoletes green HeNe lasers for most applications. Options under development include TTL modulation and fiber coupled versions for flexible beam delivery.

Features

- * Low noise option available (< 0.2% RMS)
- * SLEEP Mode and low power system alignment
- * < 2W Typical power consumption
- * Gaussian beam with $M^2 < 1.2$
- * to 20mW of 532nm Pout
- * Power stability < 1.0%
- * Single 5V DC operation
- * Pointing stability < 30 μ rad

Applications

- * Analytical Instruments
- * Flow Cytometry
- * Entertainment
- * Biomedical & Medical
- * Basic R&D
- * Inspection & Metrology

Contact Information:

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CHROMALASE 532TM Rev. 6/3/2005



CHROMALASE 532™

Product Specifications

Laser System Characteristics

Parameter	Specification
Wavelength	532 ± 0.5 nm
Output Power	5,10,20 mW Fixed
Noise, RMS 10Hz to 20MHz	< 0.5% (Option for <0.2%)
Power Stability (8hrs, ΔT<3 °C, 5min warm-up)	< 1.0%
Pointing Stability (8hrs, ΔT<3 °C, 5min warm-up)	< 30μrad

Beam Characteristics

Parameter	Specification
Beam Diameter (1/e ² point, exit aperture)	0.8 – 1.1 mm
Circularity (1/e ² point, exit aperture)	0.9 – 1.1
Beam Divergence	<1.2 mrad
Bore Site Accuracy	+/-5 mrad
Static Beam Alignment	<+/- 0.25 mm
Polarization (Horizontal, within 3°)	>200:1, linear
M ² (Calculated, Far-Field)	<1.2

Electrical Specifications

Parameter	Specification
Input Voltage	5Vdc (+/- 5%)
Power Consumption	≤ 4W
Warm-Up Time	5 minutes

Environmental Specifications

Parameter	Specification
Storage Temperature	-10° C to +65° C
Operating Temperature (Base Plate)	10°C to 45°C
Operating Humidity Range	90 C (Non-Condensing)

Mechanical Specifications

Parameter	Specification
Package Dimensions	82 x 40 x 34 mm
Mounting	Four 3.2mm through holes
Shock (11ms duration)	1g operating, 25g non-operational
Vibration (5Hz-500 MHz Sinusoid)	0.3g operating, 2g non-operational

Contact Information:

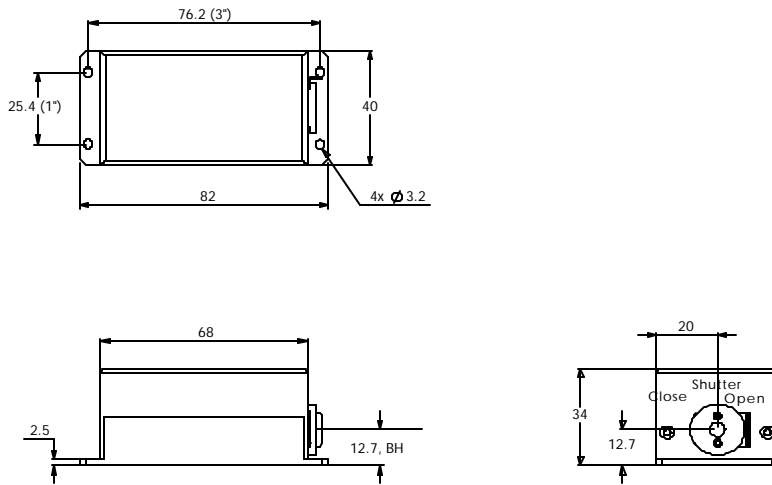
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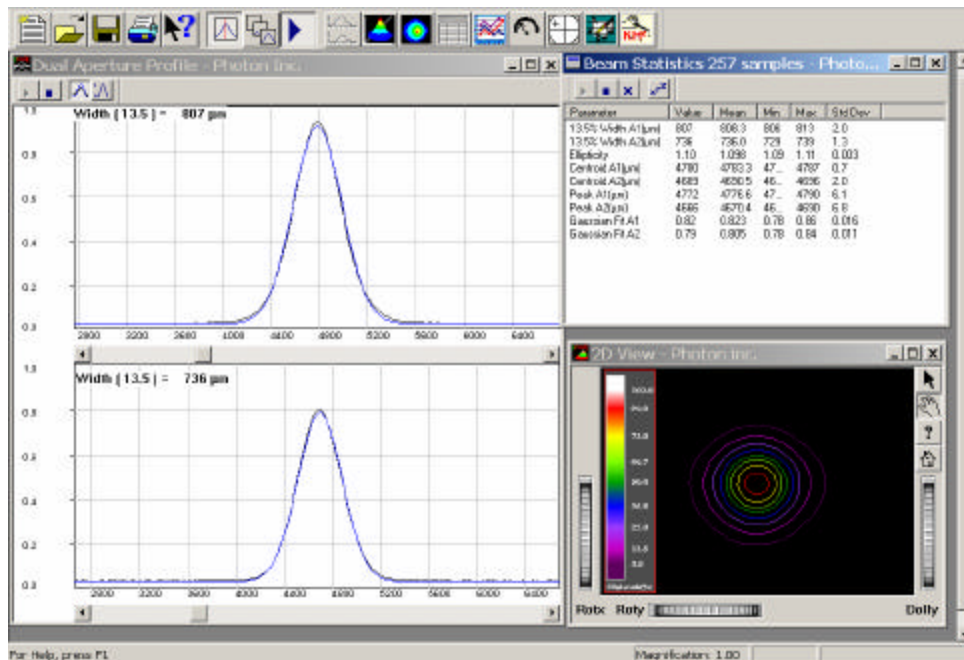


CHROMALASE 532™

Mechanical Layout



Typical Beam Profile



Beam at 50 cm

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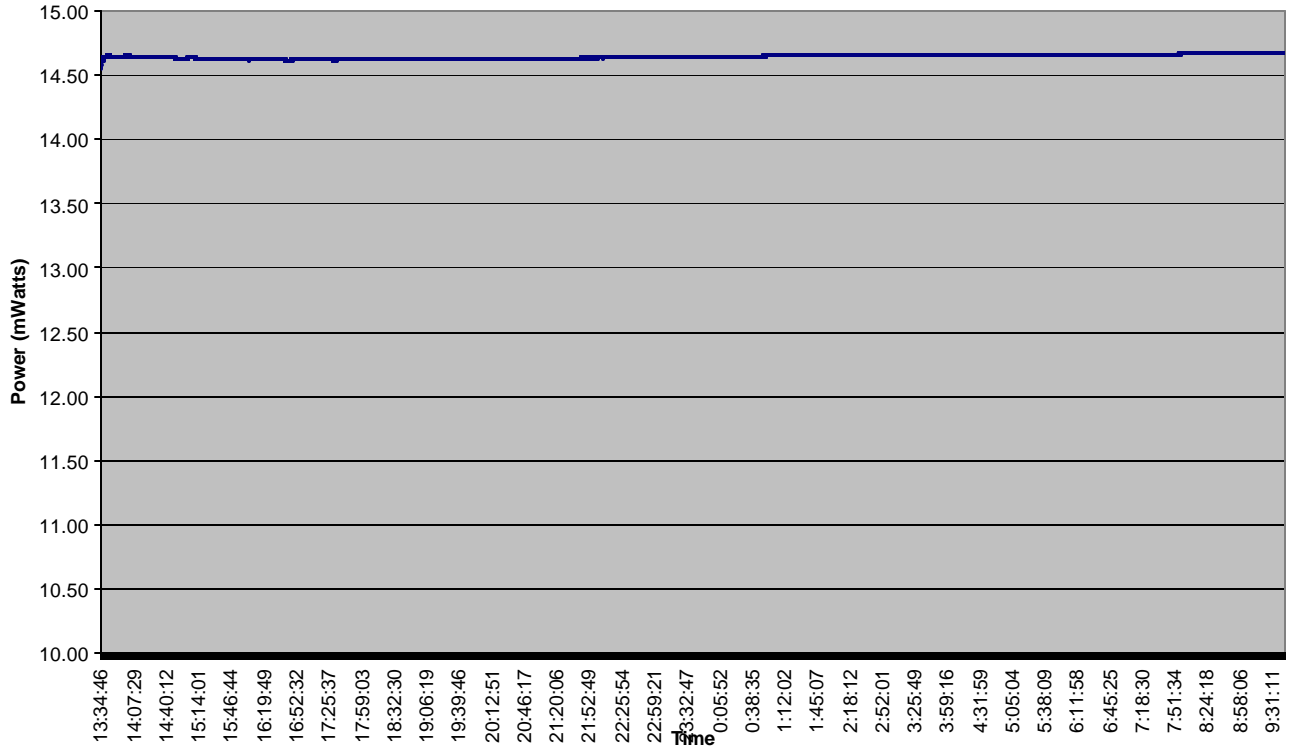
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Typical Performance

Power Stability vs. Time
0.4% over 20 hours



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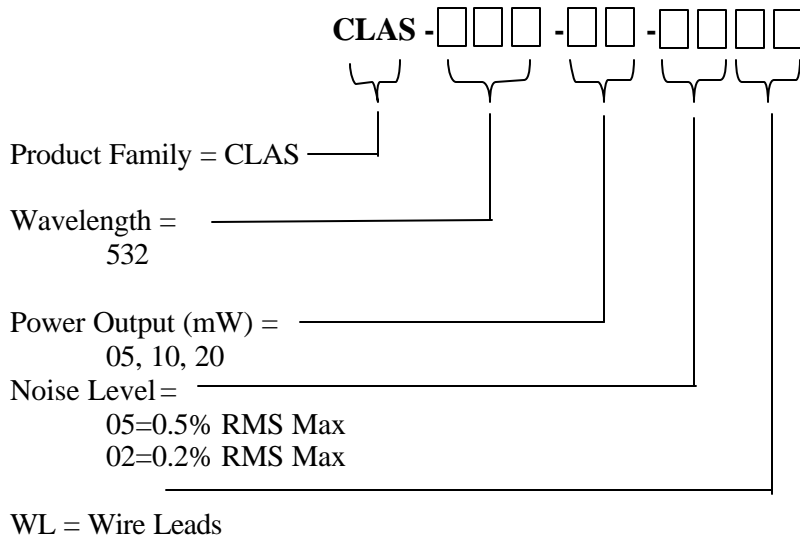
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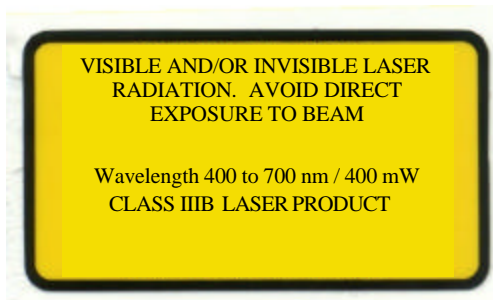
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Ordering Information



Example: CLAS-532-1005WL, CHROMALASE model, 532nm, 10mW output power, 0.5% noise level, wire power leads.

This component does not comply with the Federal Regulations (21 CFR Subchapter1) as administered by the Center for Devices and Radiological health. Purchaser acknowledges that his/her products must comply with these regulations before they can be sold to a customer. The output light from laser diodes is harmful to a human body even if it is invisible. Avoid looking at the output light of a ChromaLase532 directly, or even indirectly through a lens during operation. Observance of operation should be through a TV camera or related equipment. Refer to IEC 825-1 and 21 CFR 1040.10-1040.11 as a radiation safety standard for laser products. Blue Sky Research follows a policy of continuous improvement. Specifications are subject to change without notice.



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