

# Continuous Wave 532 nm Diode-Pumped Solid State Laser

## CDPS532S

**Key Features**

- Compact
- Robust design
- Low noise
- Excellent beam quality
- High reliability

**Applications**

- DNA sequencing
- Flow cytometry
- Capillary electrophoreses
- Instrumentation

The JDSU CDPS532S is a compact, continuous wave, 532 nm, diode-pumped solid-state laser. The system features a laser head and multi-function controller that requires a 5 V DC power source. It provides 10 and 20 mW of optical power with remarkable beam quality and low noise.

One of the key benefits of the CDPS532S is its compact and efficient design, which makes it easy to integrate into OEM instrumentation. The laser head does not incorporate beam shaping optics to allow for the smallest possible packaging. The CDPS532S laser controller is also very compact and efficient enough to forgo additional heat sinking.

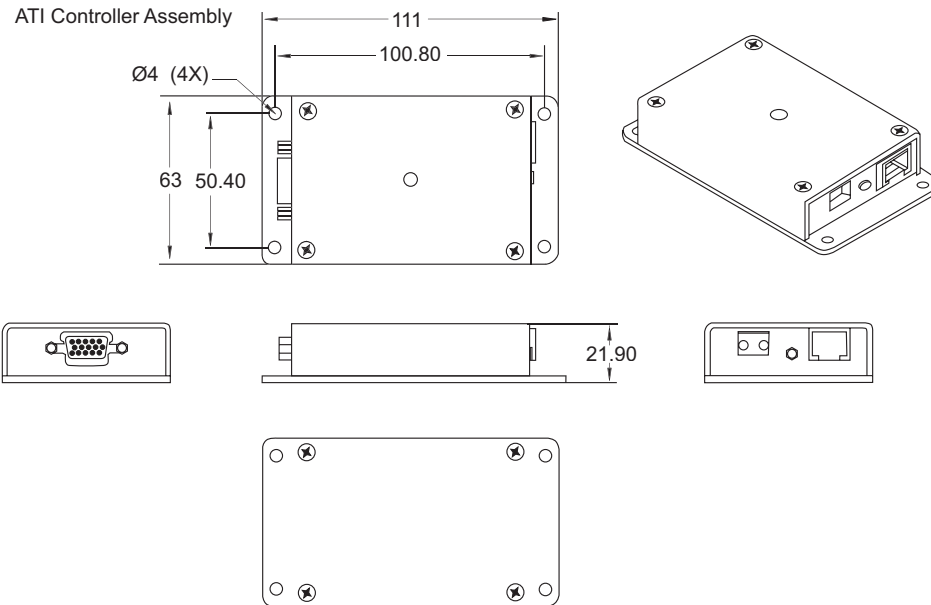
The CDPS532S laser head features an improved cavity design for longer lifetime and reliability. Its mechanical design requires fewer parts and is therefore ideally suited for high volume manufacturing techniques. Overall, the CDPS532S laser's sophisticated new design results in exceptional optical performance from a rugged package with superior long term stability.

Easy to operate and to integrate, the controller interface provides several control functions, including interlock and diagnostics via transistor-to-transistor logic (TTL) and analog signals.

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**Dimensions Diagram: Controller**

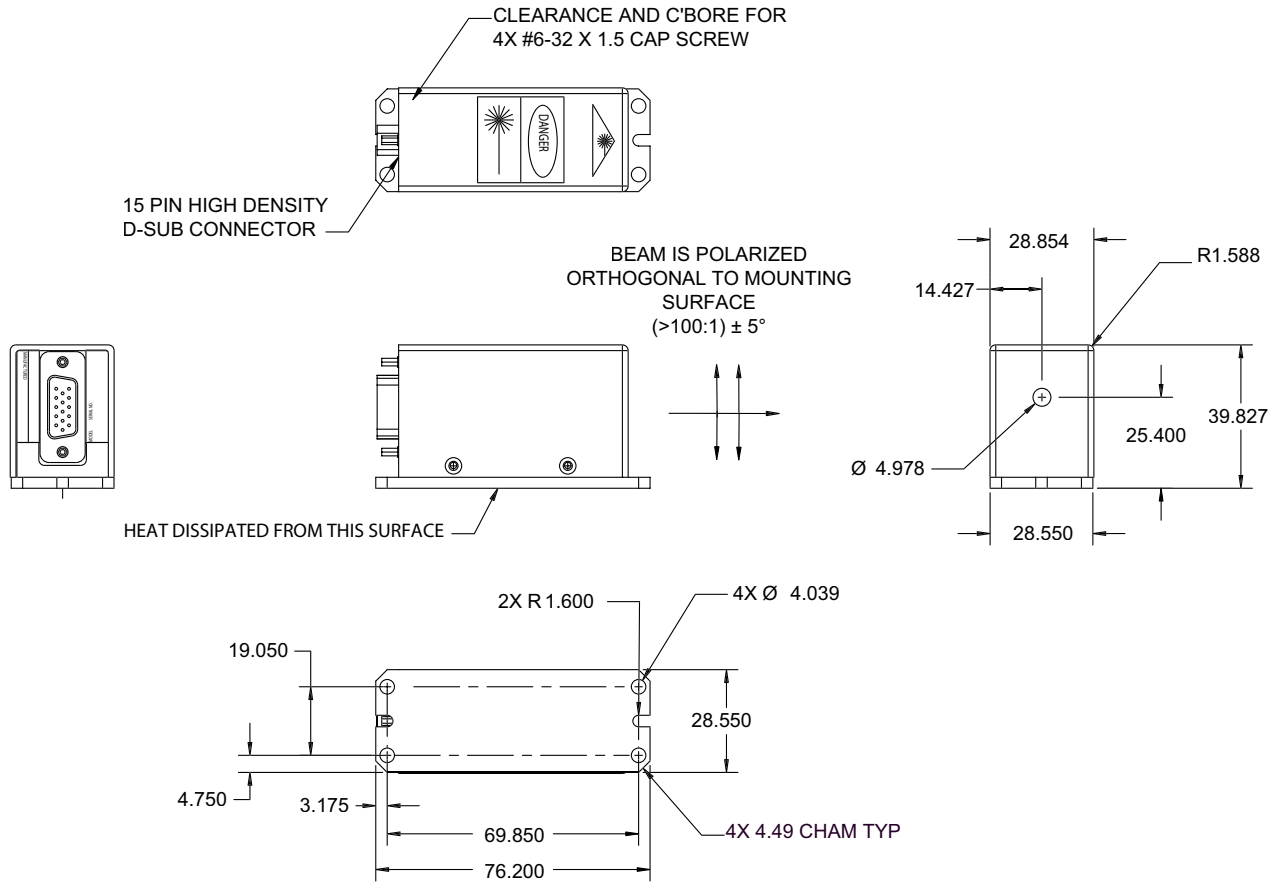
(Specifications in mm unless otherwise noted.)



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Dimensions Diagram: Laser Head

(Specifications in mm unless otherwise noted.)



## 4

**Specifications**

Parameter	Specification
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**Optical**

Wavelength	532 ± 1 nm
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## Output power

CDPS532S-010	10 mW
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CDPS532S-020	20 mW
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Power stability (1 hour, 25±3 °C)	<1.5%
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Mode quality M <sup>2</sup>	<1.3
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Beam diameter (1/e <sup>2</sup> point, at a distance of 250 mm)	1.9±0.2 mm
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Beam divergence (full angle)	<8 mrad
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Polarization ratio (E-vector is vertical)	>100:1
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Noise (rms, 20 Hz to 1 MHz)	<0.5%
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Ellipticity	<10%
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Pointing stability (after 2 hour warm-up, 25±3 °C)	±30 μrad
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## Static alignment

Beam position	±1.0 mm
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Beam angle	±1.5 °
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**Environmental**

## Base plate temperature

Operating	10 to 45 °C
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Non-operating	0 to 60 °C
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## Shock (11 ms duration)

Operating	1 g
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Non-operating	25 g
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## Vibration (sinusoidal, 5 to 500 Hz)

Operating	0.3 g
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Non-operating	2 g
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## Heat sink requirements

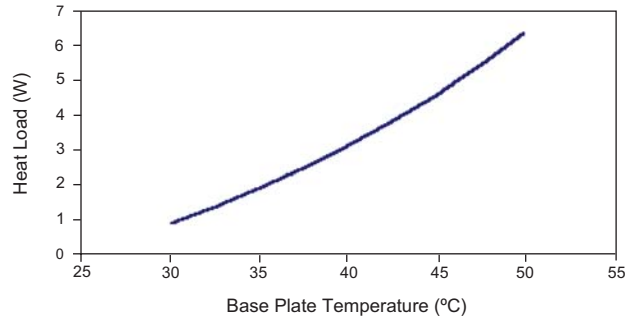
Surface flatness	25 μm
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Torque specification	0.5 Nm
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## 5

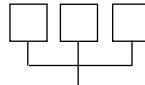
**Cooling Requirements**

Follow these cooling recommendations when integrating the laser into an original equipment manufacturer (OEM) system or application. The laser head is mounted to a heat sink for proper operation. The maximum base plate temperature is maintained below 45°C. The recommended heat sink capacity at a temperature of 45°C is 10 W. The required heat sink properties are estimated with this chart (right).

**Ordering Information**

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at [customer.service@jdsu.com](mailto:customer.service@jdsu.com).

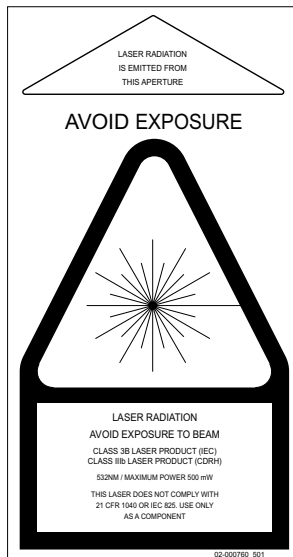
**Sample: CDPS532S-010**

**CDPS532S-**

Code	Output Power
010	10 mW
020	20 mW

**Compliance with Regulatory Requirements**

The CDPS532S laser system is an OEM version of a JDSU diode-pumped solid state laser. As such, it is intended only for integration into other equipment. The CDPS532S laser does not comply with Center for Devices and Radiological Health (CDRH) standards. The customer is responsible for CDRH certification of any system that incorporates the CDPS532S laser.

**Warranty**


JDSU diode-pumped solid state lasers are warranted to be free of defects in materials and workmanship for 12 months from the date of shipment, or 5,000 hours, whichever comes first.

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. JDSU reserves the right to change at any time without notice the design, specifications, function, fit or form of its products described herein, including withdrawal at any time of a product offered for sale herein. JDSU makes no representations that the products herein are free from any intellectual property claims of others. Please contact JDSU for more information. JDSU and the JDSU logo are trademarks of JDS Uniphase Corporation. Other trademarks are the property of their respective holders. ©2006 JDS Uniphase Corporation. All rights reserved. 10132857 Rev. 003 02/06 CDPS532S.DS.CL.AE