

Continuous Wave 532 nm Diode-Pumped Solid State Laser

CDPS532M

**Key Features**

- Compact
- Excellent performance-to-price ratio
- Low noise
- Excellent beam quality
- High reliability

Applications

- Biotechnology
- Semiconductor instrumentation
- Reprographics
- General instrumentation

The JDSU CDPS532M is a continuous wave 10 to 50 mW 532 nm diode-pumped solid state laser in a very compact package. Its head contains the laser cavity together with a beam-shaping telescope to provide a low divergence laser with excellent mode quality. The laser controller allows full control and diagnostics of the laser system.

The controller provides analog and RS232 interfaces. The laser system is powered by an external 5 V direct current (DC) power supply connected to the controller. Diagnostic features include laser parameters like output power, pump diode current, operating hours, and more. Control functions feature interlock and system status, as well as external output power control.

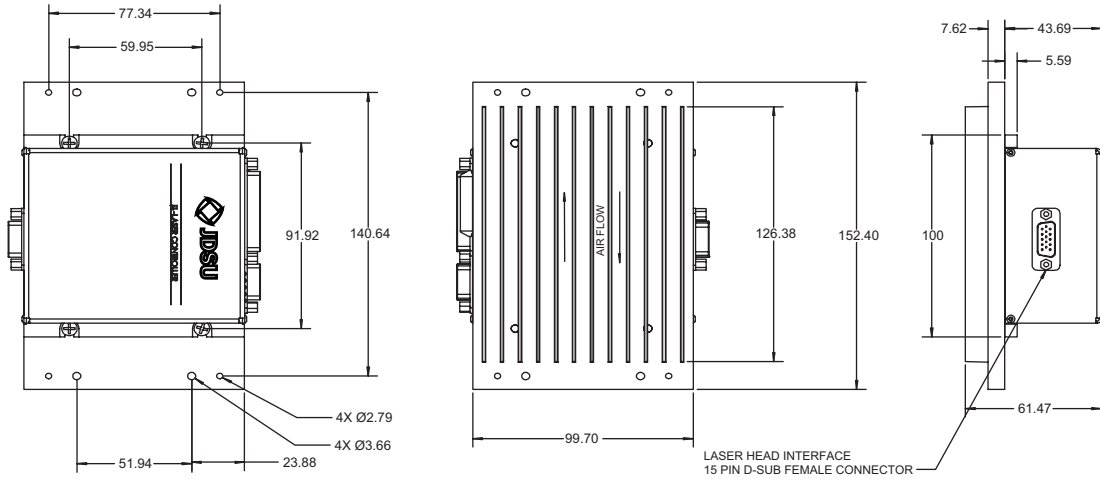
The CDPS532M laser offers an improved cavity design for longer lifetime and reliability. Its simple yet elegant optical layout is especially designed for volume manufacturing. Changes in mechanical design are further enhanced by new control software for optimized operating parameters.

The CDPS532M laser provides excellent performance for the price, and low operating costs while maintaining consistency and quality.

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Dimensions Diagram: Controller

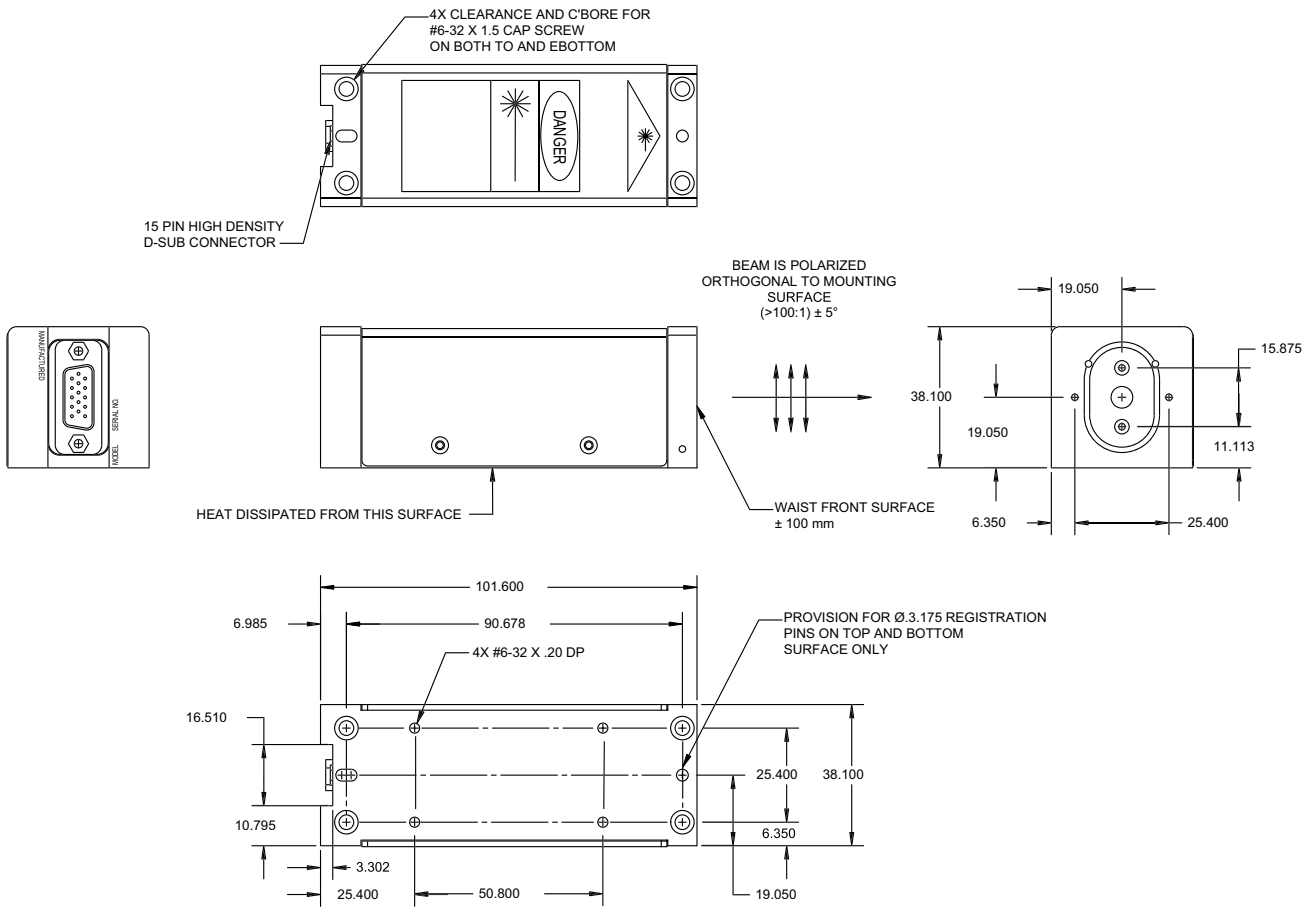
(Specifications in mm unless otherwise noted.)



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Dimensions Diagram: Laser Head

(Specifications in mm unless otherwise noted.)



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Specifications

Parameter	Specification
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Optical

Wavelength	532 ± 1 nm
Output power	
CDPS532M-010	10 mW
CDPS532M-020	20 mW
CDPS532M-050	50 mW
Power stability (2 hour, 25±3 °C) ¹	<1.0%
Mode quality M ²	<1.2
Beam diameter (1/e ² point)	0.6 mm ±10%
Beam divergence (full angle)	<1.2 mrad
Polarization ratio (E-vector is vertical)	>100:1
Noise (rms, 20 Hz to 2 MHz)	<0.5%
Ellipticity	<10%
Pointing stability (2 h, 25 ± 3 °C) ¹	± 30 μrad
Static alignment ²	
Beam position	± 0.25 mm
Beam angle	± 1.0 mrad

Environmental

Base plate temperature	
Operating	10 to 45 °C
Non-operating	0 to 60 °C
Shock (11 ms duration)	
Operating	1 g
Non-operating	25 g
Vibration (sinusoidal, 5 to 500 Hz)	
Operating	0.3 g
Non-operating	2 g
Heat sink requirements	
Surface flatness	25 μm
Torque specification	0.5 Nm

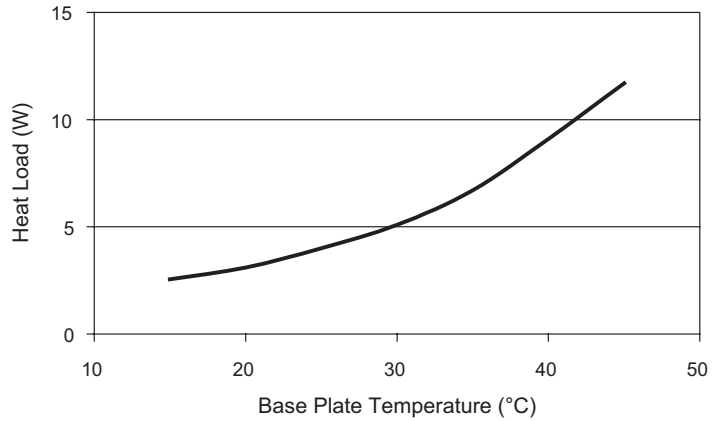
1. After warm-up.

2. Specified for bottom-down mounting; same specifications can be applied to upside-down mounting upon request.

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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 12 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.

Sample: CDPS532M-010

CDPS532M-

Code	Output Power
010	10 mW
020	20 mW
050	50 mW

Compliance with Regulatory Requirements

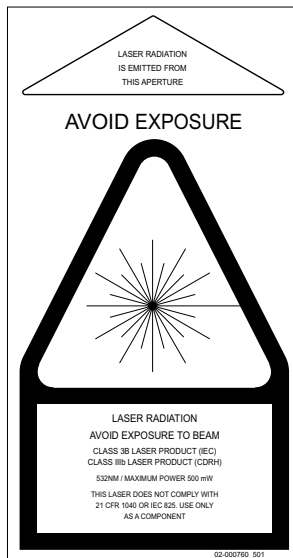
The CDPS532M laser system is an OEM version of a JDS Uniphase diode-pumped solid state laser. As such, it is intended only for integration into other equipment. The CDPS532M laser does not comply with Center for Devices and Radiological Health (CDRH) standards. The customer is responsible for CDRH certification of any system that incorporates the CDPS532M laser.

This unit is designed and tested to comply with the following standards:

Electromagnetic Emissions (EN 50081-1) tested to standard EN CISPR 11:1999 + A1

Electromagnetic Immunity (EN 61000-6-2) tested to standard EN 61000-4-2 and EN 61000-4-3

Safety evaluation tested to standard UL 3101 and EN61010-1.

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. 10139555 Rev. 003 02/06 CDPS532M.DS.CL.AE