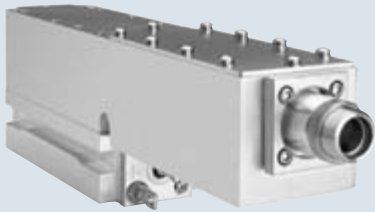


Genesis Taipan 639 M

High-Power Optically Pumped Semiconductor Powered CW Laser

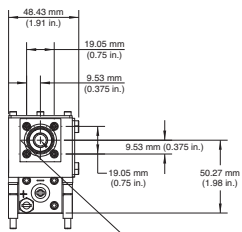
Features

- OPSSL reliability
- Compact, efficient design
- Modulation rate to >50 kHz
- Ability to deliver high output powers at unique wavelengths - 1W at 639 nm
- Low heat load for ease of integration

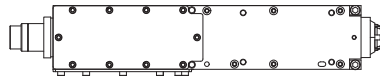


Mechanical Specifications

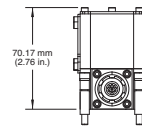
Front View



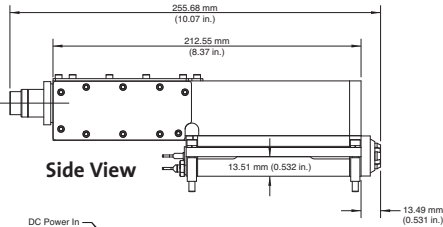
Top View



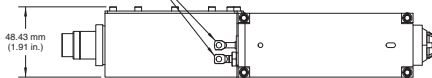
Rear View



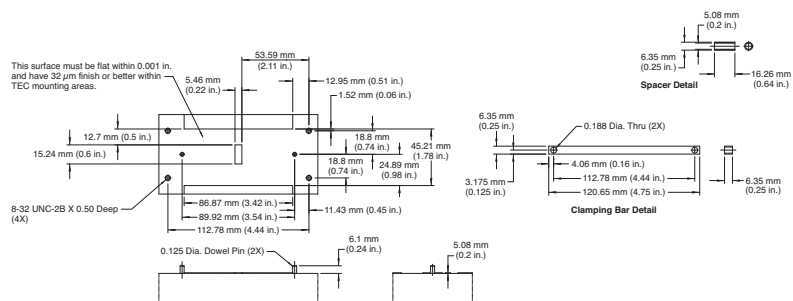
Side View



Bottom View



Base Plate Requirements



Superior Reliability & Performance

Genesis™ Taipan™ 639 M

High-Power Optically Pumped Semiconductor Powered CW Laser

Optical Specifications¹

Wavelength (nm)	639 ±1
Output Power (W)	1
Bandwidth (nm)	<0.5
Beam Waist Dimensions (mm)	
Horizontal Size ² (FW, 1/e ² , mm)	0.25
Vertical Size ² (FW, 1/e ² , mm)	0.25
Location ^{2,3} (mm)	-40
Beam Divergence	
Horizontal ² (FW, 1/e ² , mrad)	6
Vertical ² (FW, 1/e ² , mrad)	6
Collimated Version	
Beam Waist Diameter ² (1/e ² , mm)	1.0
Beam Divergence ² (1/e ² , mrad)	1.5
Beam Waist Location ² (m)	0.25
M ²	
Horizontal	<1.5
Vertical	<1.5
Pointing Stability ⁴ (μrad/°C)	<30
Noise	
10 Hz to 10 MHz ² (% rms)	<1
10 Hz to 5 kHz (% peak-to-peak)	<10
Polarization Ratio	>100:1, vertical
Direct Modulation ⁵	Available

Utility and Environmental Requirements

Operating Diode Current (A)	<27
Maximum Diode Current (A)	<32
Diode Voltage (V)	1.5 to 2.2
Cooling Requirements ⁶	Active cooling required
Case Temperature (°C)	25 ±2
Humidity	Non-condensing
Dimensions (L x W x H)	
Laser Head ⁷	256 x 49 x 71 mm (10.07 x 1.93 x 2.76 in.)
Weight	
Laser Head (g)	900 ±10

Measurement Tools

Meter	FieldMax™-TO
Sensor	PM10

¹ Optical parameters measured at the output plane of the laser head. Unless noted all parameters valid for the lifetime of the unit.

² Typical value.

³ Measured from the output face, negative value corresponds to a location inside the head; positive outside.

⁴ Measured at the output window; tolerance relative to the nominal center of the output window and perpendicular to the mounting plane.

⁵ Theoretical limit is >1 MHz; actual performance will be limited by the diode-driver (not included).

⁶ Air cooling available with appropriate heat sink and fans.

⁷ Includes collimator.

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Genesis lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.



www.Coherent.com

U.S. Patent No. 5,991,318
 U.S. Patent No. 6,167,068
 U.S. Patent No. 6,285,702
 U.S. Patent No. 6,438,153
 U.S. Patent No. 6,683,901
 U.S. Patent No. 7,180,928

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