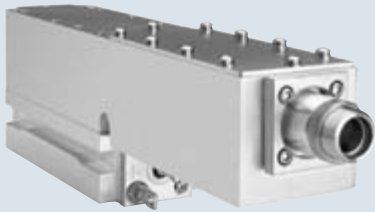


# Genesis Taipan 639 M

High-Power Optically Pumped Semiconductor Powered CW Laser

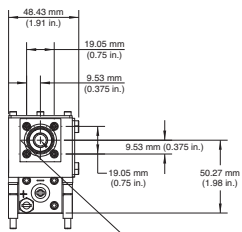
## Features

- 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

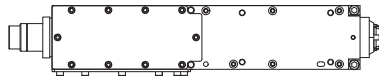


## Mechanical Specifications

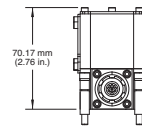
### Front View



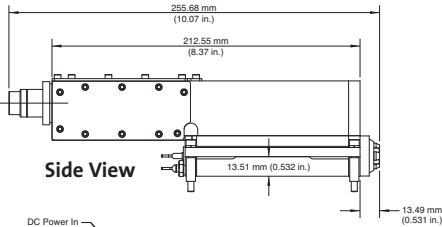
### Top View



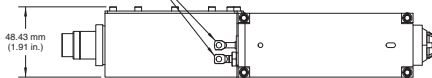
### Rear View



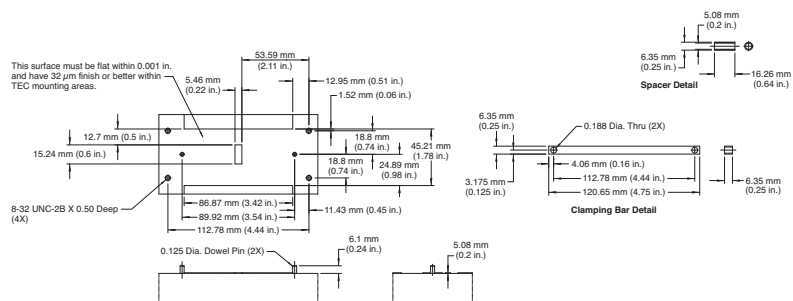
### Side View



### Bottom View



## Base Plate Requirements



## Superior Reliability & Performance

# Genesis™ Taipan™ 639 M

## High-Power Optically Pumped Semiconductor Powered CW Laser

### System Specifications<sup>1</sup>

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

### Utility and Environmental Requirements

Operating Diode Current (A)	<27
Maximum Diode Current (A)	<32
Diode Voltage (V)	1.5 to 2.2
Cooling Requirements	Active cooling required <sup>6</sup>
Case Temperature (°C)	25 ±2
Humidity	Non-condensing
Dimensions (L x W x H)	
Laser Head <sup>7</sup>	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

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

<sup>2</sup> Typical value.

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

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

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

<sup>6</sup> Air cooling available with appropriate heat sink and fans.

<sup>7</sup> 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](http://www.Coherent.com) or contact your local Sales or Service Representative.



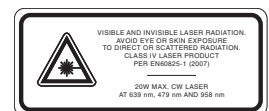
[www.Coherent.com](http://www.Coherent.com)

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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