


## 9W 9xxnm High Power Single Emitter Laser Diode on C-mount

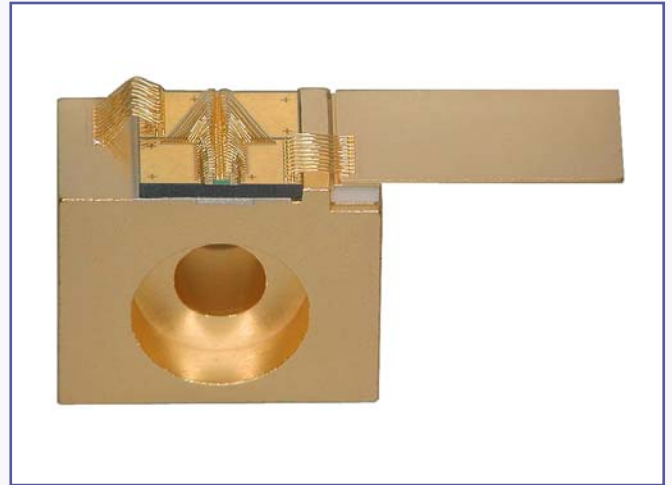
SEC9-9xx-01

### Features:

- 3.6mm x 0.4mm laser diode
- 90µm wide emitter
- Cu C-Mount
- 9W operating power (p-side down mounted)
- Highly reliable single quantum well MBE structure
- Standard wavelength at 915, 940, 960, and 975nm (other available on request)
- RoHS compliant 

### Applications:

- Fiber laser pumping
- Material processing
- Printing
- Medical



The Oclaro SEC9-9xx-01 single emitter laser diode series has been designed to provide the high output power, high coupling efficiency and high reliability required for pumping next generation fiber lasers and for other high power laser diode applications. The proprietary E2 front mirror passivation process, developed at our Zurich site, prevents Catastrophic Optical Damage (COD) to the laser diode facet even at extremely high output powers. The single emitter laser diodes are p-side down mounted on a submount that is attached to a C-mount.

## Characteristics

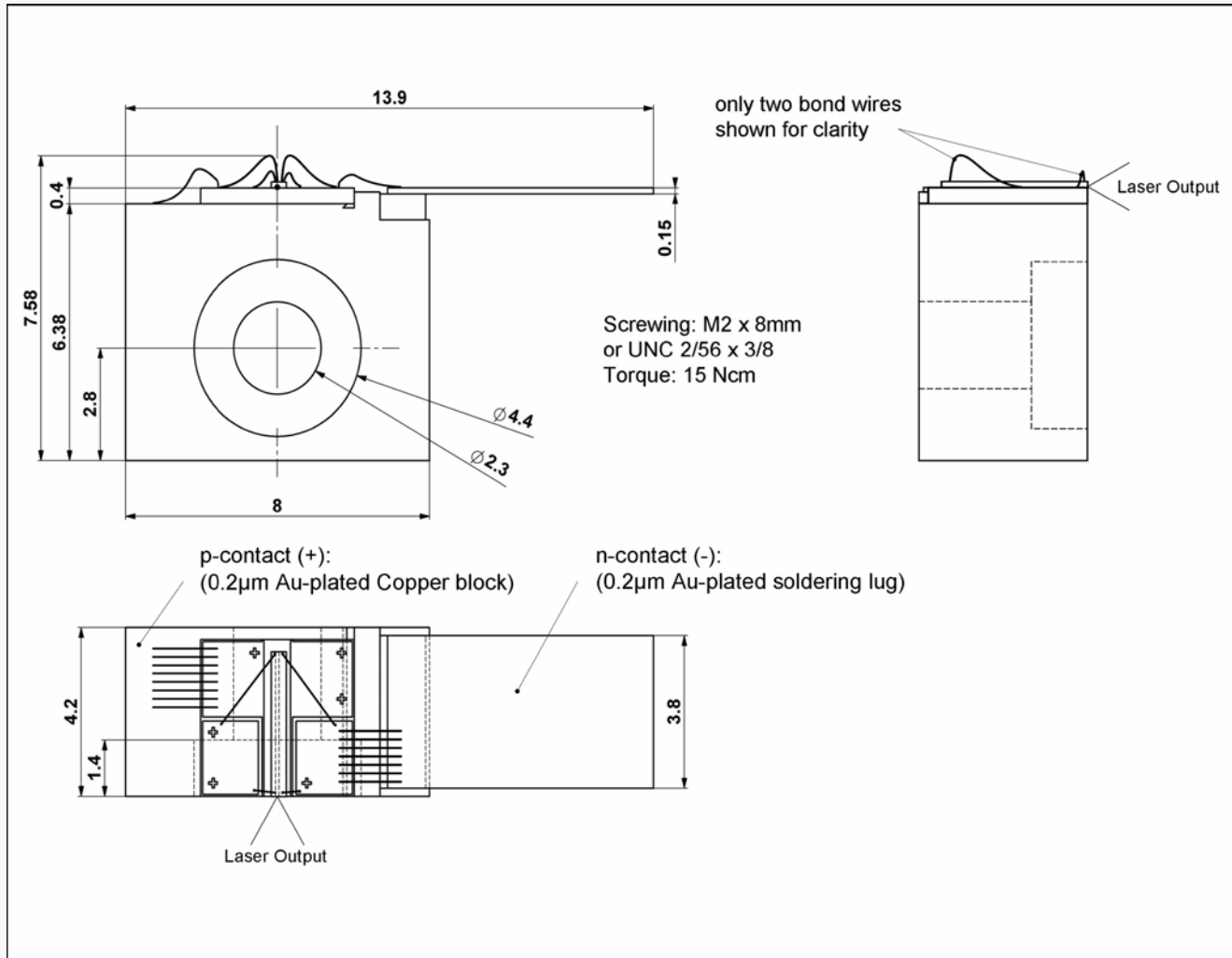
| Parameter   | Symbol   | Typical                                      | Unit     |
|---|--|--|----------|
| CW Output Power   | $P_{op}$   | 9  | W        |
| Center Wavelength [1]<br>SEC9-915-01<br>SEC9-940-01<br>SEC9-960-01<br>SEC9-975-01 | $\lambda_{c915}$<br>$\lambda_{c940}$<br>$\lambda_{c960}$<br>$\lambda_{c975}$ | 915 ± 10<br>940 ± 10<br>960 ± 10<br>975 ± 10 | nm       |
| Spectral Width (FWHM)   | $\Delta\lambda$  | 4  | nm       |
| Wavelength Shift with Temperature   | $d\lambda_c/dT_{op}$   | 0.3  | nm/°C    |
| Beam Divergence (FWHM)<br>Parallel to Junction<br>Perpendicular to Junction       | $\theta_{//}$<br>$\theta_{\perp}$  | 8<br>29                                      | deg      |
| Polarization  | –  | TE   | –        |
| Threshold Current   | $I_{th}$   | 500  | mA       |
| Slope Efficiency  | $\eta_D = P_{op}/(I_{op} - I_{th})$  | 1.0  | W/A      |
| Conversion Efficiency   | $H = P_{op}/(V_{op} \times I_{op})$  | > 50   | %        |
| Series Resistance   | $R_s$  | 0.03   | $\Omega$ |
| Operating Current   | $I_{op}$   | 9.5  | A        |
| Operating Voltage   | $V_{op}$   | 2.2  | V        |
| Operating Temperature   | $T_{op}$   | 25 ± 5                                       | °C       |

[1] Reduced wavelength window/extended range available on request (900-1070nm).

## Chip Dimensions

| Parameter        | Symbol | Typical | Unit          |
|------------------|--------|---------|---------------|
| Chip Width       | b      | 400     | $\mu\text{m}$ |
| Resonator Length | l      | 3600    | $\mu\text{m}$ |
| Chip Thickness   | d      | 150     | $\mu\text{m}$ |
| Emitter Width    | w      | 90      | $\mu\text{m}$ |

### Package Dimensions (mm)



## RoHS Compliance



Oclaro is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

## Ordering Information

|             |  |
|-------------|--|
| SEC9-915-01 | 9W 915nm Single Emitter Laser Diode on C-mount |
| SEC9-940-01 | 9W 940nm Single Emitter Laser Diode on C-mount |
| SEC9-960-01 | 9W 960nm Single Emitter Laser Diode on C-mount |
| SEC9-975-01 | 9W 975nm Single Emitter Laser Diode on C-mount |

## Contact Information

**Oclaro Inc.**  
**Worldwide Headquarters**  
 2584 Junction Avenue  
 San Jose  
 CA 95134  
 USA

Tel: +1 408 919 2788  
 Fax: +1 408 904 5026

[www.oclaro.com](http://www.oclaro.com)  
[sales@oclaro.com](mailto:sales@oclaro.com)

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Oclaro before they become applicable to any particular order or contract. In accordance with the Oclaro policy of continuous improvement specifications may change without notice. The publication of information in this data sheet does not imply freedom from patent or other protective rights of Oclaro or others. Further details are available from any Oclaro sales representative.



BH13931 Rev 1.1 July 2009  
 ©Oclaro 2009. Oclaro the Oclaro, Inc. logo, and all other Oclaro, Inc product names and slogans are trademarks or registered trademarks of Oclaro, Inc. in the U.S.A. or other countries. Products described in this datasheet may be covered by one or more patents in the U.S.A. and abroad. Information in this datasheet is subject to change without notice.