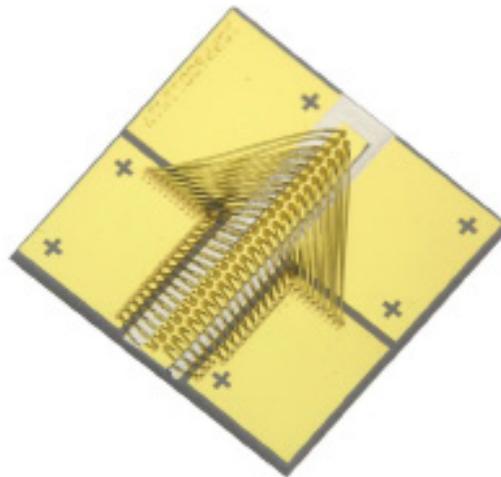


# 9 W 9xx nm 90 $\mu\text{m}$ HIGH POWER SINGLE EMITTER LASER DIODE ON SUBMOUNT

## SES9-9xx-01

The Coherent SES9-9xx-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 an optimized submount providing very low thermal resistance.



## FEATURES

- 3.6 mm x 0.4 mm laser diode
- 90  $\mu\text{m}$  wide emitter
- 9 W operating power (p-side down mounted)
- Highly reliable single quantum well MBE structure
- Standard wavelength at 915, 940 and 975 nm (other available on request)
- RoHS compliant 

## APPLICATIONS

- Fiber laser pumping
- Material processing
- Printing
- Medical

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## Characteristics

Parameters at 25 °C

Parameter	Symbol	Typ	Unit
CW Output Power	$P_{op}$	9	W
Center Wavelength <sup>1</sup>			
SEC9-915-01	$\lambda_c 915$	915 ± 10	nm
SEC9-940-01	$\lambda_c 940$	940 ± 10	
SEC9-975-01	$\lambda_c 975$	975 ± 10	
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM)			
Parallel to Junction	$\theta_{//}$	8	deg
Perpendicular to Junction	$\theta_{\perp}$	23	
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	Ω
Operating Current	$I_{op}$	9.5	A
Operating Voltage	$V_{op}$	2.2	V

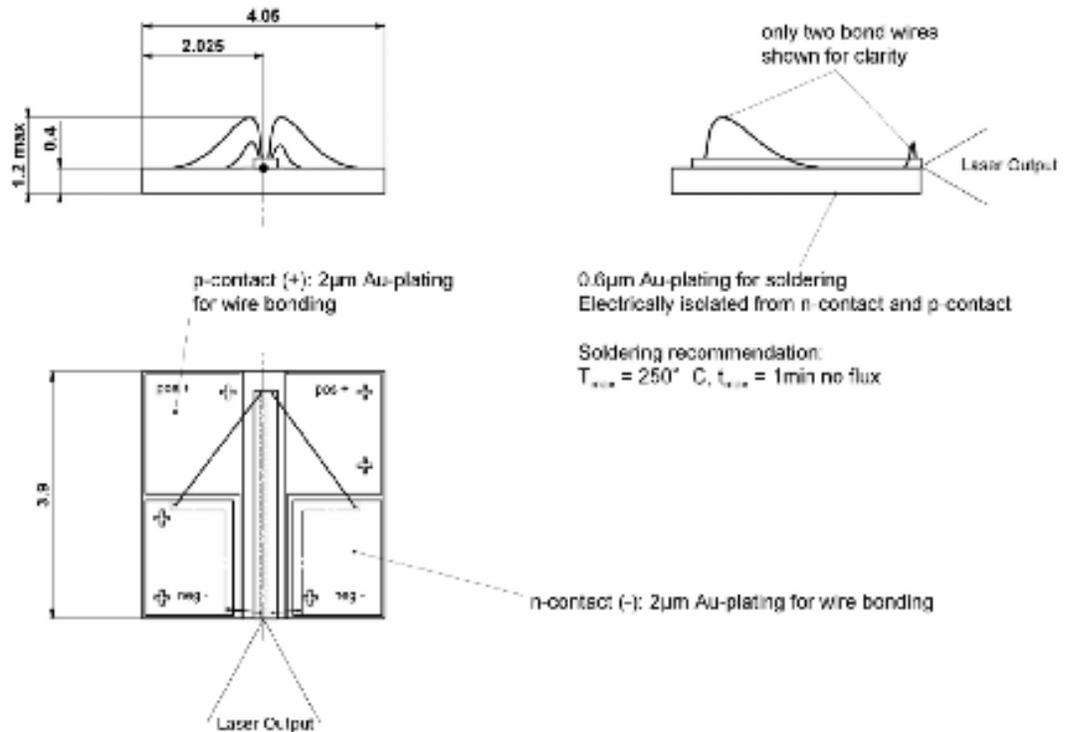
<sup>1</sup> Reduced wavelength window/extended range available on request (900 - 1070 nm).

## Chip Dimensions

Parameter	Symbol	Typ	Unit
Chip Width	b	400	μm
Resonator Length	l	3600	μm
Chip Thickness	d	150	μm
Emitter Width	w	90	μm

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## Package Dimensions (mm)



## RoHS Compliance

Coherent 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

SES9-915-01	9 W 915 nm Single Emitter Laser Diode on Submount
SES9-940-01	9 W 940 nm Single Emitter Laser Diode on Submount
SES9-975X-01	9 W 975 nm Single Emitter Laser Diode on Submount

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Coherent before they become applicable to any particular order or contract. In accordance with the Coherent policy of continuous improvement specifications may change without notice. Further details are available from any Coherent sales representative.

## Safety Labels



Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.