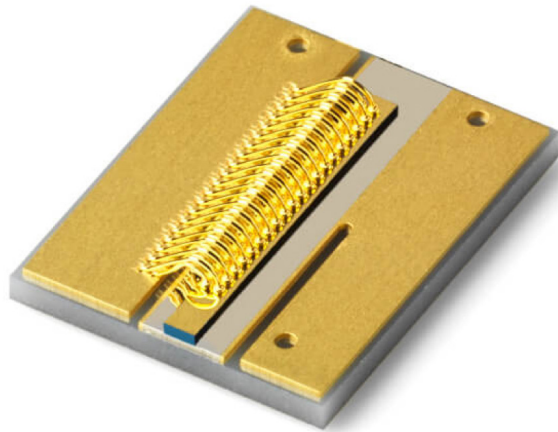



13 W 9xx nm 94 μm HIGH POWER SINGLE EMITTER LASER DIODE ON SUBMOUNT

SES13-9xx-94-01

The Coherent SES13-9xx-94-01 single emitter laser diode series has been designed to provide highest output power and efficiency for 105 μm core fiber pump configurations for 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

- 94 μm wide emitter
- 13 W operating power (p-side down mounted)
- Highly reliable single quantum well structure
- Standard wavelength at 915, 940, and 975 nm (other available on request)
- RoHS compliant 

APPLICATIONS

- Fiber laser pumping
- Material processing
- Medical

13 W 9xx nm 94 μm HIGH POWER SINGLE EMITTER LASER DIODE ON SUBMOUNT

Characteristics

Parameters at 25 °C

Parameter	Symbol	Typ	Unit
CW Output Power	P_{op}	9	W
Center Wavelength ¹ SES13-915-94-01 SES13-940-94-01 SES13-975B-94-01	λ_c 915 λ_c 940 λ_c 975	915 ± 10 940 ± 10 976 ± 3	nm
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 Perpendicular to Junction	$\theta_{//}$ θ_{\perp}	8.5 27	deg
Polarization	–	Polarization (TE) 98%	–
Threshold Current	I_{th}	550	mA
Slope Efficiency	$\eta_D = P_{op}/(I_{op} - I_{th})$	1.05	W/A
Conversion Efficiency	$H = P_{op}/(V_{op} \times I_{op})$	60	%
Series Resistance	R_s	0.03	Ω
Operating Current	I_{op}	< 13	A
Operating Voltage	V_{op}	1.65	V

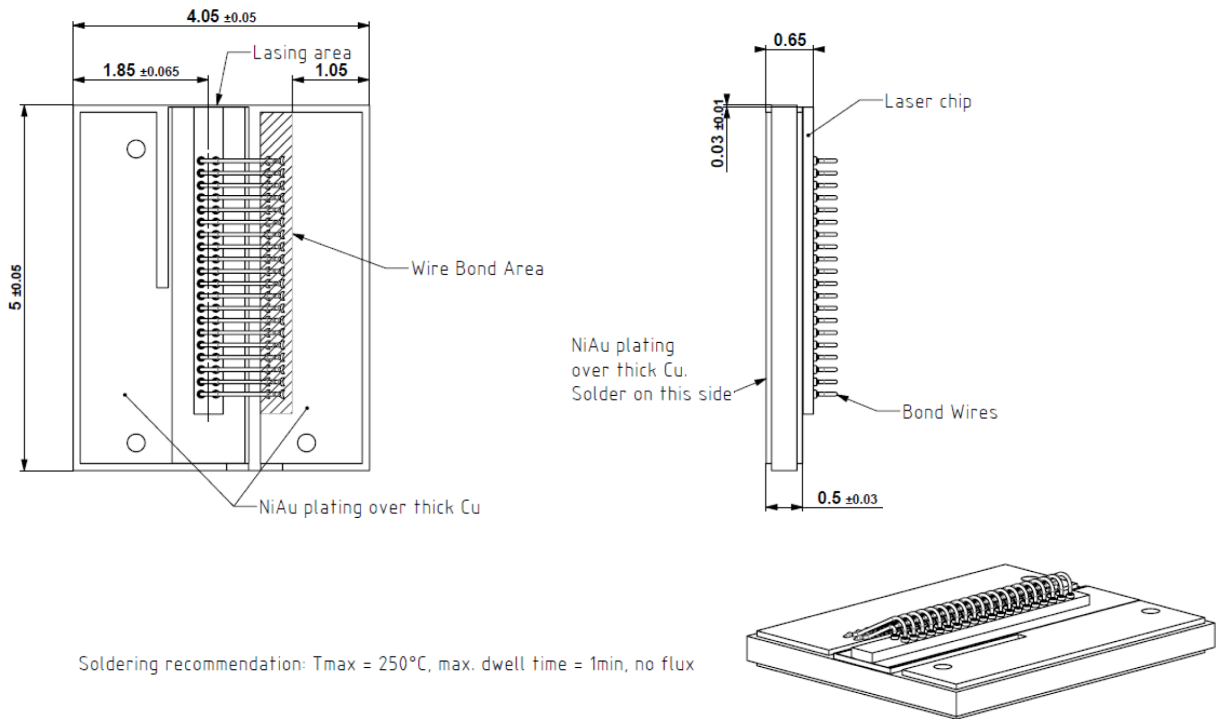
¹ Reduced wavelength window/extended range available on request (900 - 1070 nm).

Chip Dimensions

Parameter	Symbol	Typ	Unit
Chip Width	b	400	μm
Chip Thickness	d	150	μm
Emitter Width	w	94	μm

13 W 9xx nm 94 μm HIGH POWER SINGLE EMITTER LASER DIODE ON SUBMOUNT

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

SES13-915-94-01	13 W 915 nm Single Emitter Laser Diode on Submount
SES13-940-94-01	13 W 940 nm Single Emitter Laser Diode on Submount
SES13-975-94-01	13 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.