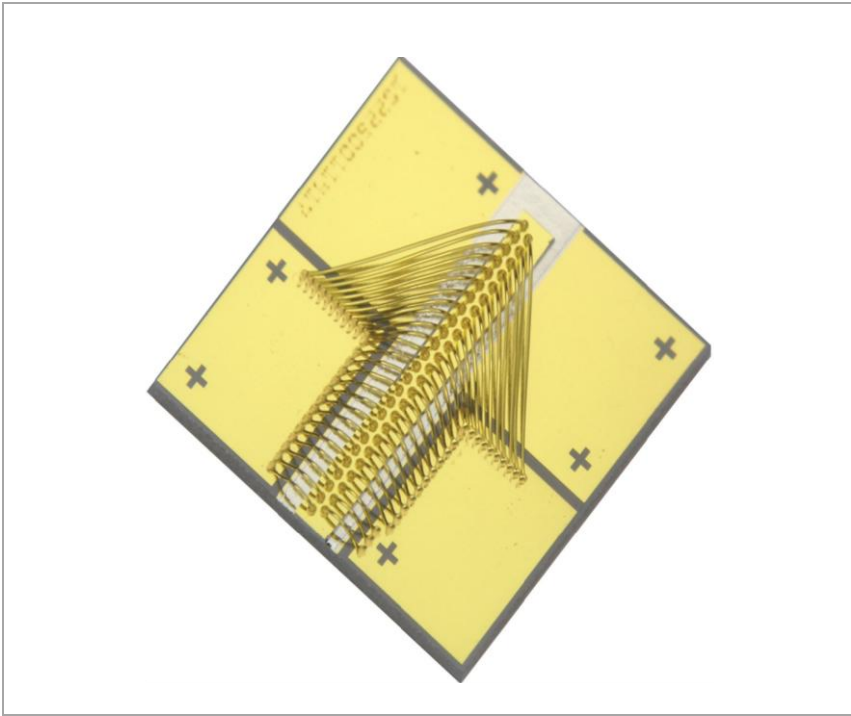


# 9W 9xxnm 90 $\mu$ m High Power Single Emitter Laser Diode on Submount


SES9-9xx-01



The II-VI Laser Enterprise 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:

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

## Applications

- Fiber laser pumping
- Material processing
- Printing
- Medical

## Characteristics

Parameters at 25°C

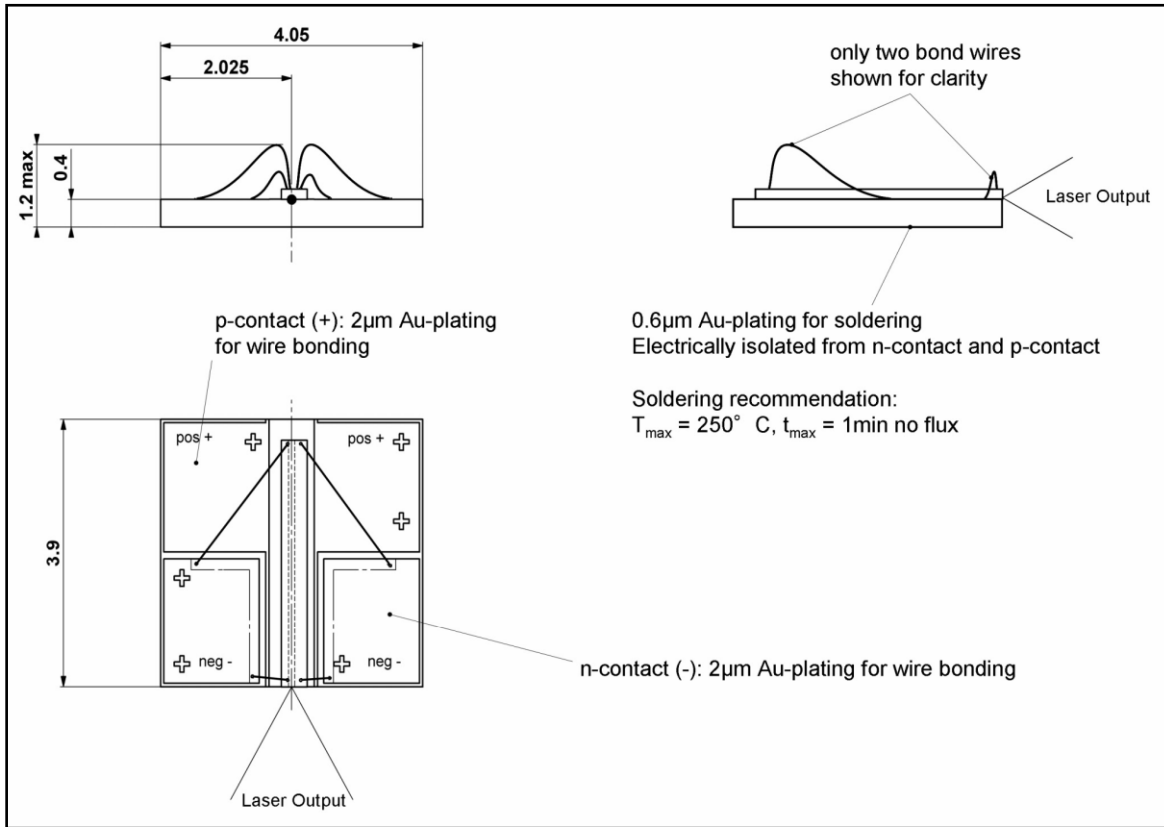
Parameter	Symbol	Typ	Unit
CW Output Power	$P_{op}$	9	W
Center Wavelength <sup>[1]</sup> SES9-915-01 SES9-940-01 SES9-975-01	$\lambda_{c915}$ $\lambda_{c940}$ $\lambda_{c975}$	915 ± 10 940 ± 10 975 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ $\theta_{\perp}$	8 23	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

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

## Chip Dimensions

Parameter	Symbol	Typ	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**



II-VI Laser Enterprise 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 9W 915nm Single Emitter Laser Diode on Submount
- SES9-940-01 9W 940nm Single Emitter Laser Diode on Submount
- SES9-975-01 9W 975nm Single Emitter Laser Diode on Submount

**Contact Information**

[www.laserenterprise.com](http://www.laserenterprise.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 II-VI Laser Enterprise before they become applicable to any particular order or contract. In accordance with the II-VI Laser Enterprise policy of continuous improvement specifications may change without notice. Further details are available from any II-VI Laser Enterprise sales representative.



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

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