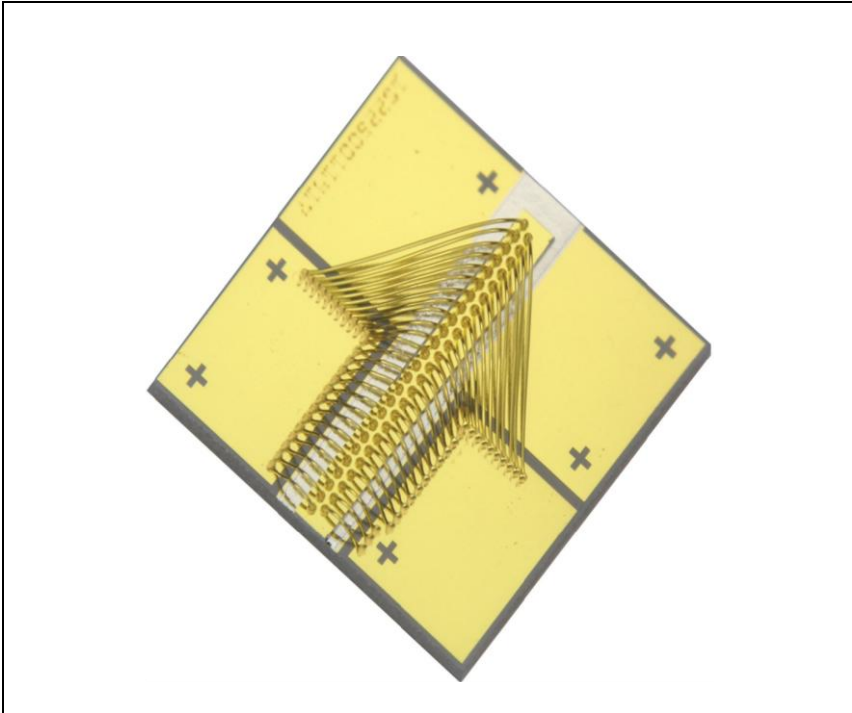



4W 808nm 90 μ m High Power Single Emitter Laser Diode on Submount

SES4-808A/B/C-01



The II-VI Laser Enterprise SES4-808A/B/C-01 single emitter laser diode has been designed to provide the high output power, high coupling efficiency and high reliability required for both solid-state laser pumping and direct laser 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 μ m wide emitter
- 4W operating power (p-side down mounted)
- Highly reliable single quantum well MBE structure
- RoHS compliant 

Applications

- Solid-state laser pumping
- Medical
- Analytical
- Printing

Characteristics

Parameters at 25°C

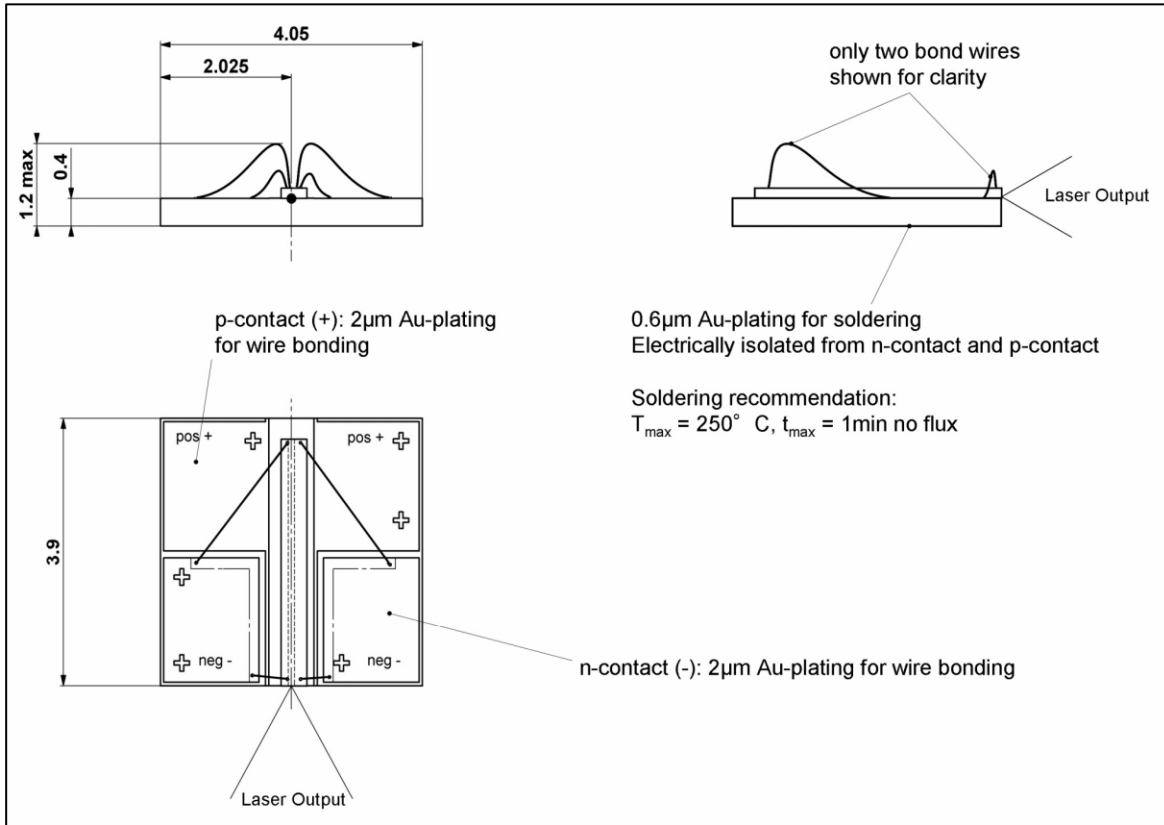
Parameter	Symbol	Typ	Unit
CW Output Power	P_{op}	4	W
Center Wavelength ^[1] SES4-808A-01 SES4-808B-01 SES4-808B-01	λ_{cA} λ_{cB} λ_{cC}	806 ± 3 803 ± 3 808 ± 2.5	nm
Spectral Width (FWHM)	$\Delta\lambda$	2	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ θ_{\perp}	6 27	deg
Polarization	–	TE	
Threshold Current	I_{th}	600	mA
Slope Efficiency	$\eta_D = P_{op}/(I_{op} - I_{th})$	1.1	W/A
Conversion Efficiency	$H = P_{op}/(V_{op} \times I_{op})$	50	%
Series Resistance	R_s	0.03	Ω
Operating Current	I_{op}	4	A
Operating Voltage	V_{op}	1.9	V

[1] Reduced wavelength window available on request.

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

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

- SES4-808A-01 4W 806 ± 3 nm Single Emitter Laser Diode on Submount
- SES4-808B-01 4W 803 ± 3 nm Single Emitter Laser Diode on Submount
- SES4-808C-01 4W 808 ± 2.5 nm Single Emitter Laser Diode on Submount

Contact Information

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.

D00467 Issue 01 January 2013
 ©II-VI Laser Enterprise 2012. II-VI Laser Enterprise the II-VI Laser Enterprise, Inc. logo, and all other II-VI Laser Enterprise, Inc product names and slogans are trademarks or registered trademarks of II-VI Laser Enterprise, 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..