


## 4W 808nm 90 $\mu$ m High Power Single Emitter Laser Diode on Submount

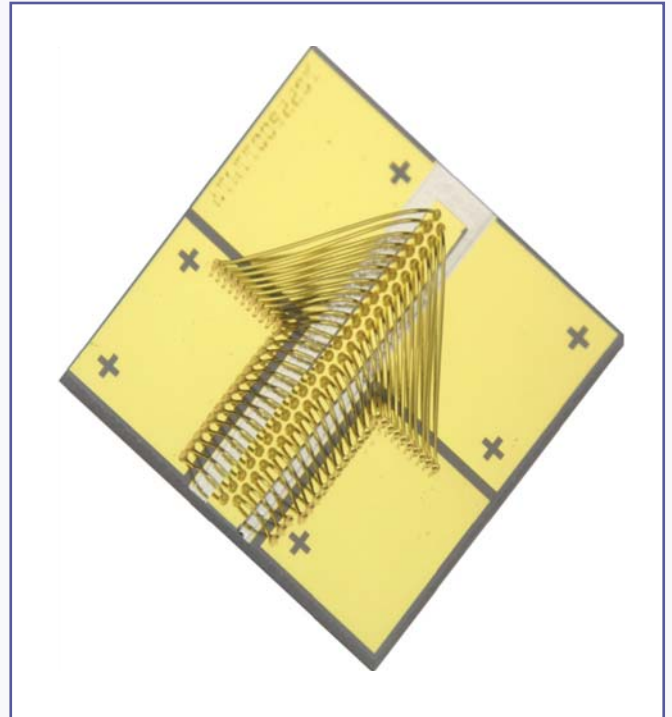
SES4-808A/B-01

### Features:

- 3.6mm x 0.4mm laser diode
- 90 $\mu$ 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



The Oclaro SES4-808A/B-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.

## Characteristics

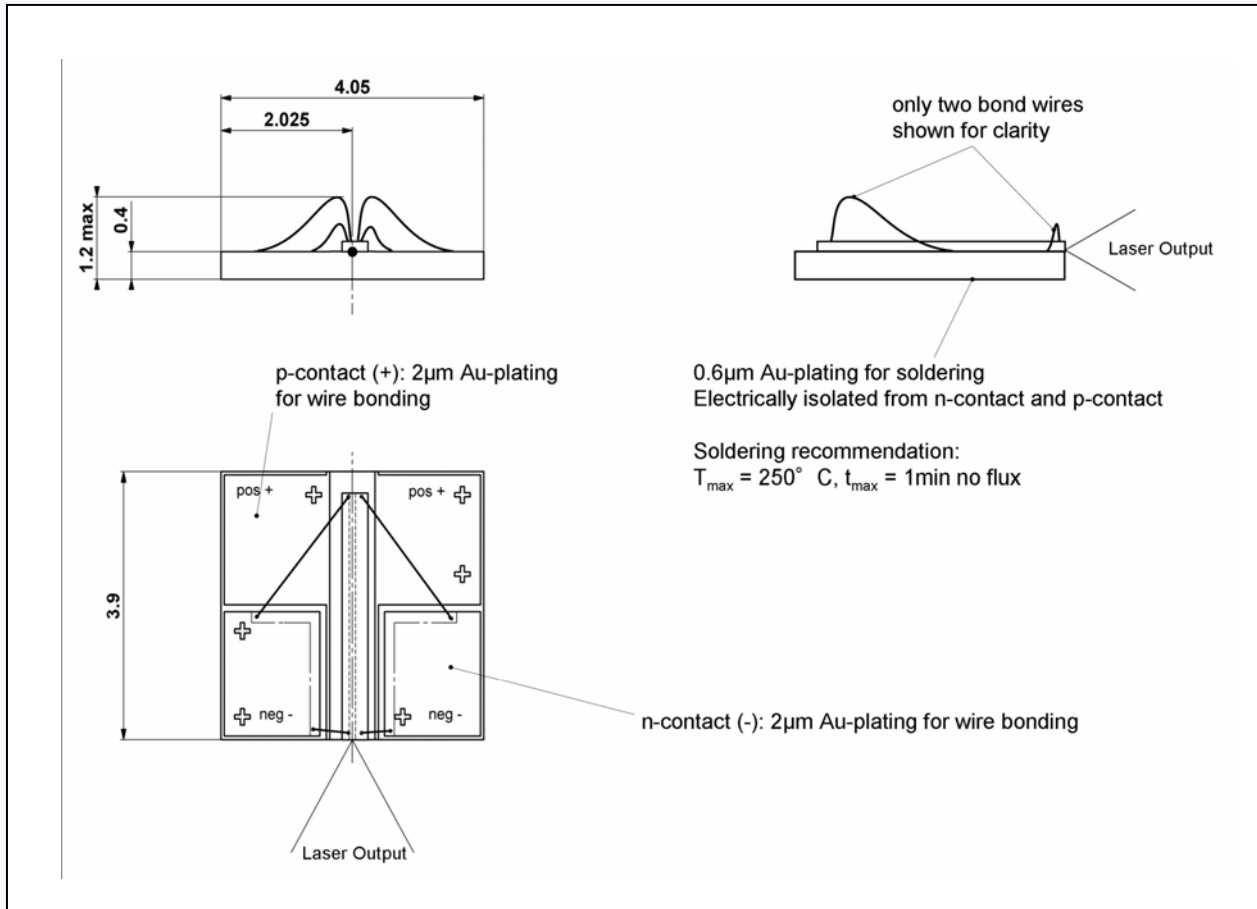
Parameter	Symbol	Typical	Unit
CW Output Power	$P_{op}$	4	W
Center Wavelength [1] SES4-808A-01 SES4-808B-01	$\lambda_{cA}$ $\lambda_{cB}$	$806 \pm 3$ $803 \pm 3$	nm
Spectral Width (FWHM)	$\Delta\lambda$	2	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ $\theta_{\perp}$	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	$\Omega$
Operating Current	$I_{op}$	4	A
Operating Voltage	$V_{op}$	1.9	V

[1] Reduced wavelength window available on request.

## 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**

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

**Contact Information**

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