


11W 9xxnm 90 μ m High Power Single Emitter Laser Diode on Submount

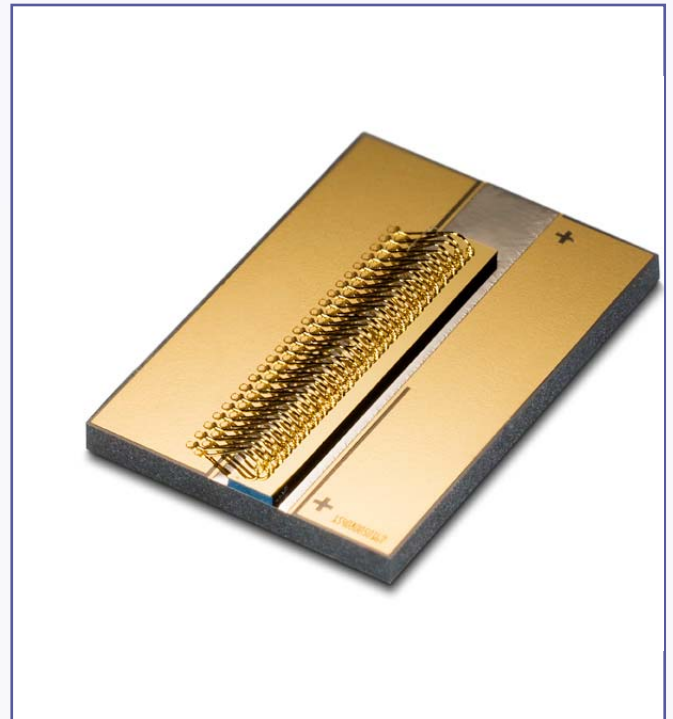
SES11-9xx-01

Features:

- 90 μ m wide emitter
- 11W operating power (p-side down mounted)
- Highly reliable single quantum well MBE structure
- Standard wavelength at 915, 940, 960 and 975nm (other available on request)
- RoHS compliant 

Applications:

- Fiber laser pumping
- Material processing
- Printing
- Medical



The Oclaro SES11-9xx-01 single emitter laser diode series has been designed to provide higher output power, and higher efficiency 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.

Characteristics

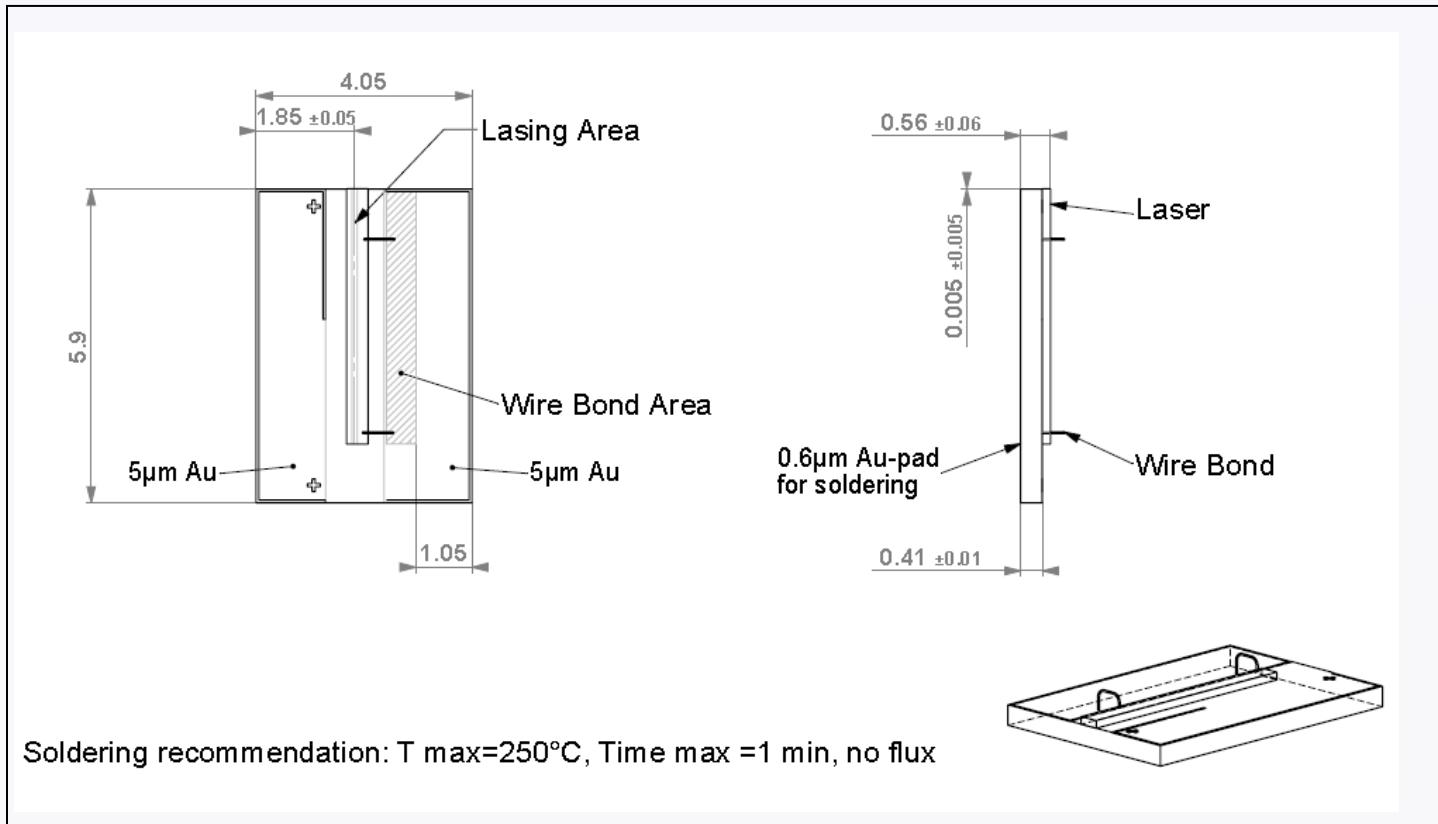
Parameter	Symbol	Typical	Unit
CW Output Power	P_{op}	11	W
Center Wavelength ^[1] SES11-915-01 SES11-940-01 SES11-960-01 SES11-975-01	λ_{c915} λ_{c940} λ_{c960} λ_{c975}	915 ± 10 940 ± 10 960 ± 10 975 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ θ_{\perp}	8 23	deg
Polarization	–	TE	–
Threshold Current	I_{th}	600	mA
Slope Efficiency	$\eta D = P_{op}/(I_{op} - I_{th})$	1.0	W/A
Conversion Efficiency	$H = P_{op}/(V_{op} \times I_{op})$	> 55	%
Series Resistance	R_s	0.03	Ω
Operating Current	I_{op}	11.5	A
Operating Voltage	V_{op}	1.8	V
Operating Temperature	T_{op}	25 ± 5	°C

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

Chip Dimensions

Parameter	Symbol	Typical	Unit
Chip Width	b	400	μm
Chip Thickness	d	150	μm
Emitter Width	w	90	μm

Package Dimensions (mm)



Soldering recommendation: T max=250°C, Time max =1 min, no flux

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

SES11-915-01	11W 915nm Single Emitter Laser Diode on Submount
SES11-940-01	11W 940nm Single Emitter Laser Diode on Submount
SES11-960-01	11W 960nm Single Emitter Laser Diode on Submount
SES11-975-01	11W 975nm Single Emitter Laser Diode on Submount

Contact Information

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