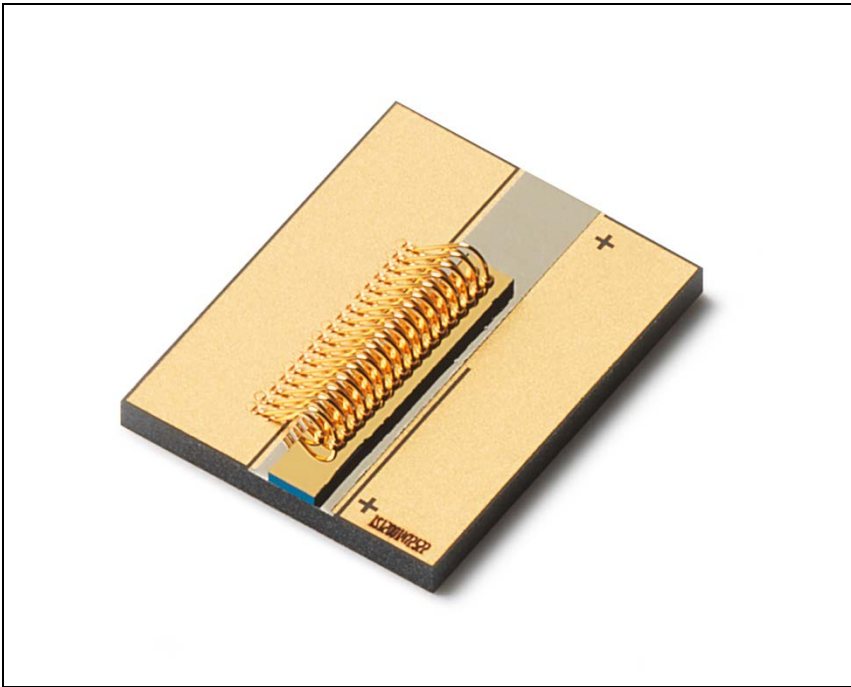



18W 9xxnm 190 μ m High Power Single Emitter Laser Diode on Submount

SES18-9xx-01



The II-VI Laser Enterprise SES18-9xx-01 single emitter laser diode series has been designed to provide highest output power and efficiency for 200 μ m 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:

- 190 μ m wide emitter
- 18W operating power (p-side down mounted)
- Highly reliable single quantum well structure
- Standard wavelength at 915, 940, and 975nm (other available on request)
- RoHS compliant 

Applications

- Fiber laser pumping
- Material processing
- Medical

Characteristics

Parameters at 25°C

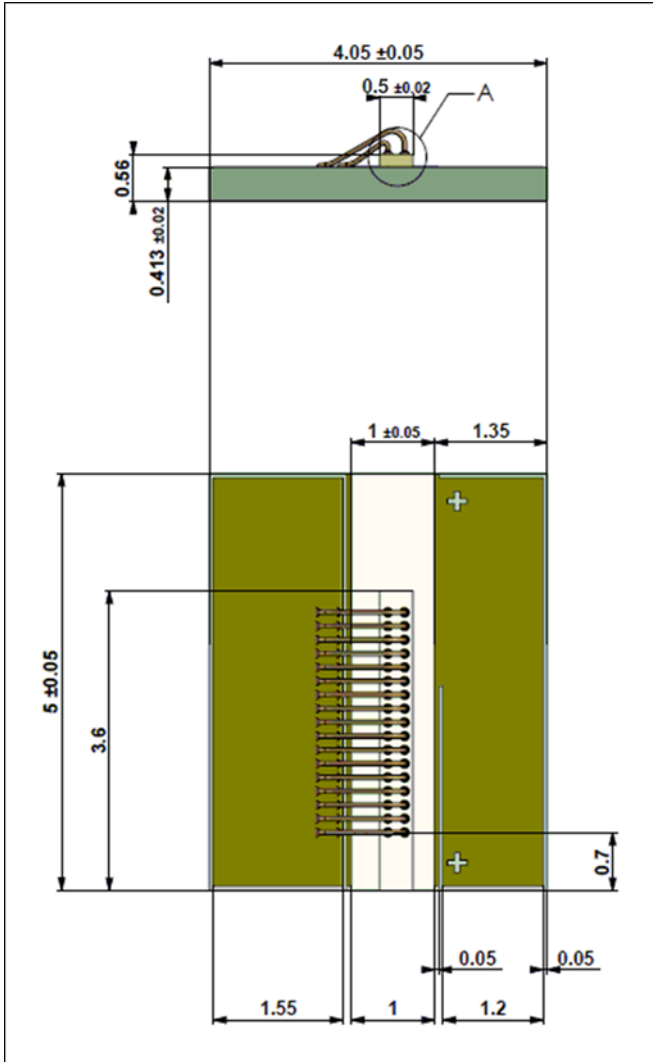
Parameter	Symbol	Typ	Unit
CW Output Power	P_{op}	18	W
Center Wavelength ^[1] SES18-915-01 SES18-940-01 SES18-975-01	λ_{c915} λ_{c940} λ_{c975}	915 ± 10 940 ± 10 975 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ θ_{\perp}	9 29	deg
Polarization	–	TE	–
Threshold Current	I_{th}	1050	mA
Slope Efficiency	$\eta_D = P_{op}/(I_{op} - I_{th})$	1.1	W/A
Conversion Efficiency	$H = P_{op}/(V_{op} \times I_{op})$	57	%
Series Resistance	R_s	0.03	Ω
Operating Current	I_{op}	< 20	A
Operating Voltage	V_{op}	1.75	V

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

Chip Dimensions

Parameter	Symbol	Typ	Unit
Chip Width	b	500	μm
Chip Thickness	d	150	μm
Emitter Width	w	190	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

- SES18-915-01 18W 915nm Single Emitter Laser Diode on Submount
- SES18-940-01 18W 940nm Single Emitter Laser Diode on Submount
- SES18-975-01 18W 975nm 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.

D00470 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..