


9W 940nm High Power Single Emitter Laser Diode on Submount

SES9-940-01

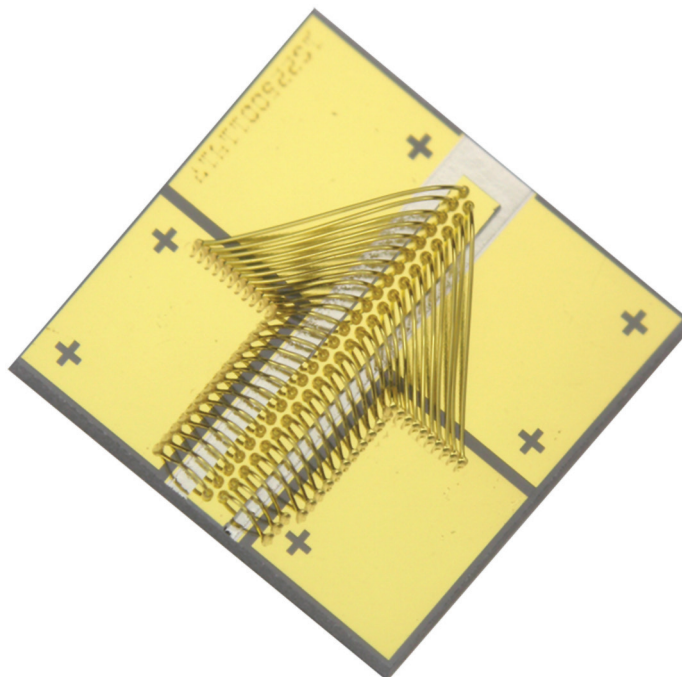
The Bookham SES9-940-01 single emitter laser diode series has been designed to provide the high output power, high coupling efficiency and high reliability required for pumping next generation fiber lasers and for other high power laser diode applications. The proprietary E2 front mirror passivation 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
- 90µm wide emitter
- 9W operating power (p-side down mounted)
- Highly reliable single quantum well MBE structure
- Standard wavelength at 940nm (other available on request)
- RoHS compliant 

Applications:

- Fiber laser pumping
- Material processing
- Printing
- Medical



Characteristics

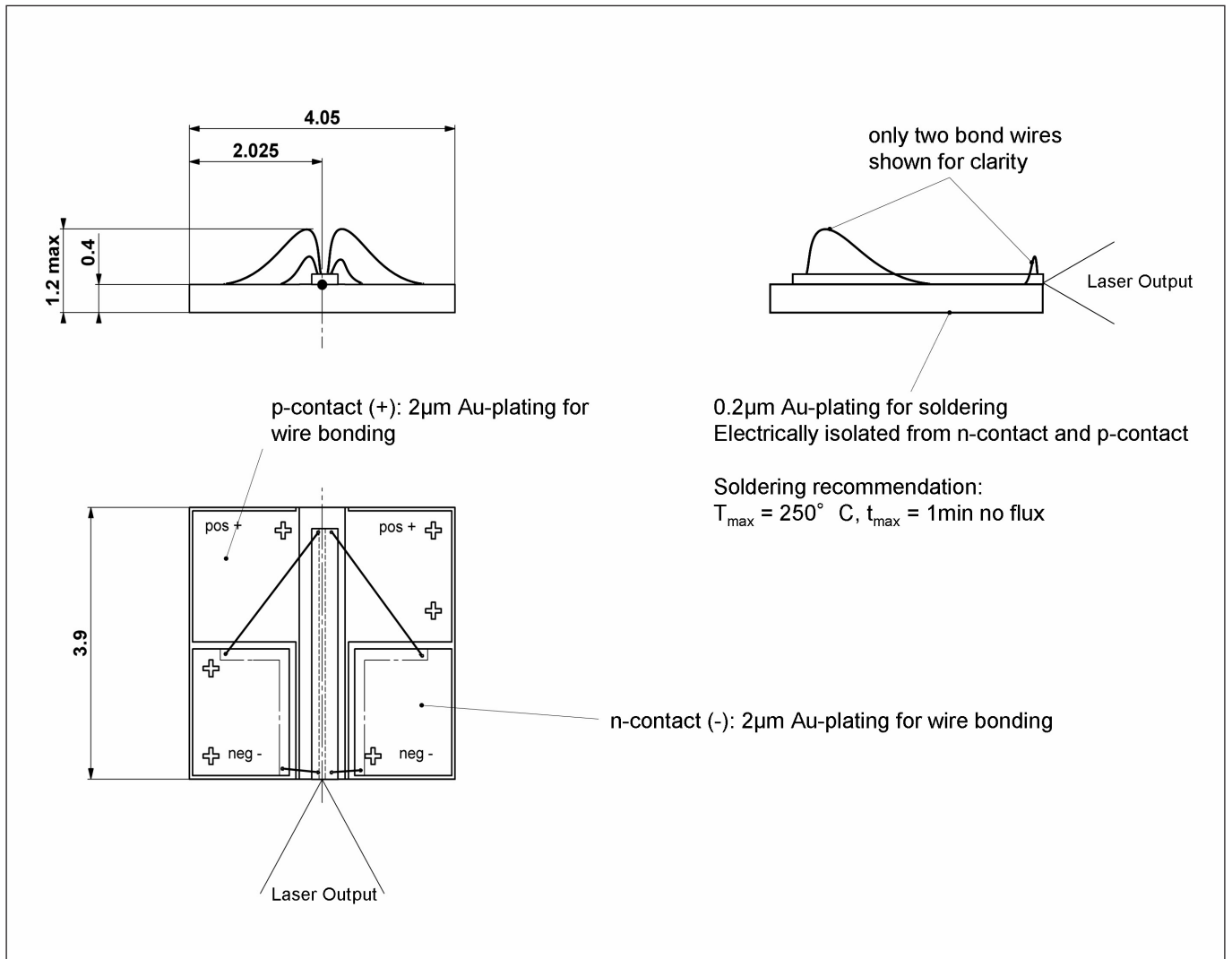
Parameter	Symbol	Typical	Unit
CW Output Power	P_{op}	9	W
Center Wavelength [1]	λ_c	940 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{//}$ θ_{\perp}	8 29	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	Ω
Operating Current	I_{op}	9.5	A
Operating Voltage	V_{op}	2.2	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
Resonator Length	l	3600	μm
Chip Thickness	d	150	μm
Emitter Width	w	90	μm

Package Dimensions (mm)



RoHS Compliance



Bookham 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:

SES9-940-01 9W 940nm Single Emitter Laser Diode on Submount

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