8W/7W 9xxnm High Power Single Emitter Laser Diode on C-mount

SEC8-9xx-01

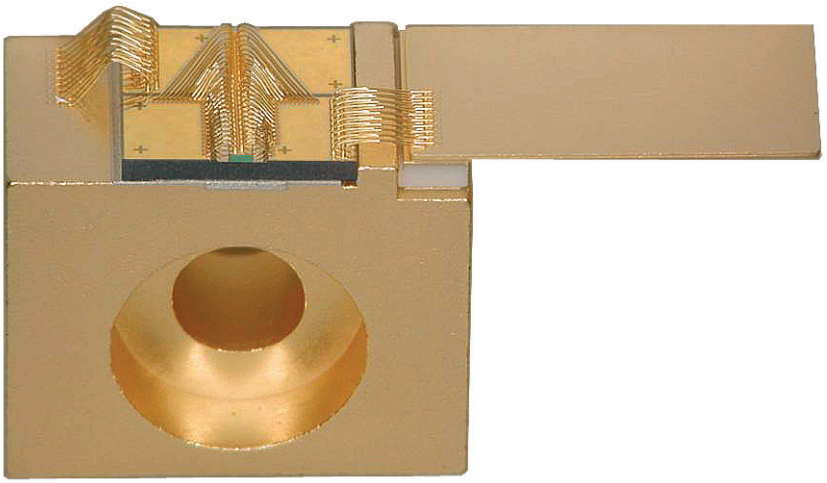
The Bookham SEC8-9xx-01 single emitter laser diode series has been designed to provide the high output power, high coupling efficiency and high reliability required for pumping next generation fiber lasers and for other high power laser diode applications. The proprietary E2 front mirror passivation 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 a submount that is attached to a C-mount.

Features:

- 3.6mm x 0.4mm laser diode
- 90µm wide emitter
- Cu C-Mount
- 8W/7W 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



Characteristics

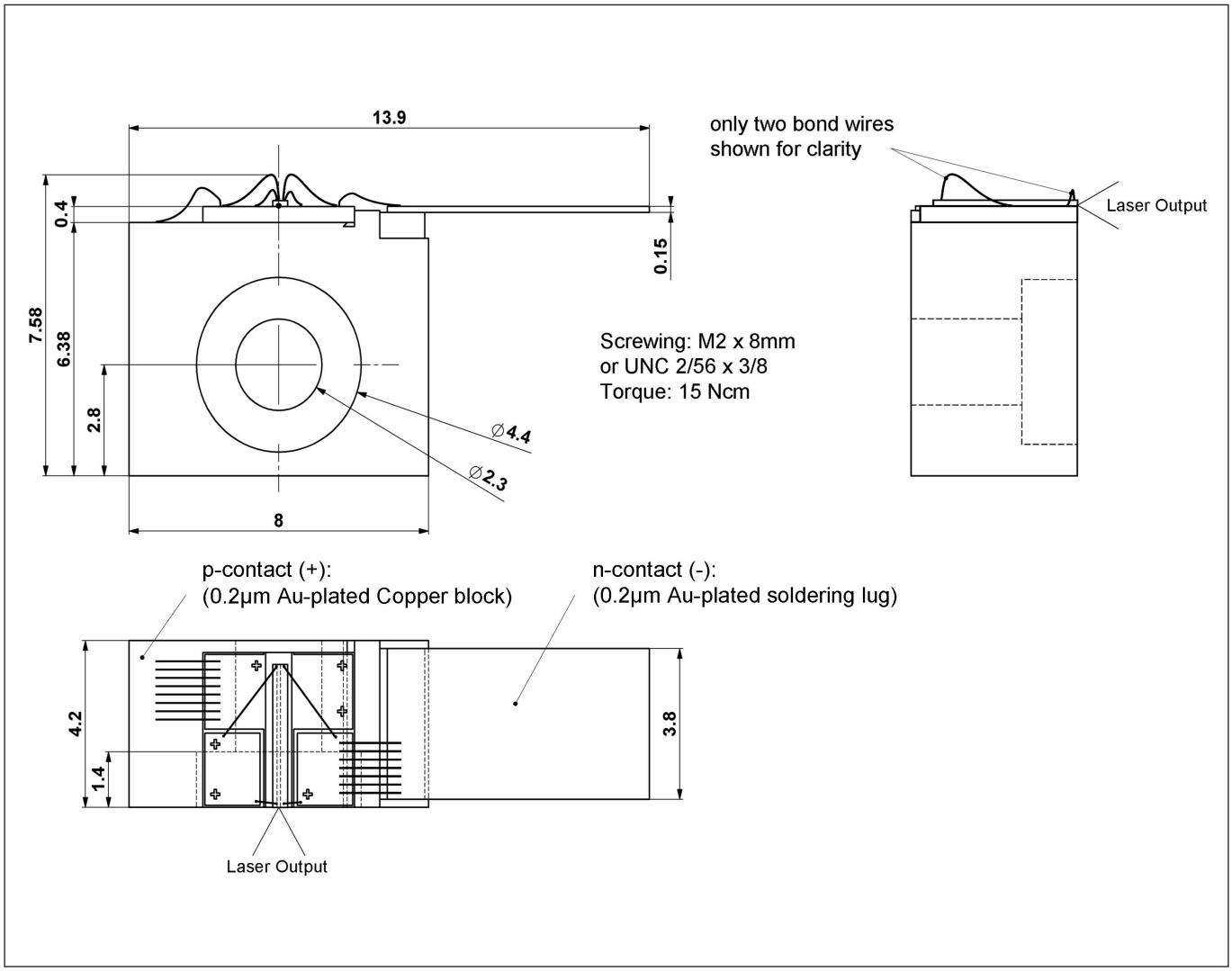
Parameter	Symbol	Typical	Unit
CW Output Power SEC8-915-01 SEC8-940-01 SEC8-960-01 SEC7-975-01	 P_{op915} P_{op940} P_{op960} P_{op975}	 8 8 8 7	W
Center Wavelength [1] SEC8-915-01 SEC8-940-01 SEC8-960-01 SEC7-975-01	 λ_{c915} λ_{c940} λ_{c960} λ_{c975}	 915 ± 10 940 ± 10 960 ± 10 975 ± 10	nm
Spectral 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	 $\theta_{//}$ $\theta_{\perp}$	 8 29	deg
Polarization	–	TE	–
Threshold Current	I_{th}	400	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 SEC8-915-01 SEC8-940-01 SEC8-960-01 SEC7-975-01	 I_{op915} I_{op940} I_{op960} I_{op975}	 8.5 8.5 8.5 7.5	A
Operating Voltage	V_{op}	1.9	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:

SEC8-915-01	8W 915nm Single Emitter Laser Diode on C-mount
SEC8-940-01	8W 940nm Single Emitter Laser Diode on C-mount
SEC8-960-01	8W 960nm Single Emitter Laser Diode on C-mount
SEC7-975-01	7W 975nm Single Emitter Laser Diode on C-mount

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REFERENCE IEC 60825-
Edition 1.2

This product complies with
21CFR 1040.10

ISO 9001:2000
Certified

FM 68159