

Preliminary

60W 10xxnm High Power Bare Laser Diode Bar B60C-10xx-01

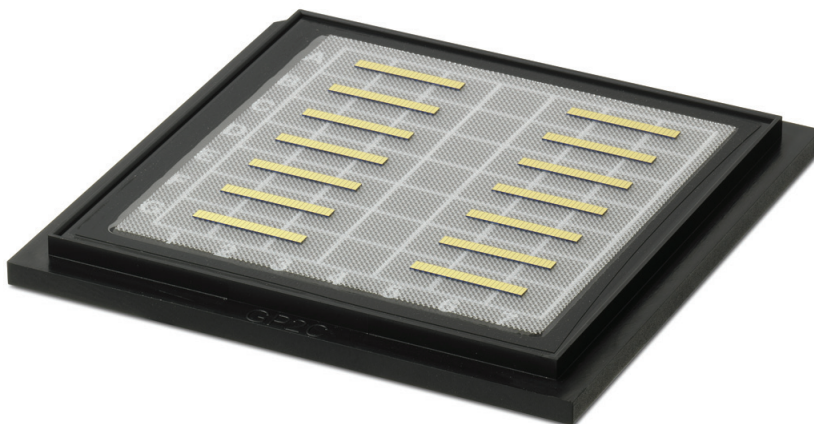
The Bookham B60C-10xx-01 50% fill factor laser diode bar has been designed to provide the increased brightness and reliability required for direct diode applications and as replacement for Nd:YAG lasers. The proprietary E2 front mirror passivation process, developed at our Zurich site, prevents Catastrophic Optical Damage (COD) to the laser diode facet even at extremely high output powers.

Features:

- Bare 10mm x 1.2mm laser diode bar
- 60W operating power
- Highly reliable single quantum well MBE structure
- Excellent solderability
- Standard wavelength at 1060nm (others available on request)
- RoHS compliant 

Applications:

- Direct applications such as material processing
- Nd:YAG laser replacement
- Medical
- Printing



Characteristics

Parameter	Symbol	Typical	Unit
CW Output Power	P_{op}	60	W
Central Wavelength [1] B60C-1060-01	λ_{c1060}	1060 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence Parallel to Junction (90% of Power) Perpendicular to Junction (FWHM)	$\theta_{//}$ $\theta_{\perp}$	9 26	deg
Polarization	–	TE	–
Threshold Current	I_{th}	11	A
Slope Efficiency	$\eta_D = P_{op}/(I_{op}-I_{th})$	0.9	W/A
Conversion Efficiency	$H = P_{op}/(V_{op} \times I_{op})$	50	%
Series Resistance	R_s	5	mΩ
Operating Current	I_{op}	80	A
Operating Voltage	V_{op}	1.5	V
Operating Temperature	T_{op}	25 ± 5	°C
Watercooler Flow	Q_w	22 ± 4	l/hrs
Microchannel Cooler Differential Pressure	P_w	0.7	bar

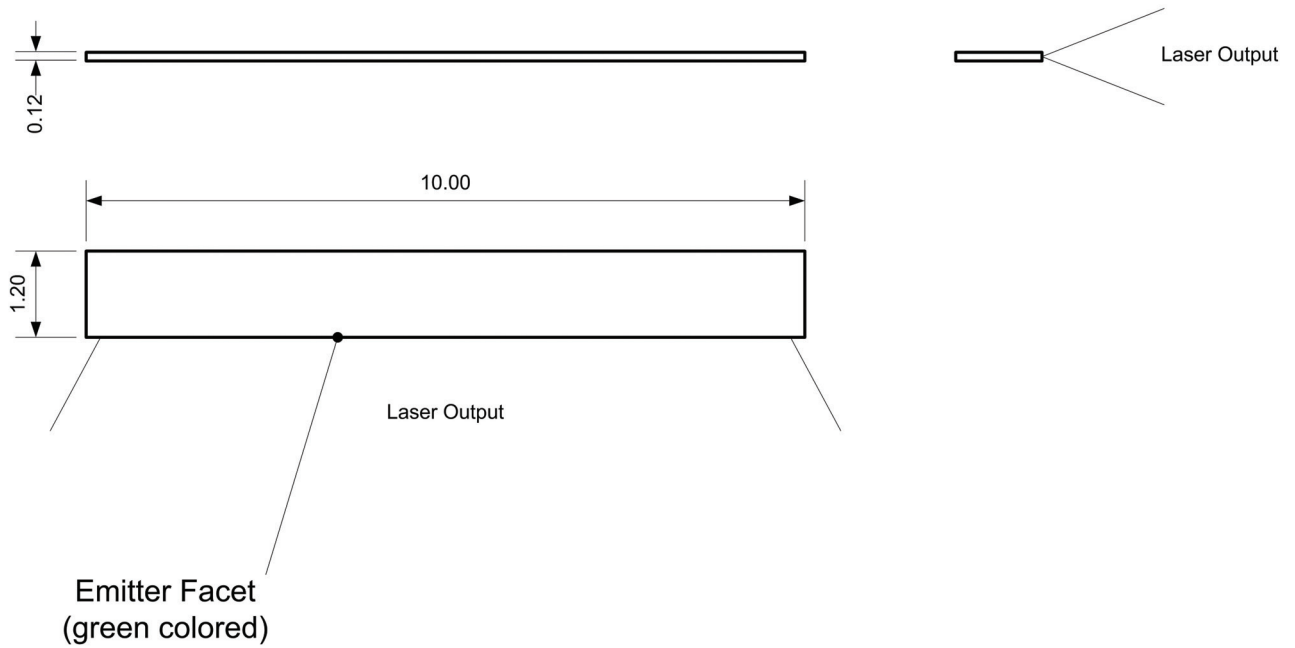
Notes:

[1] Reduced wavelength window/extended range available on request (900-1060nm).

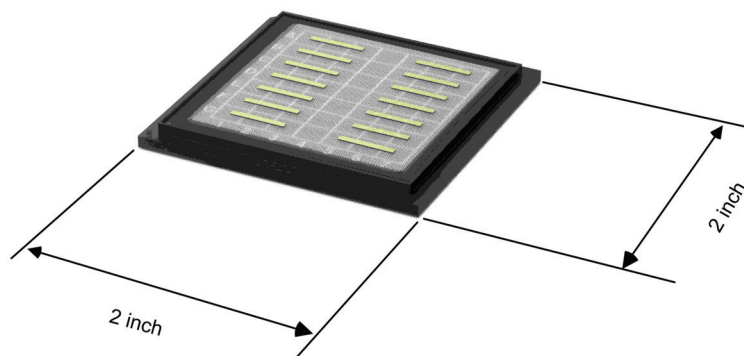
Bar Dimensions

Parameter	Symbol	Typical	Unit
Bar Width	b	10	mm
Resonator Length	l	1.2	mm
Number of Emitters	n	25	–
Emitter Spacing	p	400	μm
Emitter Width	w	200	μm
Fill Factor	f	50	%

Bare Bar Dimensions (mm)



Bars in Gel-Pack:
(bars are mounted p-side down)



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:

B60C-1060-01 60W 1060nm Bare Laser Diode Bar

Contact Information

Bookham (Switzerland) AG

Binzstrasse 17
8045 Zurich
Switzerland

- Tel: +41 44 455 8787
- Fax: +41 44 455 8586

www.bookham.com
highpower@bookham.com

EMEA Sales Contact

Gunnar Stolze

- Tel: +41 79 635 3777

North America Sales Contact

Michael Cutler

- Tel: +1 678 763 0777

ASIA Sales Contact

Patrick Lee

- Tel: +852 9197 7014

Japan Sales Contact

Japan Laser Corporation

- Tel: +813 5285 0861

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Bookham before they become applicable to any particular order or contract. In accordance with the Bookham policy of continuous improvement specifications may change without notice. The publication of information in this data sheet does not imply freedom from patent or other protective rights of Bookham or others. Further details are available from any Bookham sales representative.

