


## Preliminary

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

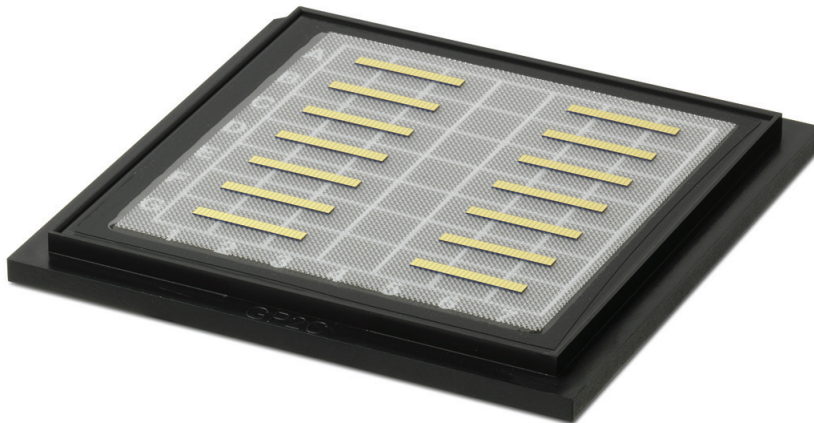
The Bookham B60C-10xx-01 50% fill factor laser diode bar has been designed to provide the increased brightness and reliability required for direct diode applications and as replacement for Nd:YAG lasers. The proprietary E2 front mirror passivation process, developed at our Zurich site, prevents Catastrophic 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	$\lambda_{c1060}$	$1060 \pm 10$	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	$T_{op}$	$25 \pm 5$	°C
Watercooler Flow	$Q_w$	$22 \pm 4$	l/hrs
Microchannel Cooler Differential Pressure	$P_w$	0.7	bar

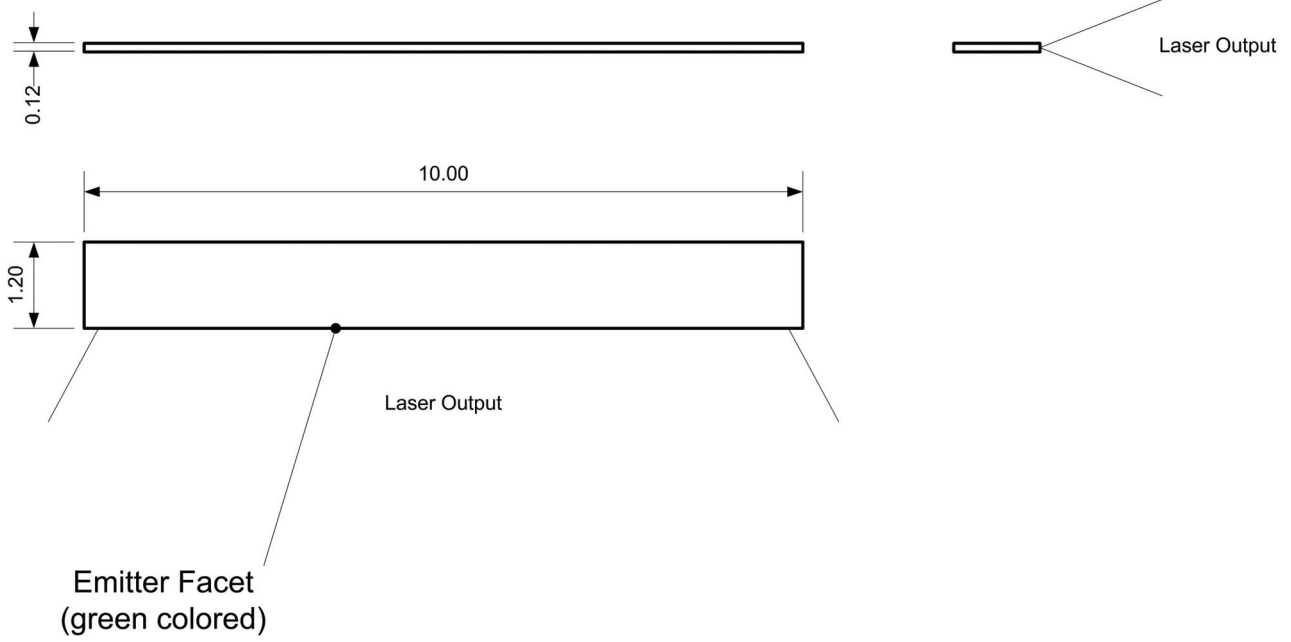
**Notes:**

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

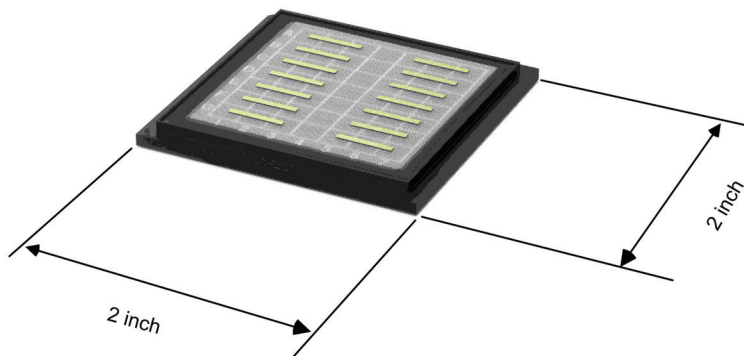
## Bar Dimensions

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

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