Bookham™

Preliminary

40W 10xxnm 30% Fill Factor High Power Laser Diode Bar on Passive Cu Block Cooler

BPC40C-10xx-01

The Bookham BPC40C-10xx-01 30% fill factor laser diode bar on passive cooler series has been designed to provide the high brightness and reliability required for both medical and direct 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 laser diode bars are mounted on an expansion matched CuW submount onto a Cu block package providing very high reliability in CW and pulsed (1-Hz type) applications.

Features:

- Mounted 10mm x 1.2mm laser diode bar
- Passive 1" x 1" Cu block cooler
- 30% fill factor (150µm emitter / 500µm pitch)
- 40W operating power
- Highly reliable single quantum well MBE structure
- Telecom grade AuSn mounting technology
- Standard wavelength at 1060nm (others available on request)
- RoHS compliant

Applications:

- Direct applications such as material processing
- Medical
- Therapeutic

Characteristics

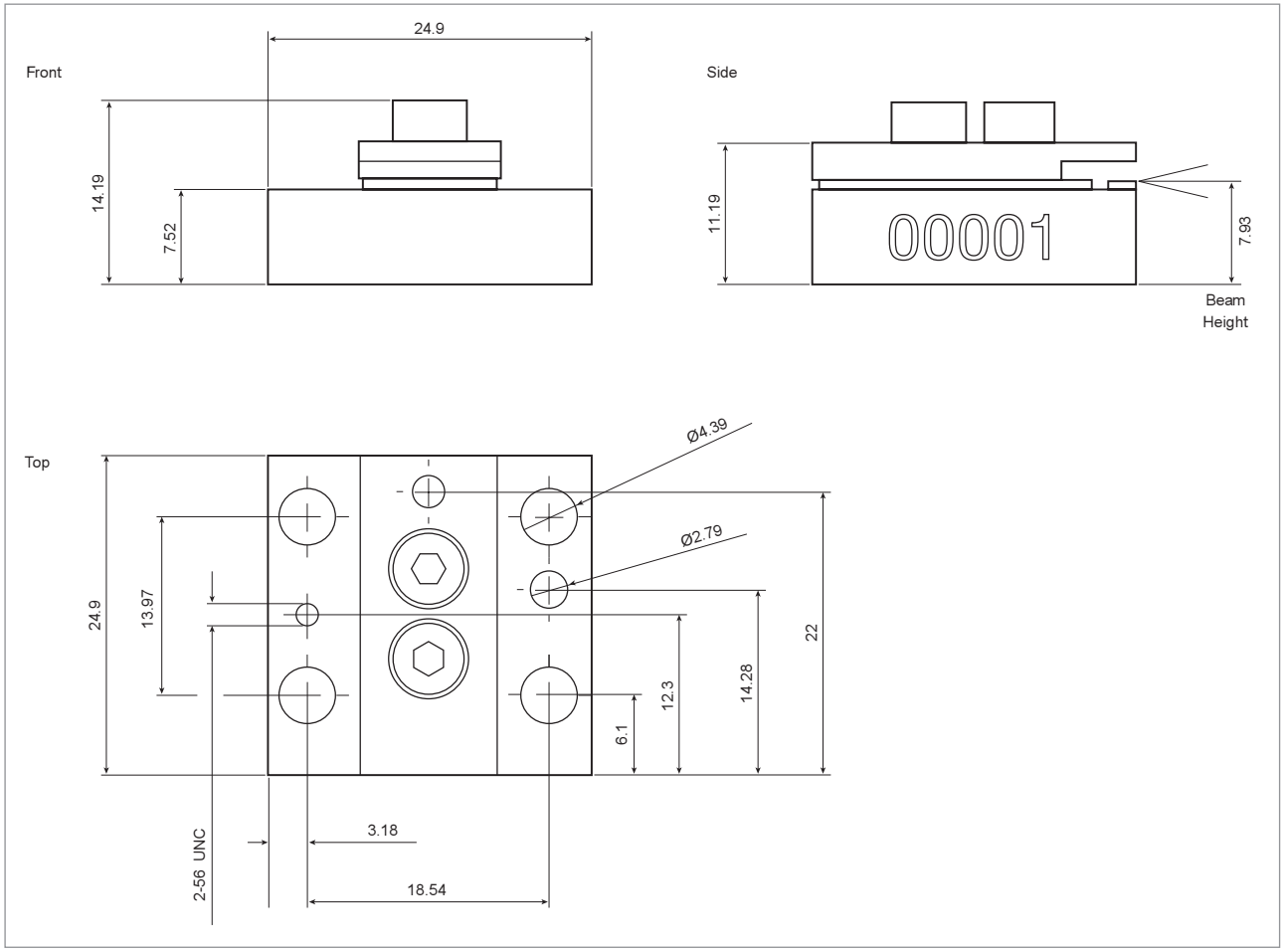
Parameter	Symbol	Typical	Unit
CW Output Power BPC40C-1060-01	P_{op}	40	W
Center Wavelength[1] BPC40C-1060-01	λ_{c1060}	1060 ± 10	nm
Spectral Width (FWHM)	$\Delta\lambda$	4	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	 $\theta_{//}$ $\theta_{\perp}$	 9 26	deg
Polarization	–	TE	–
Threshold Current	I_{th}	6	A
Slope Efficiency	$\eta_D=P_{op}/(I_{op}-I_{th})$	0.9	W/A
Conversion Efficiency	$H=P_{op}/(V_{op}xI_{op})$	50	%
Series Resistance	R_s	5	mΩ
Operating Current	I_{op}	50	A
Operating Voltage	V_{op}	1.5	V
Operating Temperature	T_{op}	25 ± 5	°C

[1] Reduced wavelength window / extended range available on request (1020-1070nm)

Bar Dimensions

Parameter	Symbol	Typical	Unit
Bar Width	b	10	mm
Resonator Length	l	1.2	mm
Number of Emitters	n	19	–
Emitter Spacing	p	500	µm
Emission Width	w	150	µm
Fill Factor	f	30	%

Passive Cu Block Cooler 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:

BPC40C-1060-01	40W 1060nm 30% Fill Factor Laser Diode Bar on Passive Cu Block Cooler

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Important Notice

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REFERENCE IEC 60825-Edition 1.2

THIS PRODUCT COMPLIES WITH 21CFR 1040.10

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