

## Preliminary

# 30W 9xx nm MaxiChip High Power Laser Diode on Passive Cu Block Cooler

## BPC30C-9xx-01

The Bookham BPC30C-9xx-01 MaxiChip laser diode on passive cooler has been designed for direct coupling into a 800μm diameter fiber providing the high brightness required for collimated solid-state laser pumping 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 1.25mm x 3.6mm laser diode
- Passive 1" x 1" Cu block cooler
- Small aperture (800μm emission area)
- 30W operating power
- Highly reliable single quantum well MBE structure
- Telecom grade AuSn mounting technology
- Standard wavelength at 915nm, 940nm, and 980nm (others available on request)
- RoHS compliant 

### Applications:

- Collimated solid state laser pumping
- Direct applications such as material processing
- Printing
- Medical



## Characteristics

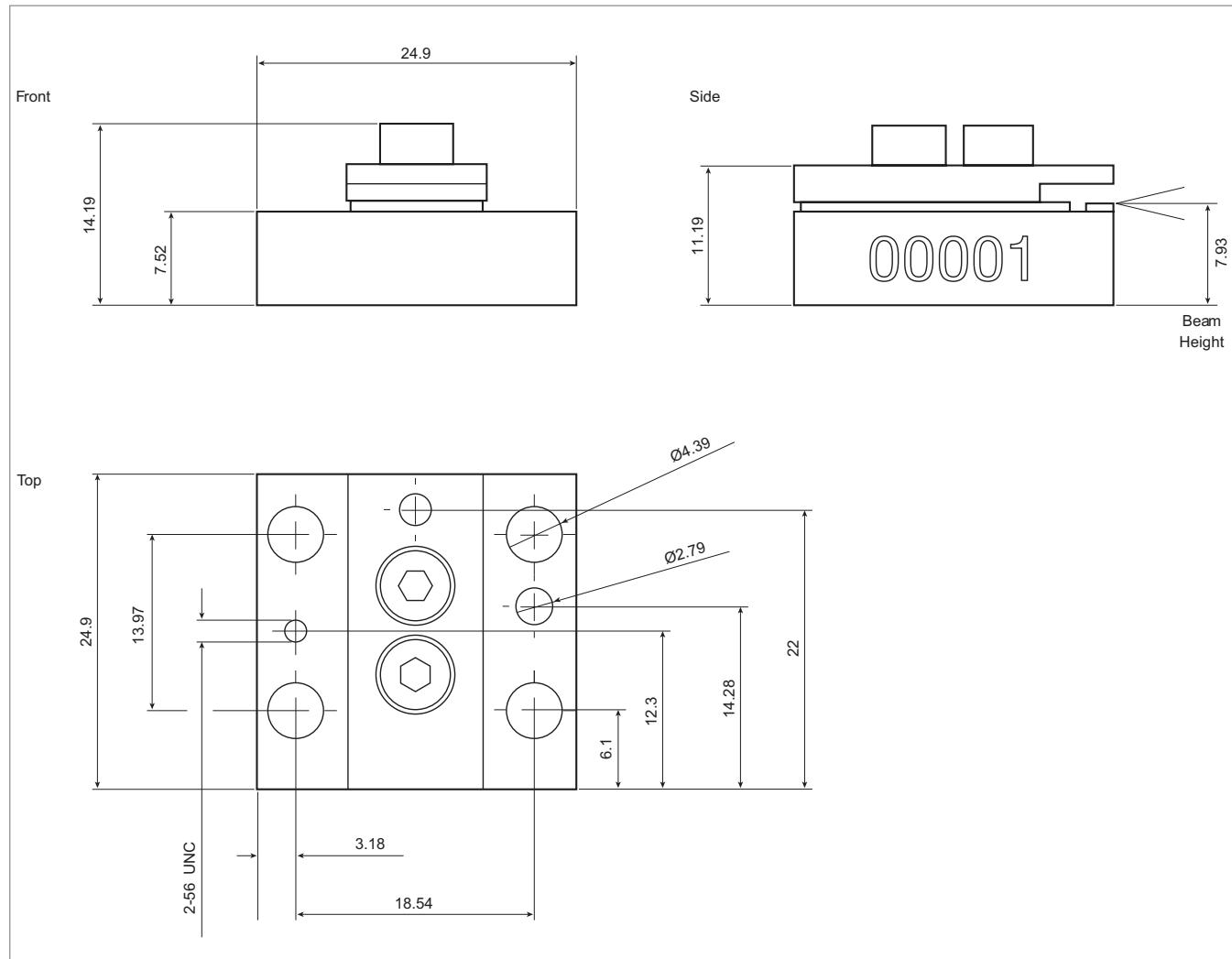
Parameter	Symbol	Typical	Unit
CW Output Power	$P_{op}$	30	W
Center Wavelength [1] BPC30C-915-01 BPC30C-940-01 BPC30C-980-01	$\lambda_{c915}$ $\lambda_{c940}$ $\lambda_{c980}$	$915 \pm 10$ $940 \pm 10$ $980 \pm 10$	nm
Spectral Width (FWHM)	$\Delta\lambda$	3	nm
Wavelength Shift with Temperature	$d\lambda_c/dT_{op}$	0.3	nm/°C
Beam Divergence (FWHM) Parallel to Junction Perpendicular to Junction	$\theta_{\parallel}$ $\theta_{\perp}$	9 26	deg
Polarization	—	TE	
Threshold Current	$I_{th}$	3	A
Slope Efficiency	$\eta_{D}=P_{op}/(I_{op}-I_{th})$	1	W/A
Conversion Efficiency	$H=P_{op}/(V_{op} \times I_{op})$	>50	%
Series Resistance	$R_s$	7	$\text{m}\Omega$
Operating Current	$I_{op}$	35	A
Operating Voltage	$V_{op}$	1.6	V
Operating Temperature	$T_{op}$	$25 \pm 5$	°C

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

## Bar Dimensions

Parameter	Symbol	Typical	Unit
Bar Width	$b$	1.25	mm
Resonator Length	$l$	3.6	mm
Emission Area	$W$	800	$\mu\text{m}$

## 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:

BPC30C-915-01	30W 915nm MaxiChip Laser Diode on Passive Cu Block Cooler
BPC30C-940-01	30W 940nm MaxiChip Laser Diode on Passive Cu Block Cooler
BPC30C-980-01	30W 980nm MaxiChip Laser Diode on Passive Cu Block Cooler

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