High Power Laser Diode Bar

Part Number: BAR-114



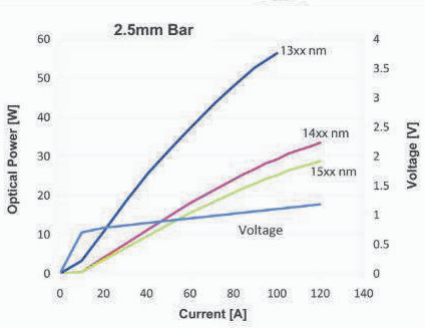
High Power 19 Emitters Bar
Multi-Mode Fabry-Perot
CW Wavelength at 1560nm

Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard 19 Emitters Bar
- Cost Effective

Application

- Professional Medical
- Home Medical
- Laser Rangefinder
- Target Illumination
- Military Systems
- Automotive TOF LiDAR
- Drones



SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements.

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High Power Laser Diode Bar

Specification

BAR-114



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1560	nm (±20)
Output Power (CW)*	P_{out}	27.5	watts (±10%)
Chip Cavity Length	CL	2500	µm
Emitter Width	W	95	µm
Number of Emitters		19	
Spectral Width FWHM	$\Delta\lambda$	15	nm
Slope Efficiency	η	0.27	W/A
Fast Axis Div.	$\Theta_\perp$	25	deg FWHM
Slow Axis Div.	$\Theta_\parallel$	8	deg FWHM
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	23	%
Threshold Current	I_{TH}	10	A
Operating Current	I_{op}	110	A
Operating Voltage	V_{op}	1.1	V
Mechanical		**Range**	**Units**
Operating Temp.**		-40 to 60	°C
Storage Temp.		-40 to 80	°C

*Specified values are rated at a constant heat sink temperature of 20°C.
**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

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Mechanical Drawing



BAR ATTRIBUTES

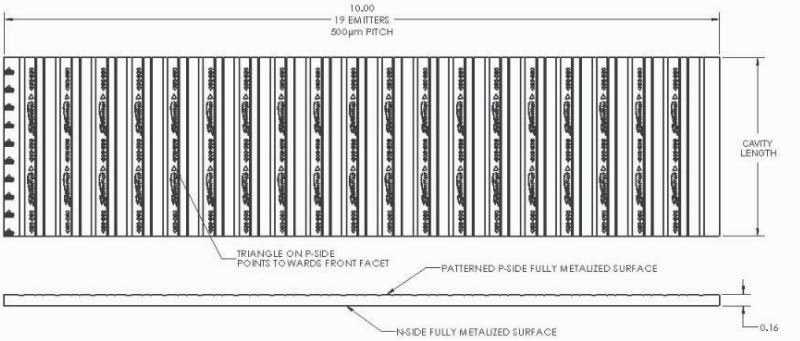
APERTURE WIDTH (µm)	Multi Mode (95) ± 3
BAR WIDTH (mm)	10 ± 0.01
THICKNESS (µm)	160 ± 10
CAVITY LENGTH (µm)	Varies ± 10

P METALIZATION

MATERIAL	THICKNESS (nm)	TOLERANCE (nm)
Ti	50	± 10
Pt	125	± 25
Au	250	± 50

N METALIZATION

MATERIAL	THICKNESS (nm)	TOLERANCE (nm)
Ti	30	± 10
Pt	125	± 25
Au	400	± 40



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