

Datasheet: Necsel™ Red High Power FC Bar

These specifications are for the Necsel red high power fiber-coupled bar package. The centroid of the wavelength spectrum will be within the indicated wavelength range.



Model #	Symbol	Min. (nm)	Typical (nm)	Max. (nm)
Red-HP-FC-63x	λ	634	637	642

Operating Wavelengths

Laser Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Power (CW)	P_{op}	-	5.0	-	W
Module Operating Temperature [non-condensing atmosphere]	$T_{Thermistor}$	-	25	30	°C
Center Wavelength [at 25°C and P_{op}]	λ	634	637	642	nm
Spectral Width @ FWHM	$\Delta\lambda$	-	1	3	nm
Wavelength Temperature Coefficient	-	-	0.2	-	nm/°C
Threshold Current	I_{th}	-	4.0	-	A
Slope Efficiency	η	-	0.8	-	W/A

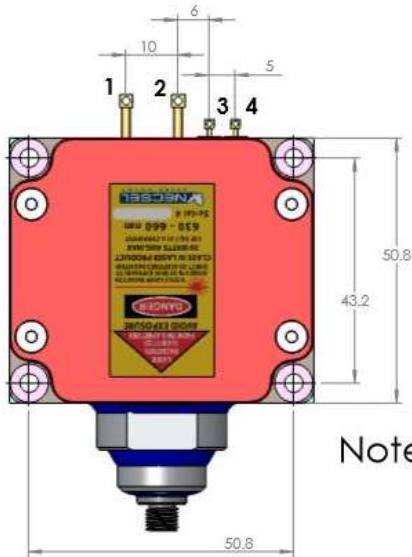
Power Supply Requirements

Operating Voltage	V_{op}	-	2.4	3.0	V
Operating Current	I_{op}	-	10	12	A

Fiber Specifications

Fiber Core Diameter (Centration $\leq 10 \mu\text{m}$)		0.400		mm
Connector Type (Nose length 0.3850 - 0.3863 in., 9.779 – 9.812 mm)		SMA-905		
Numerical Aperture		0.22		

Outline Drawing and Electrical Connections

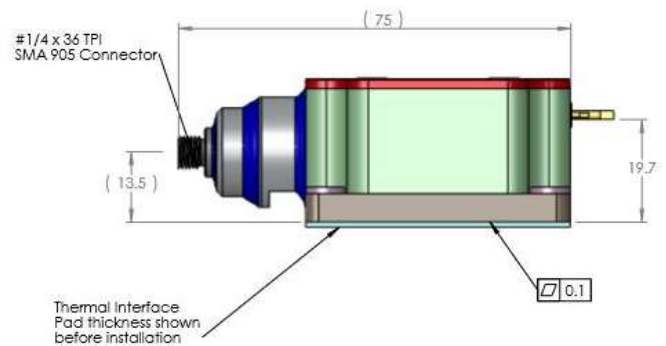
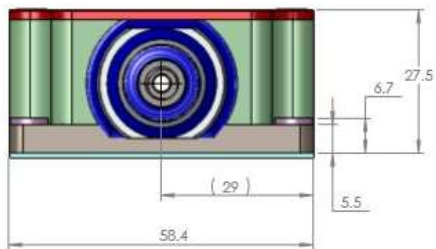


Electrical Connection Contact #	Description
1	Laser (+)
2	Laser (-)
3	Thermistor
4	Thermistor



Note: Package is electrically positive

nylon shoulder washer electrical insulator shown in all views



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Datasheet: Necsel™ Red High Power CS Mounted Bar

These specifications are for the Necsel red high power CS mounted bar with FAC/SAC lensing. The centroid of the wavelength spectrum will be within the indicated wavelength range.



Model #	Symbol	Min. (nm)	Typical (nm)	Max. (nm)
Red-HP-63x	λ	634	637	642

Operating Wavelengths

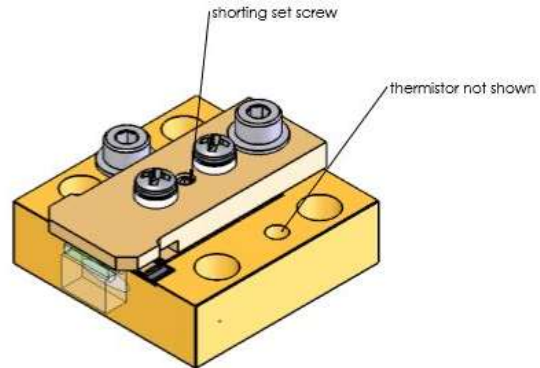
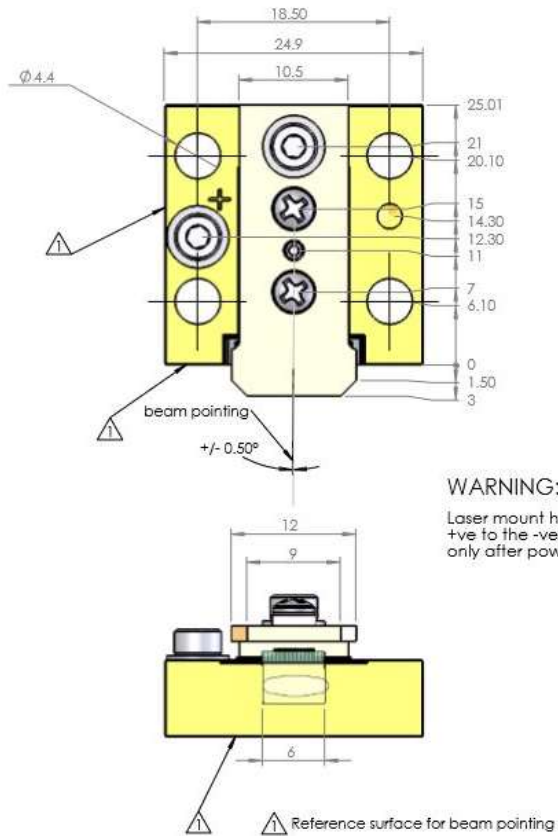
Laser Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Power (CW)	P_{op}	-	6.0	-	W
Module Operating Temperature [non-condensing atmosphere]	$T_{Thermistor}$	-	25	30	°C
Center Wavelength [at 25°C and P_{op}]	λ	634	637	642	nm
Spectral Width @ FWHM	$\Delta\lambda$	-	1	3	nm
Wavelength Temperature Coefficient	-	-	0.2	-	nm/°C
Threshold Current	I_{th}	-	4.0	-	A
Slope Efficiency	η	-	0.95	-	W/A

Array Specifications	Symbol	Min.	Typical	Max.	Unit
Number of Output Beams	N	18	20	20	-
Emitting Area Width	W_{ea}	-	40	-	μm
Emitting Area Period	L_{ea}	-	200	-	μm
Fill Factor	FF	-	20	-	%

Lensing	Symbol	Min.	Typical	Max.	Unit
Fast-Axis Collimation	FAC	-	3	4	mRad
Slow-Axis Collimation	SAC	-	33	40	mRad

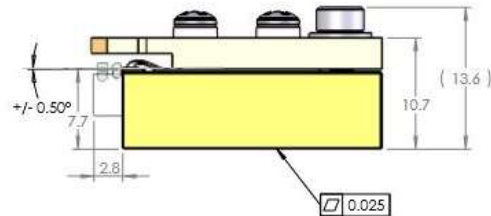
Power Supply Requirements	Symbol	Min.	Typical	Max.	Unit
Operating Voltage	V_{op}	-	2.4	3.0	V
Operating Current	I_{op}	-	10	12	A

Outline Drawing and Electrical Connections



WARNING: ESD SENSITIVE DEVICE.

Laser mount has a set screw connecting the +ve to the -ve terminals. Remove set screw only after power supply is connected.



NOTE: Lens Position actively aligned to achieve a residual beam divergence of <40 mRad horizontally and <4 mRad vertically. Beam pointing shall be ± 0.5 degrees in the vertical and horizontal axes.

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