



High Power Multi-Mode SemiNex Lasers
 4.4 Watts of Continuous Operation Power
 1470, 1532, or 1550 nm Wavelength
 High Heat Load - Fiber-Coupled

SemiNex delivers the highest available CW power at infrared wavelengths. SemiNex will optimize the design of its laser chips to meet customers' optical and electrical performance specifications. Diodes are mounted and tested to meet custom applications. Typical results and packaging options are shown below. Contact SemiNex for additional details or to discuss your application.

Key Features

- High output power
- High dynamic power range
- High efficiency
- Custom packaging

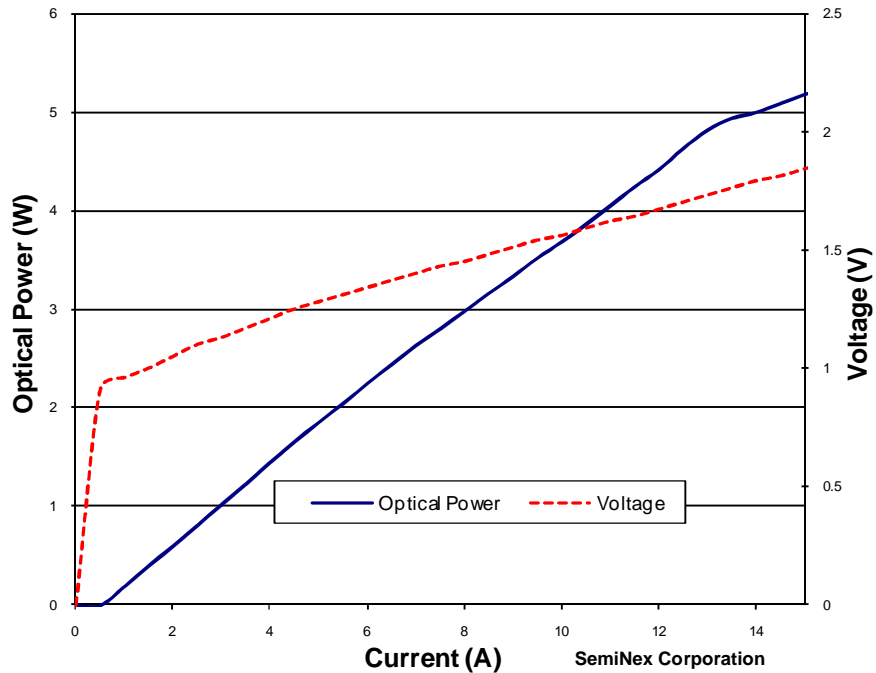
Applications

- Medical laser equipment
- LIDAR
- Free Space Optical Communication
- DPSS pump lasers
- Military / Aerospace

	Symbol	Typical	Units
Optical			
Output power (CW)	P_o	4.4	watts
Center Wavelength Range	λ_c	1470, 1532, 1550	nm
Emitter Width	W	95	μm
Emitter Height	H	1	μm
Spectral Width	$\Delta\lambda$	10	nm 3dB
Slope Efficiency	η_o	0.4	W/A
Optical Fiber Core Diameter		105	μm
Optical Fiber NA		0.22	
Wavelength Temp. Coeff.	λ_{coef}	0.7	nm/C

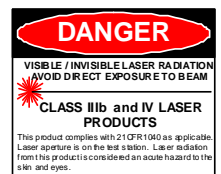
Electrical			
Power conversion Efficiency	η	0.2	
Threshold Current	I_{th}	0.45	A
Operating Current	I_{op}	12	A
Operating Voltage	V_{op}	1.8	V
Series Resistance	R_s	0.05	ohm

Typical CW LIV Optical Power Chart



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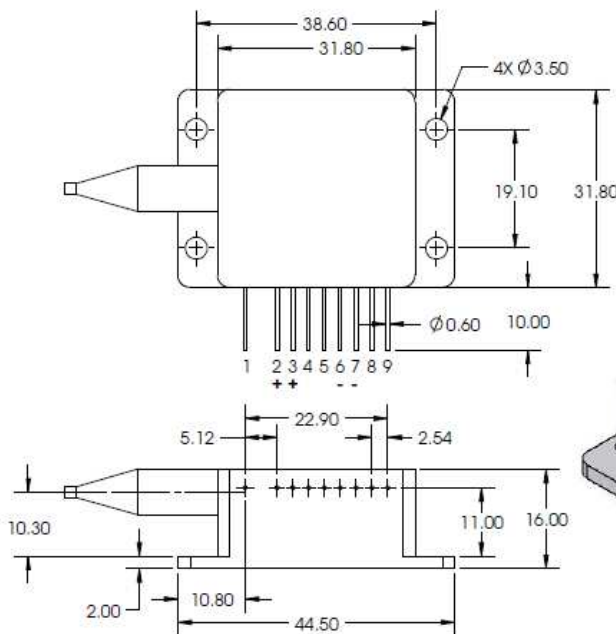
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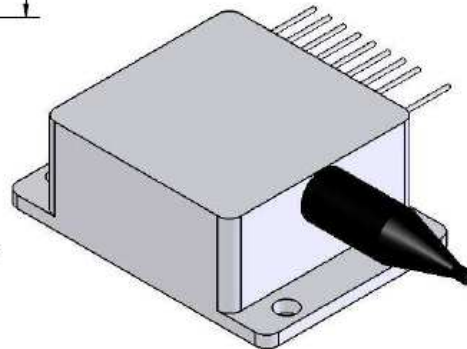
	Symbol	HHF-1470-6-95	HHF-1532-6-95	HHF-1550-6-95	Units
Optical					
Output power (CW)	P_o	4.4	3.7	3.7	watts
Center Wavelength	λ_c	1470	1532	1550	nm
Emitter Width	W	95	95	95	μm
Emitter Height	H	1	1	1	μm
Spectral Width	$\Delta\lambda$	10	10	10	nm 3dB
Slope Efficiency	η_o	0.4	0.4	0.4	W/A
Optical Fiber Core Diameter		105	105	105	μm
Optical Fiber NA		0.22	0.22	0.22	
Electrical					
Power conversion Efficiency	η	0.2	0.2	0.2	
Threshold Current	I_{th}	0.45	0.45	0.45	A
Operating Current	I_{op}	12	12	12	A
Operating Voltage	V_{op}	1.8	1.8	1.8	V
Series Resistance	R_s	0.05	0.05	0.05	ohm
Lead Soldering Temperature	$^{\circ}\text{C}$	250	250	250	$^{\circ}\text{C}$
TEC (Optional)					
TEC Voltage	V	8.6	8.6	8.6	V
TEC Current	A	3.8	3.8	3.8	A
Thermistor (Optional)					
Resistance	R	10 +/- 5% @ 25 $^{\circ}\text{C}$	10 +/- 5% @ 25 $^{\circ}\text{C}$	10 +/- 5% @ 25 $^{\circ}\text{C}$	K ohm
Thermistor Constant	β	3477 +/- 3%	3477 +/- 3%	3477 +/- 3%	β

Standard HHF's are terminated with a FC connector; SMA-905 type connectors are optional



PIN CALLOUT: (FOR REFERENCE ONLY, REFER TO DOCUMENTATION SUBMITTED WITH PRODUCT FOR ACTUAL PIN CALLOUTS)

1. N/A
2. LASER ANODE (+), CASE
3. LASER ANODE (+)
4. THERMISTOR
5. THERMISTOR
6. LASER CATHODE (-)
7. LASER CATHODE (-)
8. PD ANODE
9. PD CATHODE



NOTE: Dimensions are in mm

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