To request any additional information please contact us at:

Email: sales@axcelphotonics.com

Phone: (508) 481-9200

Features

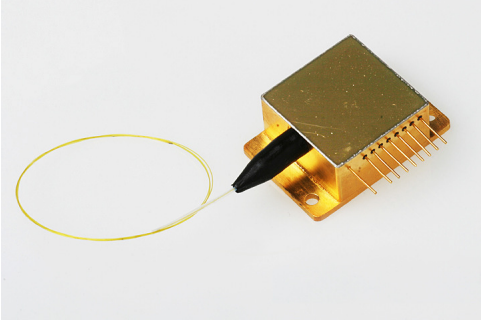
- Up to 10W CW output power
- 200 µm emitter size
- High Quality, Reliability, & Performance

Applications

- Solid State Pumping
- Fiber Lasers
- Material Processing
- Medical
- Defense

Product Specifications

975nm Multi-Mode High-Heat-Load Modules w/ Fiber Pigtailed Package



Description:

High brightness, high quality, and high reliability are the foundation of our multi mode product line. Axcel's 975nm multi mode laser diodes are available with up to 10W of continuous output power from fiber pigtailed, 9-pin high-heat-load mdoule. All modules come standard with an internal thermistor, TEC, and photodiode. Output fiber comes with 200 µm core diameter and is 0.22 NA. Axcel's trademark laser chip design creates un-measurable degradation and long lifetimes that make our chips among the most reliable in the industry today. All modules come standard with a SMA connector. Our 975nm multi mode line serves a broad range of applications including solid state pumping, fiber lasers, material processing, graphics, medical, and defense.

Please view our website for mechanical drawings of all of our module packages.

Performance Data for Multi-Mode 975nm HHL Fiber modules

		4.5W Series			7.5W Series			10W Series		
Parameter	Unit	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	970	975	980	970	975	980	970	975	980
Spectrum FWHM	nm	-	3	5	-	3	5	-	3	5
Operating Power (P_o)	W	-	4.5	-	-	7.5	-	-	10	-
Operating Current (I_o)	A	-	6.9	7.7	-	14.0	15.2	-	16.0	17.0
Operating Voltage (V_o)	V	-	1.8	2.5	-	1.8	2.5	-	2.5	2.8
Lifetime	hour	10,000	-	-	10,000	-	-	10,000	-	-
Threshold (I_{th})	A	-	0.50	0.80	-	1.5	1.8	-	1.0	1.2
Slope Efficiency (dP/dI)	W/A	0.65	0.70	-	0.50	0.60	-	0.63	0.68	-
TEC Voltage	V	-	-	8.6	-	-	8.6	-	-	8.6
TEC Current	A	-	-	3.8	-	-	3.8	-	-	3.8
Storage Temperature	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temperature (T_{op})	°C	0	25	50	0	25	55	0	25	55
Lead Soldering Temperature (5 sec)	°C	-	-	250	-	-	250	-	-	250

Note: 1) Specifications are subject to change without notice.

2) All Axcel Photonics products are TE polarized

Determining Your Product number:

MM—WWW—PPPP—XYZ—(custom add-ons)

(package)-(wavelength)-(power)-(options)

Package:

HF	HHL package (9 pin, fiber, TEC, PD thermistor)

Wavelength:

975	975nm

Power Options:

4500	4.5W
7500	7.5W
010W	10W

X Option (aperture size)

2	200µm fiber

Y Option (wavelength tolerance)

5	±5nm

Z Option (additional options)

C	SMA connector

Please note: These are our standard product configurations. Other options may be available, please inquire about any additional options that you may require when contacting our Sales Team.

Standard Product Configurations

4W Series

HF-975-4500-25C

7.5W Series

HF-975-7500-25C

10W Series

HF-975-010W-25C

Safety

Caution: Laser light emitted from any diode laser is invisible and may be harmful to the human eye. Avoid looking directly into the diode laser aperture when the device is in operation.

Note: The use of optical instruments with this product will increase eye hazard.

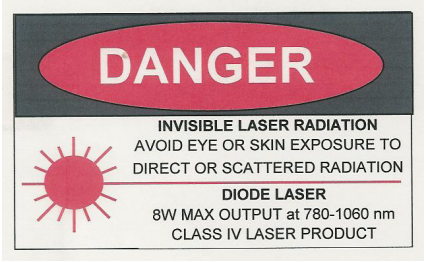
ESD Caution

Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary cause of unexpected diode failure. You can prevent ESD by always wearing wrist straps, grounding all applicable work surfaces, and following extremely rigorous anti-static techniques when handling diode lasers.

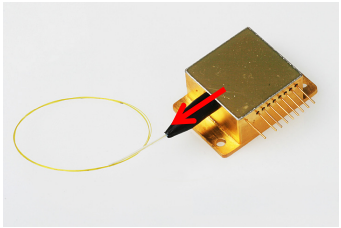
Operating Considerations

Operating the diode laser outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum peak optical power cannot be exceeded. CW diode lasers may be damaged by excessive drive current or switching transients. When using power supplies, the diode laser should be connected with the main power on and the output voltage at zero. The current should be increased slowly while monitoring the diode laser output power and the drive current. Device degradation accelerates with increased temperature, and therefore careful attention to minimize the case temperature is advised. A proper heat-sink for the diode laser on a thermal radiator will greatly enhance laser life.

Power Output Danger Label



WARNING! Invisible laser radiation is emitted from devices as shown below



21 CFR 1040.10 Compliance

Because of the small size of these devices, each of the labels shown are attached to the individual shipping container. They are illustrated here to comply with 21 CFR 1040.10 as applicable under the Radiation Control for Health and Safety Act of 1968.