To request any additional information please contact us at:

Email: sales@axcelphotonics.com

Phone: (508) 481-9200

Features

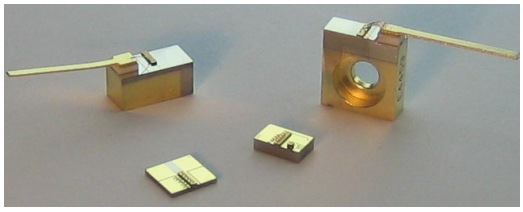
- Up to 3 W CW output power.
- High Quality, Reliability, & Performance

Applications

- Solid State Pumping
- Graphics
- Medical/Dental
- Industrial
- Defense

Product Specifications

808nm Multi-Mode Laser Diodes
100µm emitter(1W-3W)



Description:

High brightness, high quality, and high reliability are the foundation of our multi mode product line. Axcel's 808nm multi mode laser diodes are available with up to 3W of continuous output power from a 100µm single emitter chip. Axcel's trademark laser chip design creates unmeasurable degradation and long lifetimes that make our chips among the most reliable in the industry today. Our 808nm multi mode line serves a broad range of applications including solid state pumping, graphics, medical, dental, industrial, and defense.

Packaging options include industry standard 9mm TO-can, C-mount, B-mount, and QA-mount. More product options are available upon request. Please view our website for mechanical drawings of all of our sub-mount, mount, and module packages.

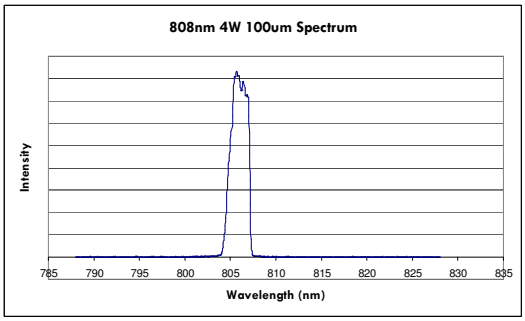
Standard Product Specifications for 808nm Multi-mode Diodes

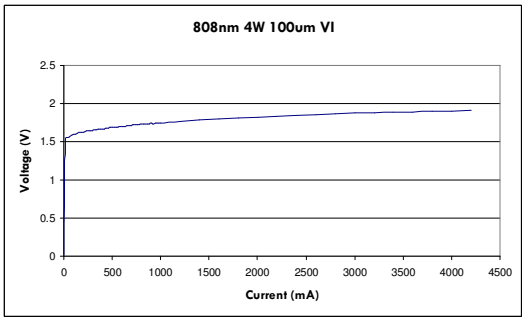
		1W Series			2W Series			3W Series		
Parameter	Unit	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	805	808	811	805	808	811	805	808	811
Spectrum FWHM	nm	-	2	4	-	2	4	-	2	4
Operating Power (P_o)	W	-	1.0	-	-	2.0	-	-	3.0	-
Operating Current (I_o)	A	-	1.1	1.4	-	2.0	2.4	-	2.8	3.2
Operating Voltage (V_o)	V	-	1.9	2.2	-	1.9	2.2	-	1.9	2.2
Lifetime	hour	10,000	-	-	10,000	-	-	10,000	-	-
Vertical Far Field	deg, FWHM	-	30	35	-	30	35	-	30	35
Parallel Far Field	deg, FWHM	-	8	11	-	8	11	-	8	11
Threshold (I_{th})	A	-	0.3	0.5	-	0.4	0.6	-	0.4	0.6
Slope Efficiency (dP/dI)	W/A	1.0	1.2	-	1.0	1.2	-	1.0	1.2	-
Storage Temp.	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temp. (T_{op})	°C	-20	25	50	-20	25	50	-20	25	50
Lead Soldering Temp.(5 sec)	°C	-	-	250	-	-	250	-	-	250

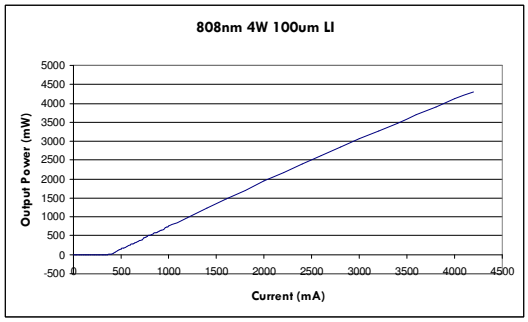
Note: 1) Specifications are subject to change without notice.

2) All Axcel Photonics products are TE polarized

808nm Multi-Mode Product Performance Data Graphs







Determining Your Product number:

MM—WWW—PPPP—XYZ—(custom add-ons)

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

Package:

CM	C-mount
BM	B-mount
QA	QA-mount
M9	9mm TO-can
C4	chip on 4mm submount

Wavelength

808	808nm

Power Options:

1000	1W
2000	2W
3000	3W

X Option (aperture size)

1	100µm aperture

Y Option (wavelength tolerance)

3	±3 nm

Z Option (additional options)

0	none
P	w/photodiode

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

1W Series	3W Series
CM-808-1000-130	CM-808-3000-130
BM-808-1000-130	BM-808-3000-130
QA-808-1000-130	C4-808-3000-130
M9-808-1000-130	
M9-808-1000-13P	

2W Series

CM-808-2000-130
BM-808-2000-130
QA-808-2000-130
M9-808-2000-130
M9-808-2000-13P

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.

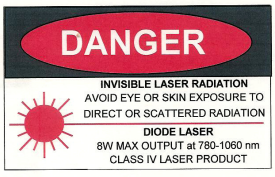
ESD Caution

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.

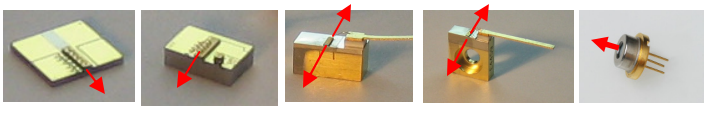
Operating Considerations

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.