To request any additional information please contact us at:

Email: sales@axcelphotonics.com

Phone: (508) 481-9200

Features

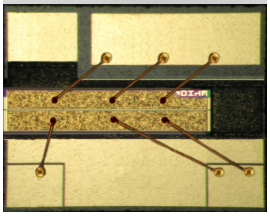
- Up to 150 mW CW output power.
- High Quality, Reliability, & Performance

Applications

- Illumination
- Laser Display
- Printing
- Sensing
- Medical Applications
- Imaging

Product Specifications

808 nm Single-Mode Laser Diodes



Description:

High brightness, high quality, and high reliability are the foundation of our single mode product line. Axcel's 808 nm single mode laser diodes are available with up to 150 mW of continuous output power from a single emitter chip. Axcel's trademark laser chip design offers unmeasurable degradation and long lifetimes that make our chips among the most reliable in the industry today. Our 808 nm single mode line serves a broad range of applications including optical data storage, image recording, laser display, point-to-point free space communications, spectral analysis, and solid-state pumping.

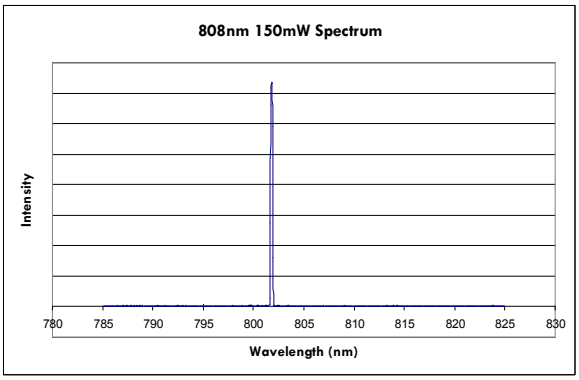
Packaging options include a 9 mm TO-can or chip on sub-mount package. More options are available upon request. Please view our website for mechanical drawings of all of our sub-mounts.

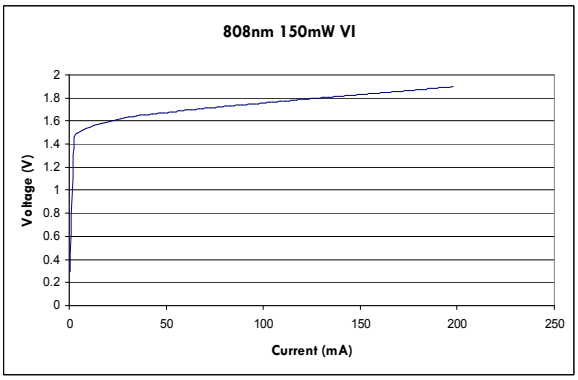
Standard Specifications for 808nm Single-mode Diodes

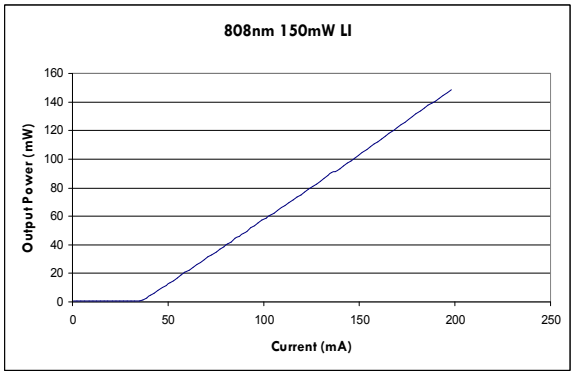
		100mW Series			150mW Series		
Parameter	Unit	Min	Typical	Max	Min	Typical	Max
Wavelength	nm	803	808	813	803	808	813
Spectrum FWHM	nm	-	0.5	2	-	0.5	2
Operating Power (P_o)	mW	-	100	-	-	150	-
Operating Current (I_o)	mA	-	130	150	-	180	220
Operating Voltage (V_o)	V	-	1.9	2.2	-	1.9	2.2
Kink-Free Power	mW	110	-	-	160	-	-
Lifetime	hour	100,000	-	-	100,000	-	-
Vertical Far Field	deg, FWHM	13	17	22	13	17	22
Parallel Far Field	deg, FWHM	-	8	11	-	8	11
Threshold (I_{th})	mA	-	30	50	-	30	50
Slope Efficiency (dP/dI)	W/A	0.9	1.0		0.9	1.0	-
Storage Temperature	°C	-40	-	80	-40	-	80
Operating Temperature (T_{op})	°C	-20	25	50	-20	25	50
Lead Soldering Temperature (5 sec)	°C	-	-	250	-	-	250

Note: 1) Specifications are subject to change without notice.
2) All Axcel Photonics products are TE polarized

808 nm Single Mode Performance Data Graphs







Determining Your Product number:

MM—WWW—PPPP—XYZ—(custom add-ons)

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

Package:

C2	2.1 mm COS
M9	9 mm TO-can

Wavelength:

808	808 nm

Power Options:

0100	100mW
0150	150mW

X Option (aperture size)

S	single-mode (cathode ground)
D	single-mode (anode ground)

Y Option (wavelength tolerance)

5	±5 nm

Z Option (additional options)

0	none
D	w/photodiode (anode ground)
P	w/ photodiode (cathode ground)

Please note: These are our standard product configurations.

Standard Product Configurations

100mW Series

C2-808-0100-S50

M9-808-0100-S50

M9-808-0100-S5D

M9-808-0100-D5P

150mW Series

C2-808-0150-S50

M9-808-0150-S50

M9-808-0150-S5D

M9-808-0150-D5P

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

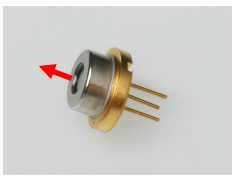
Always handle diode lasers with extreme care to prevent electrostatic discharge, the primary cause of unexpected diode failure. You can prevent ESD by always wearing wrist straps, grounding all applicable work surfaces, and following extremely rigorous anti-static

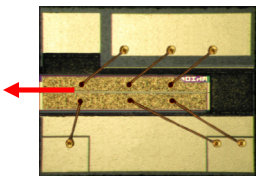
Operating Considerations

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.