

To request any additional information
please contact us at:

Email: sales@axcelphotonics.com

Phone: (508) 481-9200



Features

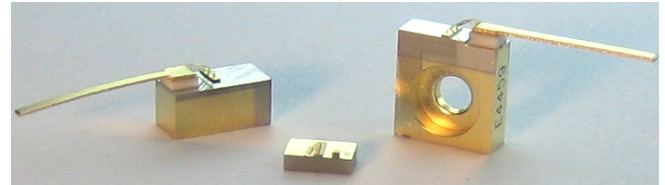
- Up to 3 W CW output power.
- High Quality, Reliability, & Performance

Applications

- Material Processing
- Laser Ranging
- Graphics
- Defense
- Medical

Product Specifications

915 nm Multi-Mode Laser Diodes



Description:

High brightness, high quality, and high reliability are the foundation of our multi mode product line. Axcel's 915nm multi mode laser diodes are available with up to 3 W of continuous output power from a single emitter chip. 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. Our 915 nm multi mode line serves a broad range of applications including Laser ranging, material processing, graphics, defense, and medical.

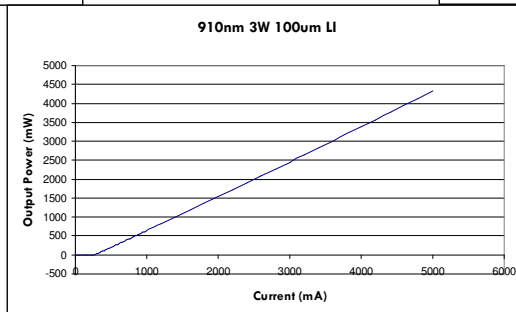
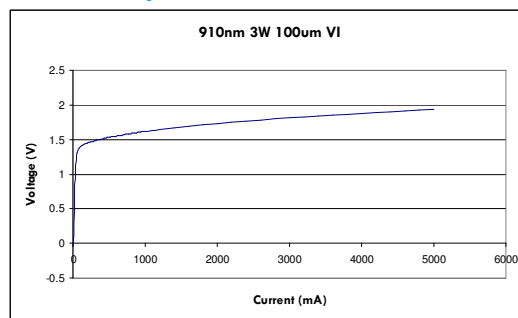
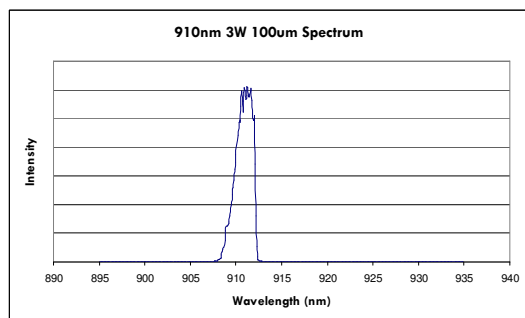
Packaging options include industry standard 9 mm TO-can, C-mount, B-mount, and QA-mount. More product options are available upon request. Please view our website for mechanical drawings of all of our sub-mounts.

Standard Product Specifications for 915nm Multi-mode Diodes

Parameter	Unit	500 mW Series			1 W Series			2 W Series			3 W Series		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	900	905	910	910	915	920	910	915	920	910	915	920
Spectrum FWHM	nm	-	3	5	-	3	5	-	3	5	-	3	5
Operating Power (P _o)	W	-	0.5	-	-	1.0	-	-	2.0	-	-	3.0	-
Operating Current (I _o)	A	-	0.64	0.70	-	1.4	1.8	-	2.5	2.9	-	3.6	4.0
Operating Voltage (V _o)	V	-	1.8	2.0	-	1.9	2.2	-	1.9	2.2	-	1.9	2.2
Lifetime	hour	10,000	-	-	10,000	-	-	10,000	-	-	10,000	-	-
Vertical Far Field	deg, FWHM	-	35	40	-	35	40	-	35	40	-	35	40
Parallel Far Field	deg, FWHM	-	8	10	-	9	12	-	9	12	-	9	12
Threshold (I _{th})	mA	-	100	120	-	250	550	-	250	550	-	250	550
Slope Efficiency (dP/dI)	W/A	0.8	0.9	-	0.8	0.9	-	0.8	0.9	-	0.8	0.9	-
Storage Temp.	°C	-40	-	80	-40	-	80	-40	-	80	-40	-	80
Operating Temp. (T _{op})	°C	-20	25	50	-20	25	50	-20	25	50	-20	25	50
Lead Soldering Temp.(5 sec)	°C	-	-	250	-	-	250	-	-	250	-	-	250

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

915 nm Multi-Mode Product Performance Data Graphs



Determining Your Product number:

Package:

CM	C-mount
BM	B-mount
QA	QA-mount
M9	9 mm TO-can
M5	5.6mm TO-can
C4	chip on 4mm submount

Wavelength:

905	905 nm
915	915 nm

Power Options:

0500	500 mW
1000	1 W
2000	2 W

MM—WWW—PPP—XYZ—(custom add-ons)

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

3000	3 W
X Option (aperture size)	
0	50 μm aperture
1	100 μm aperture
Y Option (wavelength tolerance)	
5	±5 nm
Z Option (additional options)	
0	none
R	w/ thermistor
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

500mW Series	M9-915-1000-150
CM-905-0500-050	M9-915-1000-15P
BM-905-0500-050	
QA-905-0500-050	2W Series
QA-905-0500-05R	CM-915-2000-150
M5-905-0500-050	C4-915-2000-150
M5-905-0500-05P	BM-915-2000-150
M9-905-0500-050	QA-915-2000-150
M9-905-0500-05P	QA-915-2000-15R
1W Series	3W Series
CM-915-1000-150	CM-915-3000-150
C4-915-1000-150	C4-915-3000-150
BM-915-1000-150	BM-915-3000-150
QA-915-1000-150	
QA-915-1000-15R	

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

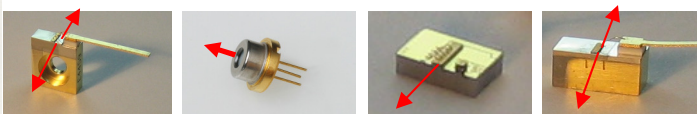
Operating Considerations

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.