

To request any additional information please contact us at:

Email: [sales@axcelphotonics.com](mailto:sales@axcelphotonics.com)

Phone: (508) 481-9200



## Features

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

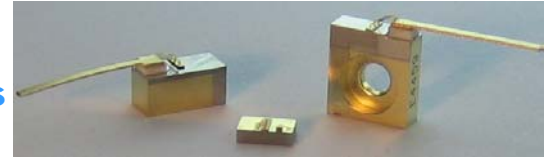
## Applications

- Medical
- Defense

## Product Specifications

### 1064nm 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 1064nm multi mode laser diodes are available with up to 3W 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 1064nm multi mode line serves a broad range of applications including medical laser therapy and defense.

Packaging options include industry standard 9mm TO-can, C-mount, Q-mount and B-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.

*Contact us today and learn how Axcel Photonics can accelerate your research and production!*

### Standard Product Specifications for 1064nm Multi-mode Diodes

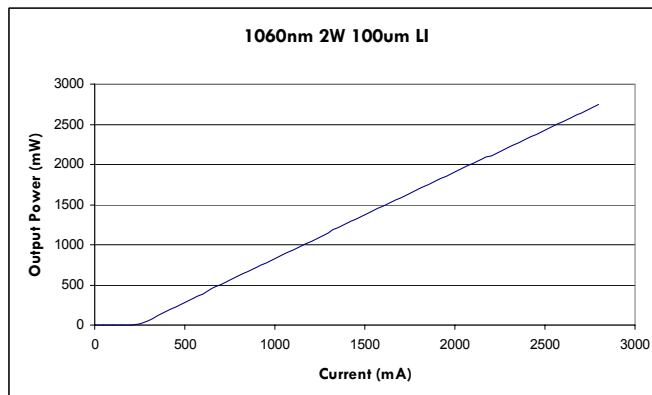
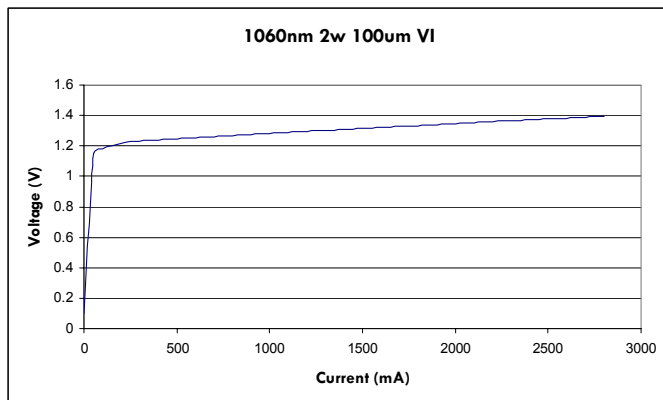
Parameter	Unit	1W Series			2W Series			3W Series		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	1059	1064	1069	1059	1064	1069	1059	1064	1069
Spectrum FWHM	nm	-	3	5	-	3	5	-	3	5
Operating Power (P <sub>o</sub> )	W	-	1.0	-	-	2.0	-	-	3.0	-
Operating Current (I <sub>o</sub> )	A	-	1.4	1.6	-	2.4	2.8	-	3.8	4.0
Operating Voltage (V <sub>o</sub> )	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 <sub>th</sub> )	A	-	0.40	0.70	-	0.40	0.70	-	0.40	0.70
Slope Efficiency (dP/dI)	W/A	0.8	0.9	-	0.8	0.9	-	0.8	0.9	-
Storage Temp.	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temp. (T <sub>op</sub> )	°C	-20	25	30	-20	25	30	-20	25	30
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

**Axcel Photonics, Inc. 45 Bartlett Street, Marlborough, MA 01752 USA [www.axcelphotonics.com](http://www.axcelphotonics.com)**

## 1064nm Multi-Mode Product Performance Data Graphs



### Determining Your Product number:

MM—WWW—PPP—XYZ—(custom add-ons)  
(package)-(wavelength)-(power)-(options)

### Standard Product Configurations

#### Package:

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

#### Wavelength:

A64 1064nm

#### Power Options:

1000	1W
2000	2W

3000 3W

#### X Option (aperture size)

1 100µm aperture

#### Y Option (wavelength tolerance)

5 ±5 nm

#### Z Option (additional options)

0 none  
P 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.

#### 1W Series

CM-A64-1000-150  
BM-A64-1000-150  
QA-A64-1000-150  
M9-A64-1000-150  
M9-A64-1000-15P

#### 2W Series

CM-A64-2000-150  
BM-A64-2000-150  
QA-A64-2000-150

#### 3W Series

CM-A64-3000-150  
BM-A64-3000-150

QA-A64-3000-150

C4-A64-3000-150

### 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.

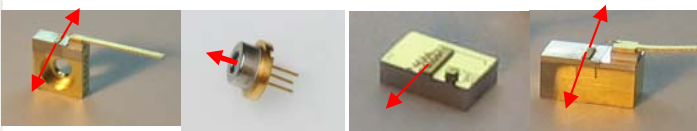
### Operating Considerations

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.