

## Features

- Up to 350 mW CW output power
- High Quality, Reliability, and Performance

## Applications

- Fiber laser
- Telecommunication
- Spectroscopy

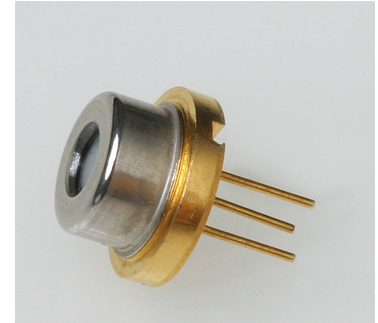
## Product Specifications

### 1064 nm Single-Mode Laser Diodes

#### Description:

High brightness, high quality, and high reliability are the foundation of our single mode product line. Axcel's 1064 nm single mode laser diodes are available with up to 350 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 1064nm single mode line serves a broad range of applications including telecommunication, fiber lasers, and spectroscopy.

Packaging options include a 9 mm TO-can or a C2 2.1 mm chip on sub-mount package. More options are available upon request. Please view our website for mechanical drawings of all of our sub-mounts.

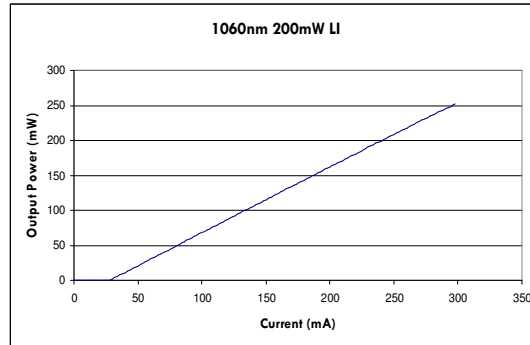
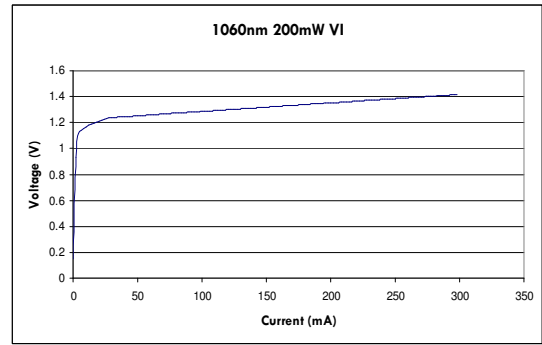
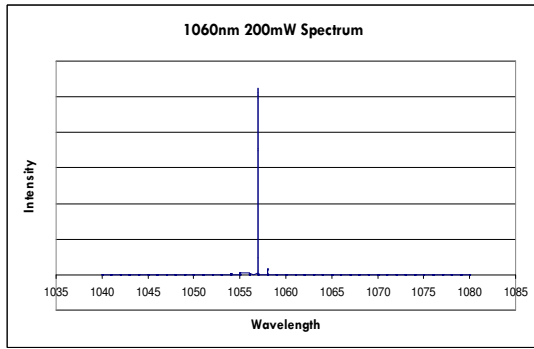


### Standard Product Specifications for 1064 nm Single-mode Diodes

Parameter	Unit	200 mW Series			300 mW Series			350 mW Series		
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength	nm	1059	1064	1069	1059	1064	1069	1059	1064	1069
Spectrum FWHM	nm	-	0.5	2.0	-	0.5	2.0	-	0.5	2.0
Rated Output Power (P <sub>o</sub> )	mW	-	200	-	-	300	-	-	350	-
Kink-Free Power	mW	220	-	-	330	-	-	385	-	-
Operating Current (I <sub>o</sub> )	mA	-	280	350	-	390	480	-	450	550
Operating Voltage (V <sub>o</sub> )	V	-	1.7	2.0	-	1.7	2.0	-	1.7	2.0
Lifetime	hour	100,000	-	-	100,000	-	-	100,000	-	-
Vertical Far Field	deg, FWHM	-	28	30	-	28	30	-	28	30
Parallel Far Field	deg, FWHM	-	8	10	-	8	10	-	8	10
Threshold (I <sub>th</sub> )	mA	-	50	100	-	50	100	-	50	100
Slope Efficiency (dP/dI)	W/A	0.8	0.9	-	0.8	0.9	-	0.8	0.9	-
Storage Temperature	°C	-40	-	80	-40	-	80	-40	-	80
Operating Temperature (T <sub>op</sub> )	°C	-20	25	50	-20	25	50	-20	25	50
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

# 1064 nm Single Mode Performance Data Graphs



**Determining Your Product number:** MM—WWW—PPP—XYZ—(custom add-ons)  
(package)-(wavelength)-(power)-(options)

### Standard Product Configurations

#### Package:

C2	2.1 mm COS
M9	9 mm TO-can

#### Wavelength:

A64	1064 nm
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#### Power Options:

0200	200 mW
0300	300 mW
0350	350 mW

#### X Option (aperture size)

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

#### Y Option (wavelength tolerance)

5	±5 nm
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#### Z Option (additional options)

0	none
D	w/ photodiode (anode ground)
P	w/ photodiode (cathode ground)
S	Low AR coating

#### 200 mW Series

C2-A64-0200-S50
M9-A64-0200-S50
M9-A64-0200-S5D
M9-A64-0200-D5P

#### 350 mW Series

C2-A64-0350-S50
M9-A64-0350-S50
M9-A64-0350-S5D
M9-A64-0350-D5P

#### 300 mW Series

C2-A64-0300-S50
M9-A64-0300-S50
M9-A64-0300-S5D
M9-A64-0300-D5P

Please note: These are our standard product configura-

#### 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.

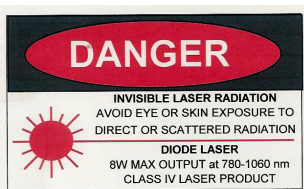
#### ESD Caution

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

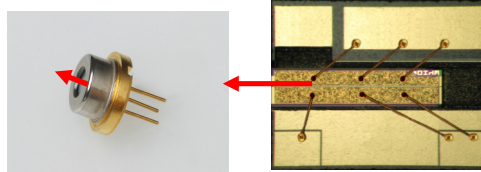
#### Operating Considerations

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.