

## Features

- Up to 3W CW output power.
- Lambda-Lok option available for increased wavelength stability ( $\pm 0.5$  nm).
- High Quality, Reliability, and Performance

## Applications

- Solid State Pumping
- Graphics
- Medical/Dental
- Laser Display
- Defense

## Product Specifications

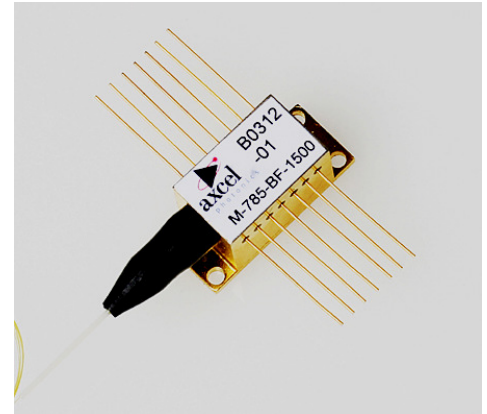
### 808nm Multi-Mode 14-Pin Butterfly Module Laser Diodes

#### 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 14-pin butterfly packaged fiber. All modules come standard

with an internal thermistor, TEC, and photodiode. Axcel's trademark laser chip design creates un-measurable degradation free and long lifetimes that make our chips among the most reliable in the industry today. The 500mW output power has a Lambda-Lok option available for increased wavelength stability at  $\pm 0.5$ nm. Our 808nm multi mode line serves a broad range of applications including solid state pumping, laser display, graphics, medical, dental, industrial, and defense.

More product options are available upon request. Please view our website for mechanical drawings of our module packages.

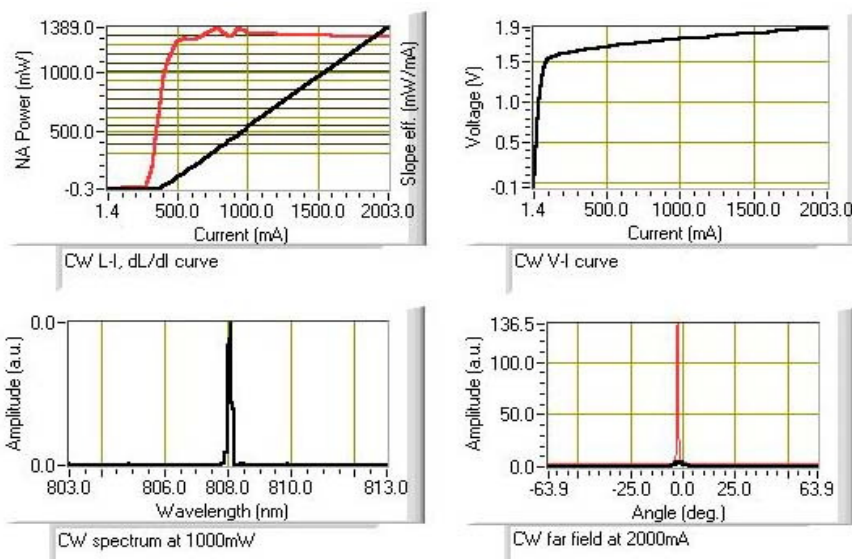


### Performance Data for Multi-Mode 808nm Butterfly module devices

Parameter	Unit	1.5W Series			3W Series		
		Min	Typ	Max	Min	Typ	Max
Wavelength	nm	803	808	813	803	808	813
Spectrum FWHM	nm	-	2	4	-	2	4
Operating Power ( $P_o$ )	W	-	1.5	-	-	3.0	-
Operating Current ( $I_o$ )	mA	-	2.0	2.4	-	4.0	4.5
Operating Voltage ( $V_o$ )	V	-	2.1	2.5	-	2.1	2.5
Lifetime	hour	10,000	-	-	10,000	-	-
Threshold ( $I_{th}$ )	A	-	0.4	0.6	-	0.5	0.7
Slope Efficiency (dP/dI)	W/A	0.8	0.95	-	0.75	0.85	-
TEC Voltage	V	-	-	3.4	-	-	2.9
TEC Current	A	-	-	2.1	-	-	7.5
Storage Temperature	$^{\circ}$ C	-40	-	80	-40	-	80
Operating Temperature ( $T_{op}$ )	$^{\circ}$ C	0	25	65	0	25	45
Lead Soldering Temperature (5 sec)	$^{\circ}$ C	-	-	250	-	-	250

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

## 808nm Multi-Mode Butterfly Module Performance Data Graphs



### Determining Your Product number:

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

### [Standard Product Configurations](#)

#### Package:

B1 14-pin Butterfly  
B2 14-pin Butterfly (3W)

#### Wavelength:

808 808nm

#### Power Options:

1500 1.5W  
3000 3W

#### X Option (aperture size)

1 100µm fiber

#### Y Option (wavelength tolerance)

5 ±5nm  
L ±0.5nm

#### Z Option (additional options)

0 none  
A FC connector (standard FC/APC)

#### 500mW Series (Lambda Lock)

B1-808-0500-1LA

#### 1.5W Series

B1-808-1500-15A

#### 3W Series

B2-808-3000-15A

Please note: These are our standard product configurations. Other options may be available, please inquire about any

### 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.

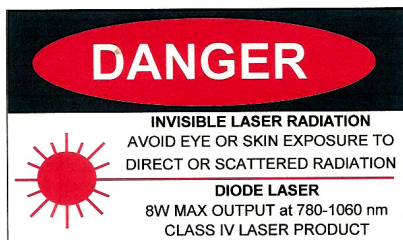
### Operating Considerations

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.

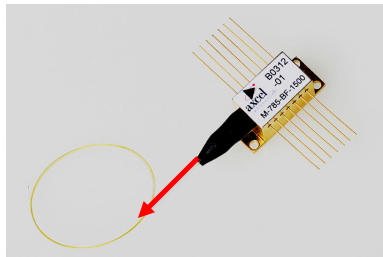
### ESD Caution

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.

### 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.